Revision Date 02.06.2020

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

- Trade name
- CAS-No.

- AUGEO CLEAN MULTI 100-79-8 01-2120066005-66-0000
- REACH : Registration number

1.2 Relevant identified uses of the substance or mixture and uses advised against

Uses of the Substance/Mixture

- Cleaning agent
- Waxes
- Stain removers and waxes removers
- Glass cleaner
- diluent and vehicle for fragrances

1.3 Details of the supplier of the safety data sheet

Company

RHODIA Opérations 40 Rue de la Haie Coq 93306 Aubervilliers Cedex - France Tel : +33 (0)1.53.56.50.00

E-mail address

manager.sds@solvay.com

1.4 Emergency telephone number

+44(0)1235 239 670 [CareChem 24]

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (Regulation (EC) No 1272/2008)

Eye irritation, Category 2

H319: Causes serious eye irritation.

2.2 Label elements

Regulation (EC) No 1272/2008

Hazardous products which must be listed on the label

CAS-No. 100-79-8 2,2-dimethyl-1,3-dioxolan-4-ylmethanol

Pictogram



- Warning

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Revision Date 02.06.2020

Hazard statements - H319	Causes serious eye irritation.
Precautionary statements	
Prevention	
- P264	Wash skin thoroughly after handling.
- P280	Wear eye protection/ face protection.
Response	
- P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
- P337 + P313	If eye irritation persists: Get medical advice/ attention.

2.3 Other hazards which do not result in classification

Results of PBT and vPvB assessment

- This substance is not considered to be persistent, bioaccumulating and toxic (PBT).
- This substance is not considered to be very persistent and very bioaccumulating (vPvB).

SECTION 3: Composition/information on ingredients

3.1 Substance

Information on Components and Impurities

Chemical name	Identification number	Classification Regulation (EC) No 1272/2008	Concentrati on [%]
2,2-dimethyl-1,3-dioxolan-4-ylmethanol	CAS-No. : 100-79-8 EINECS-No. : 202-888-7	Eye irritation, Category 2 ; H319	>= 99 - <= 100
	Registration number: 01-2120066005-66-xxxx		
	self classification		

For the full text of the H-Statements mentioned in this Section, see Section 16.

3.2 Mixture

- Not applicable, this product is a substance.

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice

- Show this safety data sheet to the doctor in attendance.
- First aider needs to protect himself.
- Place affected clothing in a sealed bag for subsequent decontamination.

In case of inhalation

- Move to fresh air.
- Keep at rest.
- Consult a physician if necessary.

In case of skin contact

- Take off contaminated clothing and shoes immediately.
- Wash off with soap and plenty of water.
- If skin irritation occurs, seek medical advice/attention.

PRC090063327 Version : 12.00 / GB (EN)



In case of eye contact

- Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
- If eye irritation persists, consult a physician

In case of ingestion

- Do NOT induce vomiting.
- Rinse mouth with water.
- Do not give anything to drink.
- Consult a physician if necessary.

4.2 Most important symptoms and effects, both acute and delayed

no data available

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician

- Treat symptomatically.
- There is no specific antidote available.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

- Foam
- Dry powder
- Water mist
- Carbon dioxide (CO2)
- Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media

- High volume water jet

5.2 Special hazards arising from the substance or mixture

- Combustible liquid.
- Heating increases the inner pressure of the bottle, risk of explosion.

5.3 Advice for firefighters

Special protective equipment for firefighters

- Personal protective equipment comprising: suitable protective gloves, safety goggles and protective clothing
- Wear self-contained breathing apparatus for firefighting if necessary.

Further information

- Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
- Cool containers/tanks with water spray.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

- Keep away from flames and sparks.
- Store away from heat.
- Evacuate personnel to safe areas.
- Avoid contact with the skin and the eyes.
- Use personal protective equipment.

PRC090063327 Version : 12.00 / GB (EN)



- For personal protection see section 8.
- Stop the leak. Turn leaking containers leak-side up to prevent the escape of liquid.
- Remove all incompatible materials as quickly as possible
- Mark the contaminated area with signs and prevent access to unauthorized personnel.

6.2 Environmental precautions

- Dam up.
- Prevent product from entering sewage system.
- Try to prevent the material from entering drains or water courses.
- Local authorities should be advised if significant spillages cannot be contained.

6.3 Methods and materials for containment and cleaning up

Recovery

- Collect spillage.
- Pick up and transfer to properly labelled containers.
- Keep in suitable, closed containers for disposal.

Neutralization

 Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13).

Decontamination/cleaning

- Pick up contaminated soil.
- Clean contaminated floors and objects thoroughly while observing environmental regulations.
- Pick up and transfer to properly labelled containers.
- Keep in suitable, closed containers for disposal.
- Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13).

Disposal

- Dispose of contents/ container to an approved waste disposal plant.
- The product should not be allowed to enter drains, water courses or the soil.
- Dispose of in accordance with local regulations.

Additional advice

- Remove all incompatible materials as quickly as possible

6.4 Reference to other sections

- no data available

SECTION 7: Handling and storage

7.1 Precautions for safe handling

- Provide adequate ventilation.
- Handle in accordance with good industrial hygiene and safety practice.
- Wear personal protective equipment.
- Avoid inhalation, ingestion and contact with skin and eyes.

Hygiene measures

- Ensure that eyewash stations and safety showers are close to the workstation location.
- Use clean, well-maintained personal protection equipment.
- Wash hands before breaks and at the end of workday.
- When using do not eat, drink or smoke.

7.2 Conditions for safe storage, including any incompatibilities

PRC090063327 Version : 12.00 / GB (EN)



Technical measures/Storage conditions

- The floor of the depot should be impermeable and designed to form a water-tight basin.
- Keep only in the original container.
- Keep away from heat and sources of ignition.
- Keep in a dry, cool and well-ventilated place.
- Note: To ensure the product's validity period, it is recommended to inert with nitrogen (N2) in storage.

Packaging material

- Suitable material
- Unlined steel
- Polyethylene terephthalate (PET)
- Plastic container of HDPE

Requirements for storage rooms and vessels

- Protect from frost, heat and sunlight.

7.3 Specific end use(s)

- no data available

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

- Contains no substances with occupational exposure limit values above their regulatory reporting threshold.

8.2 Exposure controls

Individual protection measures

Respiratory protection

- Use a respirator with an approved filter if a risk assessment indicates this is necessary.

Hand protection

- Where there is a risk of contact with hands, use appropriate gloves
- Gloves must be inspected prior to use.
- Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.

Eye protection

- Tightly fitting safety goggles

Skin and body protection

- Choose body protection according to the amount and concentration of the dangerous substance at the work place.
- Remove and wash contaminated clothing.

Hygiene measures

- Ensure that eyewash stations and safety showers are close to the workstation location.
- Use clean, well-maintained personal protection equipment.
- Wash hands before breaks and at the end of workday.
- When using do not eat, drink or smoke.

Protective measures

- Selection of appropriate personal protective equipment should be based on an evaluation of the performance characteristics of the protective equipment relative to the task(s) to be performed, conditions present, duration of use, and the potential hazards and/or risks that may occur during use.
- The protective equipment must be selected in accordance with current local standards and in cooperation with the supplier of the protective equipment.

PRC090063327 Version : 12.00 / GB (EN)

Environmental exposure controls

- Dam up.
- Prevent product from entering sewage system.
- -
- Try to prevent the material from entering drains or water courses.
 Local authorities should be advised if significant spillages cannot be contained.

SECTION 9: Physical and chemical properties 9.1 Information on basic physical and chemical properties Appearance Form: liquid Physical state: liquid Colour. colourless

	<u>Colour</u> :	colourless
<u>Odour</u>	slight	
Odour Threshold	No data available	9
Molecular weight	132.16 g/mol	
<u>рН</u>	Not applicable	
Melting point/freezing point	Freezing point: -	9° °C
Initial boiling point and boiling range	Boiling point/boili	<u>ng range</u> : 191 °C (1,013.25 hPa)
Flash point	91 °C closed cup	
	100 °C open cup	
Evaporation rate (Butylacetate = 1)	0.03	
Flammability (solid, gas)	No data available	2
Flammability (liquids)	No data available	9
Flammability/Explosive limit	No data available	9
Auto-ignition temperature	390 °C (1,013 hl Method: ELLTest	
Vapour pressure	Method: EU Test Guideline A15 0.05 hPa (20 °C)	
Vapour density	2.6	
<u>Density</u>		
Relative density	1.069 (20 °C)	
<u>Solubility</u>	<u>Water solubility</u> : (20 °C)complete	ely soluble
	Solubility in other Alcohol : miscible	
	Esters : miscible	

Ether : miscible



Revision Date 02.06.2020

	Aromatic hydrocarbons : miscible
	petroleum ether. : miscible
	petrol : miscible
Partition coefficient: n-octanol/water	No data available
Decomposition temperature	No data available
<u>Viscosity</u>	Viscosity, dynamic: 11 mPa.s (20 °C)
Explosive properties	No data available
Oxidizing properties	No data available
9.2 Other information	
Surface tension	33.5 mN/m (20 °C)

SECTION 10: Stability and reactivity

10.1 Reactivity

Not classified as a reactivity hazard.

10.2 Chemical stability

- Stable at room temperature.
- Stable under normal conditions.

10.3 Possibility of hazardous reactions

- Vapours may form explosive mixture with air.

10.4 Conditions to avoid

- Heat, flames and sparks.

10.5 Incompatible materials

- Strong oxidizing agents
- Strong acids

10.6 Hazardous decomposition products

Hazardous decomposition products

- On combustion or on thermal decomposition (pyrolysis) releases:
- (Carbon oxides (CO + CO2)).
- Acetic acid
- Ethanol

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Acute oral toxicity

2,2-dimethyl-1,3-dioxolan-4-ylmethanol

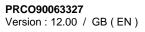
LD50 : 7,000 mg/kg - Rat Not classified as hazardous for acute oral toxicity according to GHS. Published data

Acute inhalation toxicity

PRCO90063327 Version : 12.00 / GB (EN)



2,2-dimethyl-1,3-dioxolan-4-ylmethanol	LC50 (dust/mist): > 5.11 mg/l - Rat, male and female Method: OECD Test Guideline 403 Not classified as hazardous for acute inhalation toxicity according to GHS. Aerosol No mortality observed at this concentration. Unpublished internal reports
Acute dermal toxicity 2,2-dimethyl-1,3-dioxolan-4-ylmethanol	LD50: 2,000 mg/kg - Rat , male and female Method: OECD Test Guideline 402 Not classified as hazardous for acute dermal toxicity according to GHS. Unpublished internal reports
Acute toxicity (other routes of administration)	No data available
Skin corrosion/irritation	
2,2-dimethyl-1,3-dioxolan-4-ylmethanol	Rabbit No skin irritation Method: OECD Test Guideline 404 Unpublished internal reports
Serious eye damage/eye irritation	
2,2-dimethyl-1,3-dioxolan-4-ylmethanol	Rabbit irritating Method: OECD Test Guideline 405 Unpublished internal reports
Respiratory or skin sensitisation	
2,2-dimethyl-1,3-dioxolan-4-ylmethanol	Maximisation Test - Guinea pig Does not cause skin sensitisation. Method: OECD Test Guideline 406 Unpublished internal reports
Mutagenicity	
Genotoxicity in vitro 2,2-dimethyl-1,3-dioxolan-4-ylmethanol	Ames test with and without metabolic activation negative Method: OECD Test Guideline 471 Unpublished internal reports
Genotoxicity in vivo	
2,2-dimethyl-1,3-dioxolan-4-ylmethanol	In vivo micronucleus test - Mouse male Intraperitoneal route Method: OECD Test Guideline 474
	negative Unpublished internal reports
Carcinogenicity	No data available
Toxicity for reproduction and developme	ent
Toxicity to reproduction/Fertility	





2,2-dimethyl-1,3-dioxolan-4-ylmethanol	Reproduction/developmental toxicity screening test - Rat, male and female, Oral Fertility NOAEL Parent: 1,000 mg/kg bw/day Method: OECD Test Guideline 422 Highest dose tested, no impairment of fertility has been observed, Unpublished internal reports
Developmental Toxicity/Teratogenicity 2,2-dimethyl-1,3-dioxolan-4-ylmethanol	Rat, male and female, Oral General Toxicity Maternal NOAEL: 1,000 mg/kg bw/day
	Teratogenicity NOAEL F1:1,000mg/kg bw/day Embryo-foetal toxicity NOAEL F1: 1,000 mg/kg bw/day
	Method: OECD Test Guideline 414 Highest dose tested, no embryotoxic or teratogenic effects have been observed, Unpublished internal reports
<u>STOT</u>	
STOT - single exposure 2,2-dimethyl-1,3-dioxolan-4-ylmethanol	Exposure routes: Ingestion, Skin contact, Inhalation The substance or mixture is not classified as specific target organ toxicant, single exposure according to GHS criteria. internal evaluation
STOT - repeated exposure 2,2-dimethyl-1,3-dioxolan-4-ylmethanol	Exposure routes: Ingestion, Inhalation The substance or mixture is not classified as specific target organ toxicant, repeated exposure according to GHS criteria. internal evaluation
2,2-dimethyl-1,3-dioxolan-4-ylmethanol	Oral - Rat , male and female NOAEL: 1000 mg/kg Method: OECD Test Guideline 422 Highest dose tested No significant adverse effects were reported A testing proposal has been submitted to ECHA. Unpublished internal reports
	Inhalation (aerosol) 90-day - Rat , male and female NOAEC: > 5 mg/l Method: OECD Test Guideline 413 Highest dose tested No significant adverse effects were reported Unpublished internal reports
Experience with human exposure	No data available
Aspiration toxicity	No data available

SECTION 12: Ecological information

12.1 Toxicity

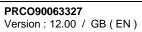
Aquatic Compartment

Acute toxicity to fish

PRC090063327 Version : 12.00 / GB (EN)



2,2-dimethyl-1,3-dioxolan-4-ylmethanol	LC50 - 96 h : 16.7 g/l - Pimephales promelas (fathead minnow) flow-through test Analytical monitoring: yes		
	Method: according to a standardised method Published data Not harmful to fish (LC/LL50 > 100 mg/L)		
Acute toxicity to daphnia and other ac	uatic invertebrates		
2,2-dimethyl-1,3-dioxolan-4-ylmethanol	EC50 - 48 h : > 96 mg/l - Daphnia similis (water flea) static test Analytical monitoring: yes Method: OECD Test Guideline 202 Not harmful to aquatic invertebrates. (EC/EL50 > 100 mg/L) Unpublished internal reports		
Toxicity to aquatic plants 2,2-dimethyl-1,3-dioxolan-4-ylmethanol	ErC50 - 72 h : > 92 mg/l - Pseudokirchneriella subcapitata (green algae) static test Analytical monitoring: yes Method: OECD Test Guideline 201 Not harmful to algae (EC/EL50 > 100 mg/L) Unpublished internal reports		
	NOEC - 72 h : 92 mg/l - Pseudokirchneriella subcapitata (green algae) static test Analytical monitoring: yes Method: OECD Test Guideline 201 No adverse chronic effect observed up to and including the threshold of 1 mg/L. Unpublished internal reports		
Toxicity to microorganisms 2,2-dimethyl-1,3-dioxolan-4-ylmethanol	EC50 - 3 h : > 1,000 mg/l - activated sludge static test Analytical monitoring: no Method: OECD Test Guideline 209 Unpublished internal reports		
Chronic toxicity to fish	No data available		
Chronic toxicity to daphnia and other aquatic invertebrates			
2,2-dimethyl-1,3-dioxolan-4-ylmethanol	semi-static test		
	NOEC: 10 mg/l - 21 Days - Daphnia magna (Water flea) flow-through test Analytical monitoring: yes End point: Reproduction Method: OECD Test Guideline 211 No adverse chronic effect observed up to and including the threshold of 1 mg/L.		
Terrestrial Compartment			
Toxicity to soil dwelling organisms 2,2-dimethyl-1,3-dioxolan-4-ylmethanol	NOEC: 250 mg/kg - 56 Days - Eisenia fetida (earthworms) End point: Reproduction Method: OECD Test Guideline 222 Unpublished internal reports		
	NOEC: 12.5 mg/kg - 28 Days - soil micro-organisms End point: Nitrogen transformation Method: OECD Test Guideline 216		



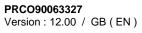


Revision Date 02.06.2020

Unpublished internal reports

12.2 Persistence	and degradabili	ity
------------------	-----------------	-----

Abiotic degradation	
Stability in water 2,2-dimethyl-1,3-dioxolan-4-ylmethanol	pH: 4.0 Temperature of hydrolysis: 25 °C Degree of hydrolysis: 50 % Hydrolysis time: 0.959 Days Method: OECD Test Guideline 111 Unpublished internal reports
Physical- and photo-chemical elimination	No data available
Biodegradation	
Biodegradability 2,2-dimethyl-1,3-dioxolan-4-ylmethanol	Ready biodegradability study: Method: OECD Test Guideline 301 D 4 % - 28 Days The substance does not fulfill the criteria for ready biodegradability and ultimate aerobic biodegradability Theoretical oxygen demand Inoculum: activated sludge Unpublished internal reports Inherent biodegradability study Method: OECD Test Guideline 302 B 25 % - 28 Days The substance fulfills the criteria for inherent primary biodegradability Dissolved organic carbon (DOC)
	Inoculum: activated sludge Conc. in standard unit mg/l: 10 mg/l Unpublished internal reports
Degradability assessment 2,2-dimethyl-1,3-dioxolan-4-ylmethanol	The product is not considered to be rapidly degradable in the environment
12.3 Bioaccumulative potential	
Partition coefficient: n-octanol/water 2,2-dimethyl-1,3-dioxolan-4- ylmethanol	Not potentially bioaccumulable
Bioconcentration factor (BCF)	No data available
12.4 Mobility in soil	
Adsorption potential (Koc) 2,2-dimethyl-1,3-dioxolan-4-ylmethanol	Adsorption/Soil Log Koc: < 1.25 Method: OECD Test Guideline 121 Unpublished internal reports
Known distribution to environmental compartments	No data available



Revision Date 02.06.2020

12.5 Results of PBT and vPvB assessment	This substance is not considered to be persistent, bioaccumulating and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulating (vPvB).
12.6 Other adverse effects	
Ecotoxicity assessment	
Short-term (acute) aquatic hazard 2,2-dimethyl-1,3-dioxolan-4-ylmethanol	The product does not have any known adverse effects on the aquatic organisms tested
Long-term (chronic) aquatic hazard 2,2-dimethyl-1,3-dioxolan-4-ylmethanol	No adverse chronic effect observed up to and including the threshold of 1 mg/L.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product Disposal

- Do not dispose of with domestic refuse.
- Dispose of in accordance with local regulations.
- The product should not be allowed to enter drains, water courses or the soil.
- Dispose of contents/ container to an approved waste disposal plant.
- Send to a licensed waste management company.

Advice on cleaning and disposal of packaging

- Do not re-use empty containers.
- Clean container with water.
- Dispose of contents/ container to an approved incineration plant.
- Dispose of in accordance with local regulations.

SECTION 14: Transport information

ADN/ADNR

not regulated

<u>ADR</u>

not regulated

RID

not regulated

IMDG

not regulated

IATA

not regulated

Note: The above regulatory prescriptions are those valid on the date of publication of this sheet. Given the possible evolution of transport regulations for hazardous materials, it would be advisable to check their validity with your sales office.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

REACH - Restrictions on the

ons on the

on the Requirements of Annex XVII to Regulation (EC) 1907/2006 apply to this

PRCO90063327 Version : 12.00 / GB (EN)



manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII) product. The precise list of restricted uses is available in the corresponding entry of this annex. Number on list: 3

Shall not be used in: - ornamental articles intended to produce light or colour effects by means of different phases, for example in ornamental lamps and ashtrays, - tricks and jokes, - games for one or more participants, or any article intended to be used as such, even with ornamental aspects.

Notification status

Inventory Information	Status
United States TSCA Inventory	- On TSCA Inventory
Canadian Domestic Substances List (DSL)	 All components of this product are on the Canadian DSL
Australia Inventory of Chemical Substances (AICS)	- On the inventory, or in compliance with the inventory
Japan. CSCL - Inventory of Existing and New Chemical Substances	- On the inventory, or in compliance with the inventory
Korea. Korean Existing Chemicals Inventory (KECI)	- On the inventory, or in compliance with the inventory
China. Inventory of Existing Chemical Substances in China (IECSC)	- On the inventory, or in compliance with the inventory
Philippines Inventory of Chemicals and Chemical Substances (PICCS)	- Listed on Inventory
Taiwan Chemical Substance Inventory (TCSI)	- Listed on Inventory
EU. European Registration, Evaluation, Authorisation and Restriction of Chemical (REACH)	 If product is purchased from Solvay in Europe it is in compliance with REACH, if not please contact the supplier.
New Zealand. Inventory of Chemical Substances	- On the inventory, or in compliance with the inventory

15.2 Chemical safety assessment

- A Chemical Safety Assessment has been carried out for this substance.

SECTION 16: Other information

Full text of H-Statements referred to under sections 2 and 3.

- H319 Causes serious eye irritation.

Key or legend to abbreviations and acronyms used in the safety data sheet

- ADR: European Agreement on International Carriage of Dangerous Goods by Road.
- ADN: European Agreement on the International Carriage of Dangerous Goods by Inland Waterways.
- RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail.
- IATA: International Air Transport Association.
- ICAO-TI: Technical Instructions for Safe Transport of Dangerous Goods by Air.
- IMDG: International Maritime Dangerous Goods.
- TWA: Time weighted average
- ATE: Estimated value of acute toxicity
- EC: European Community number

PRC090063327 Version : 12.00 / GB (EN)



Revision Date 02.06.2020

- CAS: Chemical Abstracts Service.
- LD50: Substance that causes 50% (half) death in the test animals group (Median Fatal Dose).
- LC50: Substance concentration causing 50% (half) death in the test animals group.
- EC50: Effective Concentration of the substance causing the maximum of 50%.
- PBT: Persistent, Bioaccumulative and Toxic substance.
- vPvB: Very Persistent and Very Bioaccumulative.
- GHS/CLP/SEA: Classification, labeling, packaging regulation
- DNEL: Derived No Effect Level
- PNEC: Predicted No Effect Concentration
- STOT: Specific Target Organ Toxicity

Not all acronyms listed above are referenced in this SDS.

Further information

- Update
- Exposure scenario

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. Such information is only given as a guidance to help the user handle, use, process, store, transport, dispose and release the product in satisfactory safety conditions and is not to be considered as a warranty or quality specification. It should be used in conjunction with technical sheets but do not replace them. Thus, the information only relates to the designated specific product and may not be applicable if such product is used in combination with other materials or in any other manufacturing process, unless otherwise specifically indicated. It does not release the user from ensuring he is in conformity with all regulations linked to its activity.

PRC090063327 Version : 12.00 / GB (EN)

SOLVAY

Annex

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Scenario List

1. ES1 : Formulation of biocidal products	15
2. ES2 : Use into insect repellent products	
3. ES3 : Formulation, On site	
4. ES4 : Formulation, Used for formulation of homecare products, Used for formulation of p	
care products	
5. ES5 : Professional end-use of polishes and wax blends (IFRA GES 5)	
6. ES6 : Use in formulation, end-products	39
7. ES7 : Industrial use, Use in formulation, Cosmetic products	
8. ES8 : Industrial use, end-products	53
9. ES9 : Professional use, end-products	65
10. ES10 : Use at industrial site, Use in Cleaning Agents	
11. ES11 : Use at industrial site, Industrial use, Use as an intermediate	81
12. ES12 : Consumers end-use of washing and cleaning products (IFRA GES 6)	87
13. ES13 : Consumer end-use of air care products (IFRA GES 7)	
14. ES14 : Consumers end-use polishes and wax blends (IFRA GES 9)	89
15. ES15 : Consumer use, End use of cosmetic products	

1. ES1 : Formulation of biocidal products

Main User Groups	:	SU 3	Industrial uses: Uses of substances as such or in preparations at industrial sites
Process category	:	PROC8b	Transfer of substance or mixture (charging/discharging) at dedicated facilities
		PROC3	Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition
		PROC5	Mixing or blending in batch processes
		PROC15	Use as laboratory reagent

1.2. Conditions of use affecting exposure

1.2.1 Contributing scenario controlling worker exposure for: PROC8b Transfer of substance or mixture (charging/discharging) at dedicated facilities, Loading bulk raw material, < 8h, OC9 Outdoor

Product characteristics Concentration of the Substance in Mixture/Article Physical Form (at time of use) Remarks	Covers the percentage of the substance in the product up to 100 % (unless stated differently). : Liquid : Low vapour pressure
Frequency and duration of use Duration of the activity	: <= 8 h
Other operational conditions affectin	g workers exposure
PRCO90063327 Version : 12.00 / GB (EN)	

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Revision Date 02.06.2020

Outdoor / Indoor Temperature	: Outdoor : <= 40 °C
	imit releases, dispersion and exposure
Avoid splashing.	
Assumes a good basic standard of occ	upational hygiene is implemented.
Avoid direct eye contact with product, a Use suitable eye protection. General measures (eye irritants)	ersonal protection, hygiene and health evaluation also via contamination on hands. ed to EN374) in combination with 'basic' employee training. (Effectiveness (of
	g worker exposure for: PROC3 Manufacture or formulation in the chemical industry ional controlled exposure or processes with equivalent containment condition, < 8h
Product characteristics	
Concentration of the Substance in	Covers the percentage of the substance in the product up to 100 %
Mixture/Article	(unless stated differently).
Physical Form (at time of use)	: Liquid
Remarks	: Low vapour pressure
Frequency and duration of use	
Duration of the activity	: <= 8 h
Other operational conditions affecting	u workers exposure
Outdoor / Indoor	: Outdoor
Temperature	: <= 40 °C
Remarks	: Use in closed process, With occasional controlled exposure.
Organisational measures to prevent /I Avoid splashing.	imit releases, dispersion and exposure
Conditions and measures related to p Avoid direct eye contact with product, a Use suitable eye protection. General measures (eye irritants)	ersonal protection, hygiene and health evaluation also via contamination on hands.
1.2.3 Contributing scenario controlling formulation), < 8h, OC8 Indoor, CS110	g worker exposure for: PROC3 Use in closed batch process (synthesis or) without local exhaust ventilation
Product characteristics	
Concentration of the Substance in	Covers the percentage of the substance in the product up to 100 %
Mixture/Article	(unless stated differently).
Physical Form (at time of use)	: liquid
Remarks	: Low vapour pressure
Frequency and duration of use Exposure duration	: < 8 h
Other operational conditions affecting	u workers exposure
Outdoor / Indoor	: Indoor
Temperature	: <= 40 °C
Remarks	: Use in closed process, With occasional controlled exposure.
PRCO90063327	
PRC090003327 Version : 12.00 / GB (EN)	

Version : 12.00 / GB (EN)



Technical conditions and measures	
Provide a basic standard of general ven	tilation (1 to 3 air changes per hour).
Organisational measures to prevent /lin Assumes a good basic standard of occu Avoid splashing.	
	ersonal protection, hygiene and health evaluation Iso via contamination on hands., General measures (eye irritants)
1.2.4 Contributing scenario controlling formulation), < 8h, OC8 Indoor, CS109	worker exposure for: PROC3 Use in closed batch process (synthesis or with local exhaust ventilation
Product characteristics Concentration of the Substance in Mixture/Article Physical Form (at time of use) Remarks	Covers the percentage of the substance in the product up to 100 % (unless stated differently). Iiquid Low vapour pressure
Frequency and duration of use Exposure duration	: <8h
Other operational conditions affecting	workers exposure
Outdoor / Indoor	: Indoor
Temperature Remarks	 : <= 40 °C Use in closed process, With occasional controlled exposure.
with local exhaust ventilation, Inhalation	I), Dermal exposure (Effectiveness (of a measure): 90 %) exposure (Effectiveness (of a measure): 90 %)
Organisational measures to prevent /lin Assumes a good basic standard of occu Avoid splashing.	
	ersonal protection, hygiene and health evaluation Iso via contamination on hands., General measures (eye irritants)
	worker exposure for: PROC8b Transfer of substance or preparation (charging/ ntainers at dedicated facilities, < 8h, OC8 Indoor
Product characteristics Concentration of the Substance in Mixture/Article Physical Form (at time of use) Remarks	 Covers the percentage of the substance in the product up to 100 % (unless stated differently). Liquid Low vapour pressure
Frequency and duration of use Duration of the activity	: <= 8 h
Other operational conditions affecting Outdoor / Indoor	workers exposure : Indoor
PRC090063327	
Version : 12.00 / GB (EN)	
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Revision Date 02.06.2020

Temperature	: <= 40 °C
Technical conditions and measu	ires
Provide a basic standard of gene	eral ventilation (1 to 3 air chang

Provide a basic standard of general ventilation (1 to 3 air changes per hour) . with local exhaust ventilation, Inhalation exposure (Effectiveness (of a measure): 95 %) with local exhaust ventilation, Dermal exposure (Effectiveness (of a measure): 95 %)

Organisational measures to prevent /limit releases, dispersion and exposure

Avoid splashing.

Assumes a good basic standard of occupational hygiene is implemented.

Conditions and measures related to personal protection, hygiene and health evaluation

Avoid direct eye contact with product, also via contamination on hands.

Use suitable eye protection.

General measures (eye irritants)

Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training. (Effectiveness (of a measure): 90 %)

1.2.6 Contributing scenario controlling worker exposure for: PROC8b Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities, < 8h, OC9 Outdoor

ectiveness (of
e

1.2.7 Contributing scenario controlling worker exposure for: PROC5 Mixing or blending in batch processes for formulation of preparations and articles (multistage and/ or significant contact)

Product characteristics	
Concentration of the Substance in	Covers the percentage of the substance in the product up to 100 %
Mixture/Article	(unless stated differently).
Physical Form (at time of use)	: liquid
Remarks	: Low vapour pressure
PRCO90063327	

Version : 12.00 / GB (EN)



Frequency and duration of use	
Exposure duration	: < 8 h
Other operational conditions affecting	workers exposure
Outdoor / Indoor	: Indoor
Temperature	: <= 40 °C
	tilation (1 to 3 air changes per hour) .), Dermal exposure (Effectiveness (of a measure): 90 %) exposure (Effectiveness (of a measure): 90 %)
Organisational measures to prevent /lir Assumes a good basic standard of occu Avoid splashing.	
Avoid direct eye contact with product, al suitable eye protection.	rsonal protection, hygiene and health evaluation so via contamination on hands., General measures (eye irritants), Use I to EN374) in combination with 'basic' employee training. (Effectiveness (of
1.2.8 Contributing scenario controlling	worker exposure for: PROC15 Use as laboratory reagent
Product characteristics Concentration of the Substance in Mixture/Article Physical Form (at time of use) Remarks	Covers the percentage of the substance in the product up to 100 % (unless stated differently). I liquid Low vapour pressure
Frequency and duration of use	
Exposure duration	: < 8 h
Other operational conditions affecting	workers exposure
Outdoor / Indoor	: Indoor
Temperature	: <= 40 °C
	tilation (1 to 3 air changes per hour) . exposure (Effectiveness (of a measure): 90 %) posure (Effectiveness (of a measure): 90 %)
Organisational measures to prevent /lin Assumes a good basic standard of occu Avoid splashing.	
Avoid direct eye contact with product, al	rsonal protection, hygiene and health evaluation so via contamination on hands., General measures (eye irritants) I to EN374) in combination with 'basic' employee training. (Effectiveness (of

PRCO90063327 Version : 12.00 / GB (EN)

1.3. Exposure estimation and reference to its source

Human Health

Contributing Scenario	Specific conditions	Value type	Level of Exposure	RCR
For all PROC	Qualitative approach used to conclude safe use.	All routes		
For all PROC	Qualitative approach used to conclude safe use.	All routes		

RCR = Risk characterisation ratio

For all PROC	Exposure Assessment Method : Qualitative approach used to conclude safe use.
For all PROC	Exposure Assessment Method : Qualitative approach used to conclude safe use.

1.4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

Risk management measures are based on qualitative risk characterisation. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

Risk management measures are based on qualitative risk characterisation. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

PRC090063327 Version : 12.00 / GB (EN)

Revision Date 02.06.2020

2. ES2 : Use into insect repellent products

2.1. Scenario description			
Main User Groups	:	SU 21	Consumer uses: Private households (= general public = consumers)
Product category	:	PC8	Biocidal products

2.2. Conditions of use affecting exposure

Product characteristics Covers the percentage of the substance in the product up to 100 % (unless stated differently). Amount Amount used per event : <= 10 g/event Frequency and duration of use Exposure duration : 0.01 h Frequency of use : 5 events/day Human factors not influenced by risk management Dermal exposure : whole body Other given operational conditions affecting consumers exposure Outdoor : Indoor Consumer Measures : Assumes a good basic standard of occupational hygiene is implemented. Consumer Measures : Assumes a good basic standard of occupational hygiene is implemented. Consumer Measures : Assumes a good basic standard of occupational hygiene is implemented. Consumer Measures : Assumes a good basic standard of occupational hygiene is implemented. Consumer Measures : Assumes a good basic standard of occupational hygiene is implemented. Consumer Measures : Asvid gliresthing. 2.2.2 Contributing scenario controlling consumer exposure for: PC8 Biocidal products OC9 Outdoor, Product characteristics Covers the percentage of the substance in the product up to 100 % (unless stated differently). Amount :< <= 10 g/event Frequency and duration of use :< <= 10 g/event
Concentration of the Substance in Covers the percentage of the substance in the product up to 100 % (unless stated differently). Amount
Concentration of the Substance in Covers the percentage of the substance in the product up to 100 % (unless stated differently). Amount
Amount Amount used per event : <= 10 g/event Frequency and duration of use Exposure duration : 0.01 h Exposure duration : 0.01 h : Frequency of use : 5 events/day Human factors not influenced by risk management Dermal exposure : Dermal exposure : whole body Other given operational conditions affecting consumers exposure Outdoor / Indoor : Conditions and measures related to protection of consumer (e.g. behavioural advice, personal protection and hygiene) Consumer Measures : Consumer Measures : Assumes a good basis standard of occupational hygiene is implemented. Consumer Measures : General measures (eye irritants) : Consumer Measures : Avoid direct eye contact with product, also via contamination on hands. Consumer Measures : Avoid splashing. 2.2.2 Contributing scenario controlling consumer exposure for: PC8 Blocidal products OC9 Outdoor, Product characteristics Covers the percentage of the substance in the product up to 100 % (unless stated differently). Amount : <= 10 g/event Frequency and duration of use Exposure duration Exposure duration : 0.01 h
Amount used per event : <= 10 g/event
Amount used per event : <= 10 g/event
Frequency and duration of use Exposure duration : 0.01 h Frequency of use : 5 events/day Human factors not influenced by risk management Dermal exposure Dermal exposure : whole body Other given operational conditions affecting consumers exposure Outdoor Outdoor / Indoor : Indoor Conditions and measures related to protection of consumer (e.g. behavioural advice, personal protection and hygiene) Consumer Measures : Assumes a good basic standard of occupational hygiene is implemented. Consumer Measures : General measures (e.g. initiants) Consumer Measures : Avoid direct eye contact with product, also via contamination on hands. Consumer Measures : Avoid splashing. 22.2 Contributing scenario controlling consumer exposure for: PC8 Biocidal products OC9 Outdoor, Product characteristics Covers the percentage of the substance in the product up to 100 % (unless stated differently). Amount : :<<=10 g/event Frequency and duration of use :<<=10 g/event
Exposure duration : 0.01 h Frequency of use : 5 events/day Human factors not influenced by risk management Dermal exposure : Dermal exposure : whole body Other given operational conditions affecting consumers exposure Outdoor / Indoor : Conditions and measures related to protection of consumer (e.g. behavioural advice, personal protection and hygiene) Consumer Measures related to protection of consumer (e.g. behavioural advice, personal protection and hygiene) Consumer Measures : Assumes a good basic standard of occupational hygiene is implemented. Consumer Measures : General measures (eye irritants) Consumer Measures : General measures (eye contact with product, also via contamination on hands. Consumer Measures : Avoid splashing. Z.2.2 Contributing scenario controlling consumer exposure for: PC8 Biocidal products OC9 Outdoor, Product characteristics Covers the percentage of the substance in the product up to 100 % Mixture/Article (unless stated differently). Amount : :<<= 10 g/event
Frèquency of use : 5 events/day Human factors not influenced by risk management Dermal exposure : whole body Other given operational conditions affecting consumers exposure Outdoor / Indoor : Indoor Conditions and measures related to protection of consumer (e.g. behavioural advice, personal protection and hygiene) Consumer Measures : Assumes a good basic standard of occupational hygiene is implemented. Consumer Measures : General measures (eye irritants) Consumer Measures : Avoid direct eye contact with product, also via contamination on hands. Consumer Measures : Avoid splashing. 2.2.2 Contributing scenario controlling consumer exposure for: PC8 Biocidal products OC9 Outdoor, Product characteristics Concentration of the Substance in Mixture/Article Covers the percentage of the substance in the product up to 100 % (unless stated differently). Amount Amount used per event : <= 10 g/event
Human factors not influenced by risk management Dermal exposure : whole body Other given operational conditions affecting consumers exposure Outdoor / Indoor : Indoor Conditions and measures related to protection of consumer (e.g. behavioural advice, personal protection and hygiene) Consumer Measures : Assumes a good basic standard of occupational hygiene is implemented. Consumer Measures : Assumes a good basic standard of occupational hygiene is implemented. Consumer Measures : General measures (eye irritants) Consumer Measures : Avoid direct eye contact with product, also via contamination on hands. Consumer Measures : Avoid splashing. 2.2.2 Contributing scenario controlling consumer exposure for: PC8 Biocidal products OC9 Outdoor, Product characteristics Concentration of the Substance in Mixture/Article Covers the percentage of the substance in the product up to 100 % (unless stated differently). Amount Amount used per event : <= 10 g/event Frequency and duration of use Exposure duration : 0.01 h
Dermal exposure : whole body Other given operational conditions affecting consumers exposure Outdoor / Indoor : Indoor Conditions and measures related to protection of consumer (e.g. behavioural advice, personal protection and hygiene) Consumer Measures : Assumes a good basic standard of occupational hygiene is implemented. Consumer Measures : General measures (eye irritants) Consumer Measures : Avoid direct eye contact with product, also via contamination on hands. Consumer Measures : Avoid splashing. 2.2.2 Contributing scenario controlling consumer exposure for: PC8 Biocidal products OC9 Outdoor, Product characteristics Concentration of the Substance in Mixture/Article Covers the percentage of the substance in the product up to 100 % (unless stated differently). Amount Amount used per event : <= 10 g/event
Dermal exposure : whole body Other given operational conditions affecting consumers exposure Outdoor / Indoor : Indoor Conditions and measures related to protection of consumer (e.g. behavioural advice, personal protection and hygiene) Consumer Measures : Assumes a good basic standard of occupational hygiene is implemented. Consumer Measures : General measures (eye irritants) Consumer Measures : Avoid direct eye contact with product, also via contamination on hands. Consumer Measures : Avoid splashing. 2.2.2 Contributing scenario controlling consumer exposure for: PC8 Biocidal products OC9 Outdoor, Product characteristics Concentration of the Substance in Mixture/Article Covers the percentage of the substance in the product up to 100 % (unless stated differently). Amount Amount used per event : <= 10 g/event
Other given operational conditions affecting consumers exposure Outdoor / Indoor indoor Conditions and measures related to protection of consumer (e.g. behavioural advice, personal protection and hygiene) Consumer Measures : Assumes a good basic standard of occupational hygiene is implemented. Consumer Measures : General measures (eye irritants) Consumer Measures : Avoid direct eye contact with product, also via contamination on hands. Consumer Measures : Avoid splashing. 2.2.2 Contributing scenario controlling consumer exposure for: PC8 Biocidal products OC9 Outdoor, Product characteristics Covers the percentage of the substance in the product up to 100 % (unless stated differently). Amount : <= 10 g/event
Outdoor / Indoor : Indoor Conditions and measures related to protection of consumer (e.g. behavioural advice, personal protection and hygiene) Consumer Measures : Assumes a good basic standard of occupational hygiene is implemented. Consumer Measures : General measures (eye irritants) Consumer Measures : Avoid direct eye contact with product, also via contamination on hands. Consumer Measures : Avoid splashing. 2.2.2 Contributing scenario controlling consumer exposure for: PC8 Biocidal products OC9 Outdoor, Product characteristics Covers the percentage of the substance in the product up to 100 % (unless stated differently). Amount : <= 10 g/event
Conditions and measures related to protection of consumer (e.g. behavioural advice, personal protection and hygiene) Consumer Measures : Assumes a good basic standard of occupational hygiene is implemented. Consumer Measures : General measures (eye irritants) Consumer Measures : Avoid direct eye contact with product, also via contamination on hands. Consumer Measures : Avoid splashing. 2.2.2 Contributing scenario controlling consumer exposure for: PC8 Biocidal products OC9 Outdoor, Product characteristics Covers the percentage of the substance in the product up to 100 % (unless stated differently). Amount : <= 10 g/event
Consumer Measures : Assumes a good basic standard of occupational hygiene is implemented. Consumer Measures : General measures (eye irritants) Consumer Measures : Avoid direct eye contact with product, also via contamination on hands. Consumer Measures : Avoid splashing. Z.2.2 Contributing scenario controlling consumer exposure for: PC8 Biocidal products OC9 Outdoor, Product characteristics Concentration of the Substance in Mixture/Article Consumt Amount Amount Amount used per event : <= 10 g/event
Consumer Measures : Assumes a good basic standard of occupational hygiene is implemented. Consumer Measures : General measures (eye irritants) Consumer Measures : Avoid direct eye contact with product, also via contamination on hands. Consumer Measures : Avoid splashing. Z.2.2 Contributing scenario controlling consumer exposure for: PC8 Biocidal products OC9 Outdoor, Product characteristics Concentration of the Substance in Mixture/Article Consumt Amount Amount Amount used per event : <= 10 g/event
Consumer Measures : Assumes a good basic standard of occupational hygiene is implemented. Consumer Measures : General measures (eye irritants) Consumer Measures : Avoid direct eye contact with product, also via contamination on hands. Consumer Measures : Avoid splashing. Z.2.2 Contributing scenario controlling consumer exposure for: PC8 Biocidal products OC9 Outdoor, Product characteristics Concentration of the Substance in Mixture/Article Consumt Amount Amount Amount used per event : <= 10 g/event
Consumer Measures : General measures (eye irritants) Consumer Measures : Avoid direct eye contact with product, also via contamination on hands. Consumer Measures : Avoid splashing. 2.2.2 Contributing scenario controlling consumer exposure for: PC8 Biocidal products OC9 Outdoor, Product characteristics Concentration of the Substance in Mixture/Article Covers the percentage of the substance in the product up to 100 % (unless stated differently). Amount . Amount used per event : <= 10 g/event
Consumer Measures : Avoid direct eye contact with product, also via contamination on hands. Consumer Measures : Avoid splashing. 2.2.2 Contributing scenario controlling consumer exposure for: PC8 Biocidal products OC9 Outdoor, Product characteristics Concentration of the Substance in Mixture/Article Covers the percentage of the substance in the product up to 100 % (unless stated differently). Amount
hands. Consumer Measures : Avoid splashing. 2.2.2 Contributing scenario controlling consumer exposure for: PC8 Biocidal products OC9 Outdoor, Product characteristics Concentration of the Substance in Covers the percentage of the substance in the product up to 100 % (unless stated differently). Amount Amount used per event : <= 10 g/event
Consumer Measures : Avoid splashing. 2.2.2 Contributing scenario controlling consumer exposure for: PC8 Biocidal products OC9 Outdoor, Product characteristics Concentration of the Substance in Mixture/Article Covers the percentage of the substance in the product up to 100 % (unless stated differently). Amount Amount Amount used per event : <= 10 g/event
2.2.2 Contributing scenario controlling consumer exposure for: PC8 Biocidal products OC9 Outdoor, Product characteristics Concentration of the Substance in Covers the percentage of the substance in the product up to 100 % (unless stated differently). Amount
Product characteristics Concentration of the Substance in Covers the percentage of the substance in the product up to 100 % Mixture/Article (unless stated differently). Amount Amount used per event : <= 10 g/event
Product characteristics Concentration of the Substance in Covers the percentage of the substance in the product up to 100 % Mixture/Article (unless stated differently). Amount Amount used per event : <= 10 g/event
Concentration of the Substance in Covers the percentage of the substance in the product up to 100 % (unless stated differently). Amount Amount used per event : <= 10 g/event
Concentration of the Substance in Covers the percentage of the substance in the product up to 100 % (unless stated differently). Amount Amount used per event : <= 10 g/event
Concentration of the Substance in Covers the percentage of the substance in the product up to 100 % (unless stated differently). Amount Amount used per event : <= 10 g/event
Mixture/Article (unless stated differently). Amount Amount used per event : <= 10 g/event
Amount
Amount used per event : <= 10 g/event
Frequency and duration of use Exposure duration : 0.01 h
Exposure duration : 0.01 h
Exposure duration : 0.01 h
Fraguanav at upa
Frequency of use : 5 events/day
Human factors not influenced by risk management
Dermal exposure : whole body
Other given operational conditions affecting consumers exposure
Outdoor / Indoor : Outdoor
PRCO90063327



Version : 12.00 / GB (EN)

Conditions and measures related to protection of consumer (e.g. behavioural advice, personal protection and hygiene) Consumer Measures : Assumes a good basic standard of occupational hygiene is implemented. Consumer Measures : General measures (eye irritants) Consumer Measures : Avoid direct eye contact with product, also via contamination on hands. Consumer Measures : Avoid splashing.

2.3. Exposure estimation and reference to its source

Human Health

Contributing Scenario	Specific conditions	Value type	Level of Exposure	RCR
For all PROC	Qualitative approach used to conclude safe use.	All routes		

RCR = Risk characterisation ratio

For all PROC Exposure Assessment Method : Qualitative approach used to conclude safe use.

2.4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

Risk management measures are based on qualitative risk characterisation.

Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

Revision Date 02.06.2020

3. ES3 : Formulation, On site

1. Scenario description		
Main User Groups	: SU 3	Industrial uses: Uses of substances as such or in preparations at industrial sites
Process category	: PROC3	Use in closed batch process (synthesis or formulation)
,	PROC8b	Transfer of substance or preparation (charging/ discharging) from
		to vessels/ large containers at dedicated facilities
	PROC15	Use as laboratory reagent
	PROC5	Mixing or blending in batch processes for formulation of
		preparations and articles (multistage and/ or significant contact)

3.2. Conditions of use affecting exposure

3.2.1 Contributing scenario controlling worker exposure for: PROC3 Use in closed batch process (synthesis or formulation), < 8h, OC8 Indoor

Product characteristics Concentration of the Substance in Mixture/Article Physical Form (at time of use) Process Temperature Remarks	Covers the percentage of the substance in the product up to 100 % (unless stated differently). : liquid : <= 40 °C : Low vapour pressure
Frequency and duration of use Exposure duration	: <8h
Other operational conditions affecting w Outdoor / Indoor	workers exposure : Indoor
Remarks	: Use in closed process, With occasional controlled exposure.
Technical conditions and measures Provide a basic standard of general vent	ilation (1 to 3 air changes per hour) .
Organisational measures to prevent /lin Assumes a good basic standard of occup Avoid splashing.	
	rsonal protection, hygiene and health evaluation so via contamination on hands., General measures (eye irritants)
3.2.2 Contributing scenario controlling discharging) from/ to vessels/ large con	worker exposure for: PROC8b Transfer of substance or preparation (charging/ atainers at dedicated facilities, < 8h
Product characteristics	
Concentration of the Substance in Mixture/Article	Covers the percentage of the substance in the product up to 100 % (unless stated differently).
Physical Form (at time of use) Remarks	: Liquid : Low vapour pressure
Frequency and duration of use	
Duration of the activity	: <= 8 h
PRC090063327 Version : 12.00 / GB (EN)	
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Revision Date 02.06.2020

	Revision Date	02.00.2020
Other operational conditions affecting	g workers exposure	
Outdoor / Indoor	: Indoor	
Temperature	: <= 40 °C	
Organisational measures to prevent /I Avoid splashing.	imit releases, dispersion and exposure	
Assumes a good basic standard of occ	cupational hygiene is implemented.	
Conditions and measures related to p Avoid direct eye contact with product, a	ersonal protection, hygiene and health evaluation	
Use suitable eye protection. General measures (eye irritants)		
	ed to EN374) in combination with 'basic' employee training. (Effectiveness (of	
	g worker exposure for: PROC8b Transfer of substance or preparation (ch ontainers at dedicated facilities, <15 min, OC8 Indoor	arging/
- • • • • • •		
Product characteristics	Covers the perceptors of the substance in the substance to 400.04	
Concentration of the Substance in Mixture/Article	Covers the percentage of the substance in the product up to 100 % (unless stated differently).	
Physical Form (at time of use)	: liquid	
Remarks	: Low vapour pressure	
Frequency and duration of use Exposure duration	: < 15 min	
Other operational conditions affecting		
Outdoor / Indoor	: Indoor	
Temperature	: <= 40 °C	
Technical conditions and measures Provide a basic standard of general ver	ntilation (1 to 3 air changes per hour) .	
	imit releases, dispersion and exposure	
Assumes a good basic standard of occ Avoid splashing.	supational hygiene is implemented.	
Conditions and measures related to p	ersonal protection, hygiene and health evaluation	
	also via contamination on hands., General measures (eye irritants), Use	
suitable eye protection.	ed to EN374) in combination with 'basic' employee training. (Effectiveness (of	
a measure): 90 %)	eu to EN374) in combination with basic employee training. (Enectiveness (of	
3.2.4 Contributing scenario controlling	g worker exposure for: PROC15 Use as laboratory reagent	
Product characteristics	Covers the percentage of the substance in the product up to 100%	
Concentration of the Substance in Mixture/Article	Covers the percentage of the substance in the product up to 100 % (unless stated differently).	
Physical Form (at time of use)	: liquid	
Remarks	: Low vapour pressure	
Frequency and duration of use		
Exposure duration	: <1h	
Other operational conditions affecting	g workers exposure	
PRC090063327 Version : 12.00 / GB (EN)		
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Revision Date 02.06.2020

Outdoor / Indoor Temperature	: Indoor : <= 40 °C
Technical conditions and measures	ventilation (1 to 3 air changes per hour).
Organisational measures to prevent	/limit releases, dispersion and exposure
Assumes a good basic standard of o Avoid splashing.	ccupational hygiene is implemented.
	personal protection, hygiene and health evaluation , also via contamination on hands., General measures (eye irritants)
	sted to EN374) in combination with 'basic' employee training. (Effectiveness (of
	ng worker exposure for: PROC5 Mixing or blending in batch processes for formulation
of preparations and articles (multist	age and/ or significant contact)
Product characteristics	
Concentration of the Substance in Mixture/Article	Covers the percentage of the substance in the product up to 100 % (unless stated differently).
Physical Form (at time of use)	: liquid
Remarks	: Low vapour pressure
Frequency and duration of use	
Exposure duration	: <8h
Other operational conditions affecti	ng workers exposure
Outdoor / Indoor	: Indoor : <= 40 °C
Temperature	. <= 40 C
Technical conditions and measures	ventilation (1 to 3 air changes per hour).
r tovide a basic standard of general	
Organisational measures to prevent	/limit releases, dispersion and exposure
Assumes a good basic standard of o Avoid splashing.	
	personal protection, hygiene and health evaluation
Avoid direct eye contact with product suitable eye protection.	, also via contamination on hands., General measures (eye irritants), Use
	sted to EN374) in combination with 'basic' employee training. (Effectiveness (of

PRCO90063327 Version : 12.00 / GB (EN)



3.3. Exposure estimation and reference to its source

Human Health

Contributing Scenario	Specific conditions	Value type	Level of Exposure	RCR
For all PROC	Qualitative approach used to conclude safe use.	All routes		

RCR = Risk characterisation ratio

For all PROC Exposure Assessment Method : Qualitative approach used to conclude safe use.

3.4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

Risk management measures are based on qualitative risk characterisation.

Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

4. ES4 : Formulation, Used for formulation of homecare products, Used for formulation of personal care products

4.1. Scenario description

Main User Groups	: SU 3	Industrial uses: Uses of substances as such or in preparations at industrial sites
Process category	: PROC1	Use in closed process, no likelihood of exposure
	PROC2	Use in closed, continuous process with occasional controlled
	PROC3	exposure Use in closed batch process (synthesis or formulation)
	PROC4	Use in batch and other process (synthesis) where opportunity for
	FRUC4	exposure arises
	PROC15	Use as laboratory reagent
	PROC8b	Transfer of substance or preparation (charging/ discharging) from
		to vessels/ large containers at dedicated facilities
	PROC5	Mixing or blending in batch processes for formulation of
		preparations and articles (multistage and/ or significant contact)
	PROC14	Production of preparations or articles by tabletting, compression,
		extrusion, pelletisation
	PROC9	Transfer of substance or preparation into small containers
		(dedicated filling line, including weighing)
	PROC8a	Transfer of substance or preparation (charging/ discharging) from
		to vessels/ large containers at non-dedicated facilities

4.2. Conditions of use affecting exposure

4.2.1 Contributing scenario controlling worker exposure for: PROC1 Use in closed process, no likelihood of exposure, OC8 Indoor

Product characteristics Concentration of the Substance in Mixture/Article Physical Form (at time of use) Process Temperature Remarks	Covers the percentage of the substance in the product up to 100 % (unless stated differently). : liquid : <= 40 °C : Low vapour pressure
Frequency and duration of use	
Exposure duration	: <1h
Other operational conditions affecting v Outdoor / Indoor Remarks Technical conditions and measures Provide a basic standard of general vent	: Indoor : Use in closed process
Organisational measures to prevent /lin Assumes a good basic standard of occu Avoid splashing.	

Conditions and measures related to personal protection, hygiene and health evaluation

Avoid direct eye contact with product, also via contamination on hands., General measures (eye irritants)

PRC090063327 Version : 12.00 / GB (EN)

	worker exposure for: PROC2 Use in closed, continuous process with occasional osed batch process (synthesis or formulation), OC8 Indoor, <1 hr:, CS110 without
Product characteristics Concentration of the Substance in Mixture/Article Physical Form (at time of use) Process Temperature Remarks	Covers the percentage of the substance in the product up to 100 % (unless stated differently). : liquid : <= 40 °C : Low vapour pressure
Frequency and duration of use Exposure duration	: <1h
Other operational conditions affecting Outdoor / Indoor Remarks	workers exposure : Indoor : Use in closed process
Technical conditions and measures Provide a basic standard of general ven	tilation (1 to 3 air changes per hour).
Organisational measures to prevent /lin Assumes a good basic standard of occu Avoid splashing.	
Avoid direct eye contact with product, al	ersonal protection, hygiene and health evaluation Iso via contamination on hands., General measures (eye irritants) d to EN374) in combination with 'basic' employee training. (Effectiveness (of
4.2.3 Contributing scenario controlling opportunity for exposure arises	worker exposure for: PROC4 Use in batch and other process (synthesis) where
Product characteristics Concentration of the Substance in Mixture/Article Physical Form (at time of use) Process Temperature Remarks	Covers the percentage of the substance in the product up to 100 % (unless stated differently). : liquid : <= 40 °C : Low vapour pressure
Frequency and duration of use Exposure duration	: <1h
Other operational conditions affecting Outdoor / Indoor Remarks	 workers exposure Indoor Semi-closed system, With occasional controlled exposure.
Technical conditions and measures Provide a basic standard of general ven with local exhaust ventilation, Inhalation	ntilation (1 to 3 air changes per hour) . exposure (Effectiveness (of a measure): 90 %)
Organisational measures to prevent /lin Assumes a good basic standard of occu Avoid splashing.	

PRCO90063327 Version : 12.00 / GB (EN)



Conditions and measures related to personal protection, hygiene and health evaluation

Avoid direct eye contact with product, also via contamination on hands., General measures (eye irritants), Use suitable eye protection.

Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training. (Effectiveness (of a measure): 80 %)

4.2.4 Contributing scenario controlling worker exposure for: PROC3 Use in closed batch process (synthesis or formulation), <1 hr:, CS109 with local exhaust ventilation, Without gloves

Product characteristics Concentration of the Substance in Mixture/Article Physical Form (at time of use) Process Temperature Remarks	Covers the percentage of the substance in the product up to 100 % (unless stated differently). : liquid : <= 40 °C : Low vapour pressure
Frequency and duration of use	
Exposure duration	: <1h
Other operational conditions affecting we Outdoor / Indoor Remarks	orkers exposure : Indoor : Use in closed process
Technical conditions and measures Provide a basic standard of general ventila with local exhaust ventilation, Inhalation ex	ation (1 to 3 air changes per hour) . xposure (Effectiveness (of a measure): 90 %)

Organisational measures to prevent /limit releases, dispersion and exposure Assumes a good basic standard of occupational hygiene is implemented. Avoid splashing.

Conditions and measures related to personal protection, hygiene and health evaluation

Avoid direct eye contact with product, also via contamination on hands., General measures (eye irritants) Risk of aerosols formation, Wear respiratory protection.

4.2.5 Contributing scenario controlling worker exposure for: PROC3 Use in closed batch process (synthesis or formulation), <15 min

Product characteristics Concentration of the Substance in Mixture/Article Physical Form (at time of use) Process Temperature Remarks	Covers the percentage of the substance in the product up to 100 % (unless stated differently). : liquid : <= 40 °C : Low vapour pressure
Frequency and duration of use	
Exposure duration	: < 15 min
Other operational conditions affecting w	orkers exposure
Outdoor / Indoor	: Indoor
Remarks	: Use in closed process
Technical conditions and measures Provide a basic standard of general ventil	ation (1 to 3 air changes per hour).

Organisational measures to prevent /limit releases, dispersion and exposure

PRC090063327 Version : 12.00 / GB (EN)



Assumes a good basic standard of occupational hygiene is implemented. Avoid splashing.

Conditions and measures related to personal protection, hygiene and health evaluation

Avoid direct eye contact with product, also via contamination on hands., General measures (eye irritants) Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training. (Effectiveness (of a measure): 80 %)

4.2.6 Contributing scenario controlling worker exposure for: PROC15 Use as laboratory reagent

Product characteristics

Concentration of the Substance in Mixture/Article	Covers the percentage of the substance in the product up to 100 % (unless stated differently).
Physical Form (at time of use)	: liquid
Process Temperature	: <= 40 °C
Remarks	: Low vapour pressure
Frequency and duration of use	
Exposure duration	: <1h
Other operational conditions affecting	workers exposure
Outdoor / Indoor	: Indoor
Technical conditions and measures	
Provide a basic standard of general ven with local exhaust ventilation, Inhalation	tilation (1 to 3 air changes per hour) . exposure (Effectiveness (of a measure): 90 %)
Organisational measures to prevent /lin	mit releases, dispersion and exposure

Assumes a good basic standard of occupational hygiene is implemented. Avoid splashing.

Conditions and measures related to personal protection, hygiene and health evaluation

Avoid direct eye contact with product, also via contamination on hands., General measures (eye irritants) Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training. (Effectiveness (of a measure): 80 %)

4.2.7 Contributing scenario controlling worker exposure for: PROC8b Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities

Product characteristics Concentration of the Substance in Mixture/Article Physical Form (at time of use) Process Temperature Remarks	Covers the percentage of the substance in the product up to 100 % (unless stated differently). : liquid : <= 40 °C : Low vapour pressure
Frequency and duration of use	
Exposure duration	: <1h
Other operational conditions affecting	workers exposure
Outdoor / Indoor	Indoor
Remarks	: Semi-closed system, With occasional controlled exposure.
Technical conditions and measures	
Provide a basic standard of general ver with local exhaust ventilation, Inhalation	tilation (1 to 3 air changes per hour) . exposure (Effectiveness (of a measure): 95 %)
PRCO90063327	

Version : 12.00 / GB (EN)



Organisational measures to prevent /limit releases, dispersion and exposure

Assumes a good basic standard of occupational hygiene is implemented. Avoid splashing.

Desident also as staded as

Conditions and measures related to personal protection, hygiene and health evaluation

Avoid direct eye contact with product, also via contamination on hands., General measures (eye irritants), Use suitable eye protection.

Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training. (Effectiveness (of a measure): 80 %)

4.2.8 Contributing scenario controlling worker exposure for: PROC5 Mixing or blending in batch processes for formulation of preparations and articles (multistage and/ or significant contact)

Product characteristics	
Concentration of the Substance in	Covers the percentage of the substance in the product up to 100 %
Mixture/Article	(unless stated differently).
Physical Form (at time of use)	: liquid
Process Temperature	: <= 40 °C
Remarks	: Low vapour pressure
Frequency and duration of use	
Exposure duration	: <8h
Other operational conditions affecting w	orkers exposure
Outdoor / Indoor	: Indoor
Taskaisel en ditions and measures	
Technical conditions and measures	ation (1 to 2 air changes per hour)
Provide a basic standard of general ventil	xposure (Effectiveness (of a measure): 90 %)
	xposure (Enectiveness (or a measure). 50 %)
Organisational measures to prevent /limi	t releases, dispersion and exposure
Assumes a good basic standard of occup	ational hygiene is implemented.
Avoid splashing.	
Conditions and massures related to nave	and protoction, bygions and bootth system
	sonal protection, hygiene and health evaluation
suitable eye protection.	o via contamination on hands., General measures (eye initalitis), Ose
	o EN374) in combination with 'basic' employee training. (Effectiveness (of
a measure): 80 %)	
4.2.9 Contributing scenario controlling w	orker exposure for: PROC8a Transfer of substance or preparation (charging/
discharging) from/ to vessels/ large cont	
Product characteristics	• · · · · · · · · · · · · · · · · · · ·
Concentration of the Substance in	Covers the percentage of the substance in the product up to 100 %
Mixture/Article	(unless stated differently).
Physical Form (at time of use) Process Temperature	: liquid : <= 40 °C
Remarks	: Low vapour pressure
Remarks	. Low vapour pressure
Frequency and duration of use	
Exposure duration	: <1h
Other operational conditions affecting w	orkers exposure
PRCO90063327	
Version : 12.00 / GB (EN)	
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Revision Date 02.06.2020

: Indoor

Technical conditions and measures

Provide a basic standard of general ventilation (1 to 3 air changes per hour) . with local exhaust ventilation, Inhalation exposure (Effectiveness (of a measure): 90 %)

Organisational measures to prevent /limit releases, dispersion and exposure

Assumes a good basic standard of occupational hygiene is implemented. Avoid splashing.

Conditions and measures related to personal protection, hygiene and health evaluation

Avoid direct eye contact with product, also via contamination on hands., General measures (eye irritants), Use suitable eye protection. Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training. (Effectiveness (of

a measure): 80 %)

4.2.10 Contributing scenario controlling worker exposure for: PROC14 Production of preparations or articles by tabletting, compression, extrusion, pelletisation

Product characteristics Concentration of the Substance in Mixture/Article Physical Form (at time of use) Process Temperature Remarks	Covers the percentage of the substance in the product up to 100 % (unless stated differently). : liquid : <= 40 °C : Low vapour pressure
Frequency and duration of use Exposure duration	: <8h
Outdoor / Indoor	ysical Form (at time of use) : liquid pcess Temperature : <= 40 °C
Provide a basic standard of general ver	ntilation (1 to 3 air changes per hour) . n exposure (Effectiveness (of a measure): 90 %)

Organisational measures to prevent /limit releases, dispersion and exposure

Assumes a good basic standard of occupational hygiene is implemented. Avoid splashing.

Conditions and measures related to personal protection, hygiene and health evaluation

Avoid direct eye contact with product, also via contamination on hands., General measures (eye irritants) Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training. (Effectiveness (of a measure): 80 %)

Risk of aerosols formation, Wear respiratory protection.

4.2.11 Contributing scenario controlling worker exposure for: PROC9 Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Product characteristics

Remarks	: Low vapour pressure
Process Temperature	: <= 40 °C
Physical Form (at time of use)	: liquid
Mixture/Article	(unless stated differently).
Concentration of the Substance in	Covers the percentage of the substance in the product up to 100 %

PRC090063327 Version : 12.00 / GB (EN)



Frequency and duration of use Exposure duration	: <8h
Other operational conditions affecting	n workers exposure
Outdoor / Indoor	: Indoor
Remarks	: Semi-closed system, With occasional controlled exposure.
	entilation (1 to 3 air changes per hour) . on exposure (Effectiveness (of a measure): 90 %)
	in exposure (Effectiveness (of a measure). 30 %)
Drganisational measures to prevent / Assumes a good basic standard of occ Avoid splashing.	limit releases, dispersion and exposure cupational hygiene is implemented.
Avoid direct eye contact with product,	Dersonal protection, hygiene and health evaluation also via contamination on hands., General measures (eye irritants) ed to EN374) in combination with 'basic' employee training. (Effectiveness (of
	ng worker exposure for: PROC8a Transfer of substance or preparation (charging/ ontainers at non-dedicated facilities, CS39 Equipment cleaning and maintenance
Product characteristics Concentration of the Substance in Mixture/Article Physical Form (at time of use)	Covers the percentage of the substance in the product up to 100 % (unless stated differently). : liquid
Process Temperature Remarks	 = 40 °C Low vapour pressure
requency and duration of use Exposure duration	: <4 h
Other operational conditions affecting Outdoor / Indoor	g workers exposure : Indoor
Fechnical conditions and measures Provide a basic standard of general ve	entilation (1 to 3 air changes per hour).
Organisational measures to prevent / Assumes a good basic standard of occ Avoid splashing.	limit releases, dispersion and exposure cupational hygiene is implemented.
Avoid direct eye contact with product,	personal protection, hygiene and health evaluation also via contamination on hands., General measures (eye irritants), Use
suitable eye protection. Wear chemically resistant gloves (teste a measure): 80 %)	ed to EN374) in combination with 'basic' employee training. (Effectiveness (of
2 13 Contributing scenario controlli	ng worker exposure for: PROC1 Use in closed process, no likelihood of exposure

Product characteristics Concentration of the Substance in

Covers the percentage of the substance in the product up to 100 %

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PRCO90063327 Version : 12.00 / GB (EN)

Revision Date 02.06.2020

Mixture/Article Physical Form (at time of use) Process Temperature Remarks	:	(unless stated differently). liquid <= 40 °C Low vapour pressure
Frequency and duration of use Exposure duration	:	< 15 min
Other operational conditions affecting w Outdoor / Indoor Remarks	:	kers exposure Outdoor Use in closed process

Organisational measures to prevent /limit releases, dispersion and exposure Assumes a good basic standard of occupational hygiene is implemented.

Avoid splashing.

Conditions and measures related to personal protection, hygiene and health evaluation Avoid direct eye contact with product, also via contamination on hands., General measures (eye irritants)

4.3. Exposure estimation and reference to its source

Human Health

Contributing Scenario	Specific conditions	Value type	Level of Exposure	RCR
For all PROC	Qualitative approach used to conclude safe use.	All routes		

RCR = Risk characterisation ratio

For all PROC Exposure Assessment Method : Qualitative approach used to conclude safe use.

4.4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

Risk management measures are based on qualitative risk characterisation. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.



PRC090063327 Version : 12.00 / GB (EN)

Revision Date 02.06.2020

5. ES5 : Professional end-use of polishes and wax blends (IFRA GES 5)

Main User Groups	:	SU 22	Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
Process category	:	PROC10	Roller application or brushing
		PROC11	Non industrial spraying
		PROC8a	Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities
		PROC2	Use in closed, continuous process with occasional controlled exposure

5.2. Conditions of use affecting exposure

5.2.1 Contributing scenario controlling worker exposure for: PROC10 Roller application or brushing, < 8h

Concentration of the Substance in	
	Covers percentage substance in the product up to 1 %.
Mixture/Article	
Physical Form (at time of use)	: liquid
Process Temperature	: <= 40 °C
Remarks	: Low vapour pressure
Frequency and duration of use	
Exposure duration	: <8h
Other operational conditions affecting	
Outdoor / Indoor	: Indoor
Technical conditions and measures	
	ilation (4 to 2 circhennes ner hour)
Provide a basic standard of general vent	liation (1 to 3 air changes per nour).
Organisational measures to prevent /lin	nit releases dispersion and exposure
Assumes a good basic standard of occup	
Avoid splashing.	alional hygiene is implemented.
Avoid spidsming.	
Conditions and measures related to per	sonal protection, hygiene and health evaluation
	so via contamination on hands., General measures (eye irritants), Use
suitable eye protection.	o via contamination on nands., General measures (eye initianis), Ose
Suitable eye protection.	
5.2.2 Contributing scenario controlling	worker exposure for: PPOC11 Non industrial spraving
5.2.2 Contributing scenario controlling	worker exposure for: PROC11 Non industrial spraying
5.2.2 Contributing scenario controlling	worker exposure for: PROC11 Non industrial spraying
5.2.2 Contributing scenario controlling Product characteristics	worker exposure for: PROC11 Non industrial spraying
Product characteristics	worker exposure for: PROC11 Non industrial spraying Covers percentage substance in the product up to 1 %.
Product characteristics Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 1 %.
Product characteristics Concentration of the Substance in Mixture/Article Physical Form (at time of use)	
Product characteristics Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 1 %. : liquid : <= 40 °C
Product characteristics Concentration of the Substance in Mixture/Article Physical Form (at time of use) Process Temperature	Covers percentage substance in the product up to 1 %.
Product characteristics Concentration of the Substance in Mixture/Article Physical Form (at time of use) Process Temperature	Covers percentage substance in the product up to 1 %. : liquid : <= 40 °C
Product characteristics Concentration of the Substance in Mixture/Article Physical Form (at time of use) Process Temperature Remarks	Covers percentage substance in the product up to 1 %. : liquid : <= 40 °C
 Product characteristics Concentration of the Substance in Mixture/Article Physical Form (at time of use) Process Temperature Remarks Frequency and duration of use Exposure duration 	Covers percentage substance in the product up to 1 %. : liquid : <= 40 °C : Low vapour pressure : < 15 min
 Product characteristics Concentration of the Substance in Mixture/Article Physical Form (at time of use) Process Temperature Remarks Frequency and duration of use Exposure duration Other operational conditions affecting with the second sec	Covers percentage substance in the product up to 1 %. : liquid : <= 40 °C : Low vapour pressure : < 15 min
 Product characteristics Concentration of the Substance in Mixture/Article Physical Form (at time of use) Process Temperature Remarks Frequency and duration of use Exposure duration 	Covers percentage substance in the product up to 1 %. : liquid : <= 40 °C : Low vapour pressure : < 15 min

PRCO90063327 Version : 12.00 / GB (EN)



Technical conditions and measures	
Provide a basic standard of general ve	ntilation (1 to 3 air changes per hour).
Organisational measures to prevent /I Assumes a good basic standard of occ Avoid splashing.	imit releases, dispersion and exposure supational hygiene is implemented.
	ersonal protection, hygiene and health evaluation also via contamination on hands., General measures (eye irritants)
5.2.3 Contributing scenario controlling products, Furniture care product, Lea	g worker exposure for: PROC10 Roller application or brushing,maintenance ather care product, < 4h
Product characteristics Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 1 %.
Physical Form (at time of use) Process Temperature Remarks	: liquid : <= 40 °C : Low vapour pressure
Frequency and duration of use Exposure duration	: <4 h
Outdoor / Indoor	
Technical conditions and measures Provide a basic standard of general ve	
Organisational measures to prevent /l Assumes a good basic standard of occ Avoid splashing.	imit releases, dispersion and exposure supational hygiene is implemented.
	ersonal protection, hygiene and health evaluation also via contamination on hands., General measures (eye irritants), Use
	g worker exposure for: PROC8a Transfer of substance or preparation (charging/ ontainers at non-dedicated facilities, maintenance products, Leather care product, protection
Product characteristics Concentration of the Substance in Mixture/Article Physical Form (at time of use) Process Temperature Remarks	Covers percentage substance in the product up to 1 %. : liquid : <= 40 °C : Low vapour pressure
Frequency and duration of use Exposure duration	: < 15 min
•	

PRCO90063327 Version : 12.00 / GB (EN)



Technical conditions and measures Provide a basic standard of general ventilation (1 to 3 air changes per hour) . Organisational measures to prevent /limit releases, dispersion and exposure Assumes a good basic standard of occupational hygiene is implemented. Avoid splashing. Conditions and measures related to personal protection, hygiene and health evaluation Avoid direct eye contact with product, also via contamination on hands., General measures (eye irritants), Use suitable eye protection. 5.2.5 Contributing scenario controlling worker exposure for: PROC2 Use in closed, continuous process with occasional controlled exposure Product characteristics Concentration of the Substance in Covers percentage substance in the product up to 1 %. Mixture/Article Physical Form (at time of use) liquid Process Temperature <= 40 °C Remarks Low vapour pressure Frequency and duration of use Exposure duration : < 15 min Other operational conditions affecting workers exposure Outdoor / Indoor : Indoor Remarks Use in closed process Technical conditions and measures Provide a basic standard of general ventilation (1 to 3 air changes per hour). Organisational measures to prevent /limit releases, dispersion and exposure Assumes a good basic standard of occupational hygiene is implemented. Avoid splashing. Conditions and measures related to personal protection, hygiene and health evaluation Avoid direct eye contact with product, also via contamination on hands., General measures (eye irritants) 5.2.6 Contributing scenario controlling worker exposure for: PROC8a Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities, Gloves, Respiratory protection **Product characteristics** Concentration of the Substance in Covers percentage substance in the product up to 1 %. Mixture/Article Physical Form (at time of use) : liauid <= 40 °C **Process Temperature** Remarks : Low vapour pressure Frequency and duration of use Exposure duration : < 15 min Other operational conditions affecting workers exposure Outdoor / Indoor : Indoor **Technical conditions and measures** PRCO90063327 Version : 12.00 / GB (EN)



Provide a basic standard of general ventilation (1 to 3 air changes per hour) .

Organisational measures to prevent /limit releases, dispersion and exposure

Assumes a good basic standard of occupational hygiene is implemented. Avoid splashing.

Conditions and measures related to personal protection, hygiene and health evaluation

Avoid direct eye contact with product, also via contamination on hands., General measures (eye irritants), Use suitable eye protection. Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training. (Effectiveness (of a measure): 80 %) Respirator, APF 10 (Effectiveness (of a measure): 90 %)

5.3. Exposure estimation and reference to its source

Human Health

Contributing Scenario	Specific conditions	Value type	Level of Exposure	RCR
For all PROC	Qualitative approach used to conclude safe use.	All routes		

RCR = Risk characterisation ratio

For all PROC Exposure Assessment Method : Qualitative approach used to conclude safe use.

5.4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

Risk management measures are based on qualitative risk characterisation. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.



PRC090063327 Version : 12.00 / GB (EN)

6. ES6 : Use in formulation, end-products

Main User Groups	:	SU 3	Industrial uses: Uses of substances as such or in preparations at industrial sites
Process category	:	PROC8b	Transfer of substance or preparation (charging/ discharging) from to vessels/ large containers at dedicated facilities
		PROC2	Use in closed, continuous process with occasional controlled exposure
		PROC15	Use as laboratory reagent
		PROC1	Use in closed process, no likelihood of exposure
		PROC3	Use in closed batch process (synthesis or formulation)
		PROC5	Mixing or blending in batch processes for formulation of preparations and articles (multistage and/ or significant contact)
		PROC8a	Transfer of substance or preparation (charging/ discharging) from to vessels/ large containers at non-dedicated facilities
		PROC9	Transfer of substance or preparation into small containers (dedicated filling line, including weighing)
		PROC14	Production of preparations or articles by tabletting, compression, extrusion, pelletisation

6.2. Conditions of use affecting exposure

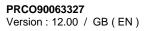
6.2.1 Contributing scenario controlling worker exposure for: PROC8b Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities, 5-25 %

ses, dispersion and exposure hygiene is implemented. rotection, hygiene and health evaluation ntamination on hands., General measures (eye irritants), Use
to 3 air changes per hour) .
mi-closed system, With occasional controlled exposure.
exposure oor
h
v vapour pressure
iid 40 °C
vers the percentage of the substance in the product up to 25 %.

PRCO90063327 Version : 12.00 / GB (EN)



	Revision Date 02.06.
Product characteristics	
Concentration of the Substance in Mixture/Article	Covers the percentage of the substance in the product up to 25 %.
Physical Form (at time of use)	: liquid
Process Temperature	: <= 40 °C
Remarks	: Low vapour pressure
Frequency and duration of use	
Exposure duration	: < 15 min
Other operational conditions affecting Outdoor / Indoor	g workers exposure : Indoor
Remarks	: Use in closed process
Technical conditions and measures Provide a basic standard of general ve	entilation (1 to 3 air changes per hour).
	limit releases, dispersion and exposure
Assumes a good basic standard of occ Avoid splashing.	cupational hygiene is implemented.
	personal protection, hygiene and health evaluation
Avoid direct eye contact with product,	also via contamination on hands., General measures (eye irritants)
6.2.3 Contributing scenario controllin	g worker exposure for: PROC15 Use as laboratory reagent, 5-25 %
Product characteristics	
Concentration of the Substance in	Covers the percentage of the substance in the product up to 25 %.
Mixture/Article	· liquid
Physical Form (at time of use) Process Temperature	: liquid : <= 40 °C
Remarks	: Low vapour pressure
Frequency and duration of use	
Exposure duration	: < 15 min
Other operational conditions affecting Outdoor / Indoor	g workers exposure : Indoor
Technical conditions and measures	entilation (1 to 3 air changes per hour).
i tovide a basic standard of general ve	
Organizational management (limit releases, dispersion and surressure
Organisational measures to prevent / Assumes a good basic standard of occ	limit releases, dispersion and exposure cupational hygiene is implemented.
Avoid splashing.	saparona nygiono io impiononou.
Conditions and measures related to a	personal protection, hygiene and health evaluation
	also via contamination on hands., General measures (eye irritants)
6.2.4 Contributing scenario controllin	g worker exposure for: PROC1 Use in closed process, no likelihood of exposure
0.2.7 Contributing Scenario Controllin	g worker exposure for Fixoor use in closed process, no intellitord of exposure
_	
Product characteristics Concentration of the Substance in	Covers the percentage of the substance in the product up to $25.\%$
Mixture/Article	Covers the percentage of the substance in the product up to 25 %.
Physical Form (at time of use)	: liquid



Revision Date 02.06.2020

Process Temperature Remarks	: <= 40 °C : Low vapour pressure
Frequency and duration of use Exposure duration	: <1h
Other operational conditions affecti	ng workers exposure
Outdoor / Indoor	: Indoor
Remarks	: Use in closed process
Technical conditions and measures Provide a basic standard of general v	ventilation (1 to 3 air changes per hour).
	t /limit releases, dispersion and exposure accupational hygiene is implemented.
	personal protection, hygiene and health evaluation t, also via contamination on hands., General measures (eye irritants)
6.2.5 Contributing scenario controll formulation)	ing worker exposure for: PROC3 Use in closed batch process (synthesis or
.	
Product characteristics	Covers the perceptage of the substance is the product we take 05.0/
Concentration of the Substance in Mixture/Article	Covers the percentage of the substance in the product up to 25 %.
Physical Form (at time of use)	: liquid
Process Temperature	$\therefore = 40 ^{\circ}\text{C}$
Remarks	: Low vapour pressure
Frequency and duration of use	
Exposure duration	: <4 h
Other operational conditions affecti	ng workers exposure
Outdoor / Indoor	: Indoor
Remarks	: Use in closed process
Technical conditions and measures	
	ventilation (1 to 3 air changes per hour) .
	t /limit releases, dispersion and exposure accupational hygiene is implemented.
	personal protection, hygiene and health evaluation t, also via contamination on hands., General measures (eye irritants)
6.2.6 Contributing scenario controll of preparations and articles (multist	ing worker exposure for: PROC5 Mixing or blending in batch processes for formulation tage and/ or significant contact)
Product characteristics Concentration of the Substance in Mixture/Article	Covers the percentage of the substance in the product up to 25 %.
Physical Form (at time of use)	: liquid
Process Temperature	: <= 40 °C
PRCO90063327	
Version : 12.00 / GB (EN)	SOLVAY



Revision Date 02.06.2020

Remarks	: Low vapour pressure
Frequency and duration of use	
Exposure duration	: <4 h
Other operational conditions affecting Outdoor / Indoor	workers exposure : Indoor
Technical conditions and measures	stillation (4 to 2 pix shore so how)
Provide a basic standard of general ver	Tillation (T to 3 all changes per hour).
Organisational measures to prevent /li Assumes a good basic standard of occ Avoid splashing.	imit releases, dispersion and exposure upational hygiene is implemented.
	ersonal protection, hygiene and health evaluation also via contamination on hands., General measures (eye irritants), Use
6.2.7 Contributing scenario controlling discharging) from/ to vessels/ large co	g worker exposure for: PROC8a Transfer of substance or preparation (charging/ ontainers at non-dedicated facilities
Product characteristics	
Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 1 %.
Physical Form (at time of use) Process Temperature	: liquid : <= 40 °C
Remarks	: Low vapour pressure
Frequency and duration of use	
Exposure duration	: <4 h
Other operational conditions affecting	workers exposure
Outdoor / Indoor	: Indoor
Technical conditions and measures Provide a basic standard of general ver	ntilation (1 to 3 air changes per hour).
Organisational measures to prevent /li Assumes a good basic standard of occ Avoid splashing.	imit releases, dispersion and exposure upational hygiene is implemented.
Conditions and measures related to pe	ersonal protection, hygiene and health evaluation also via contamination on hands., General measures (eye irritants), Use
6.2.8 Contributing scenario controlling controlling controlled exposure	g worker exposure for: PROC2 Use in closed, continuous process with occasional
Product characteristics Concentration of the Substance in	Covers percentage substance in the product up to 1 %.
Mixture/Article Physical Form (at time of use)	: liquid
Process Temperature	: <= 40 °C
Remarks	: Low vapour pressure

PRCO90063327 Version : 12.00 / GB (EN)

Frequency and duration of use	
Exposure duration	: < 15 min
Other operational conditions affecting	a workers exposure
Outdoor / Indoor	: Indoor
Remarks	: Use in closed process
Technical conditions and measures Provide a basic standard of general ve	ntilation (1 to 3 air changes per hour) .
Organisational measures to prevent /I Assumes a good basic standard of occ Avoid splashing.	imit releases, dispersion and exposure cupational hygiene is implemented.
	ersonal protection, hygiene and health evaluation also via contamination on hands., General measures (eye irritants)
6.2.9 Contributing scenario controlling	g worker exposure for: PROC15 Use as laboratory reagent, < 1%
Product characteristics	
Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 1 %.
Physical Form (at time of use)	: liquid
Process Temperature	<= 40 °C
Remarks	: Low vapour pressure
Frequency and duration of use Exposure duration	: < 15 min
Other operational conditions affecting Outdoor / Indoor	g workers exposure : Indoor
Technical conditions and measures Provide a basic standard of general ve	ntilation (1 to 3 air changes per hour).
Organisational measures to prevent /I Assumes a good basic standard of occ Avoid splashing.	imit releases, dispersion and exposure cupational hygiene is implemented.
	ersonal protection, hygiene and health evaluation also via contamination on hands., General measures (eye irritants)
6.2.10 Contributing scenario controllin opportunity for exposure arises, < 1%	ng worker exposure for: PROC4 Use in batch and other process (synthesis) where
Product characteristics	
Concentration of the Substance in	Covers percentage substance in the product up to 1 %.
Mixture/Article Physical Form (at time of use)	: liquid
Process Temperature	$\therefore = 40 ^{\circ}\text{C}$
Remarks	: Low vapour pressure
Frequency and duration of use	· 1 h
Exposure duration	: <1h
PRCO90063327 Version : 12.00 / GB (EN)	
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Other operational conditions affecting	
Outdoor / Indoor Remarks	: Indoor
Remarks	: Semi-closed system, With occasional controlled exposure.
Technical conditions and measures Provide a basic standard of general ver	ntilation (1 to 3 air changes per hour) .
Organisational measures to prevent /li Assumes a good basic standard of occ Avoid splashing.	imit releases, dispersion and exposure supational hygiene is implemented.
	ersonal protection, hygiene and health evaluation also via contamination on hands., General measures (eye irritants), Use
6.2.11 Contributing scenario controllir containers (dedicated filling line, inclu	ng worker exposure for: PROC9 Transfer of substance or preparation into small Iding weighing)
Product characteristics Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 1 %.
Physical Form (at time of use)	: liquid
Process Temperature	: <= 40 °C
Remarks	: Low vapour pressure
Frequency and duration of use	
Exposure duration	: <1h
Other operational conditions affecting	u workers exposure
Outdoor / Indoor	: Indoor
Remarks	: Semi-closed system, With occasional controlled exposure.
Technical conditions and measures	
Provide a basic standard of general ver	ntilation (1 to 3 air changes per hour).
•	imit releases, dispersion and exposure
Assumes a good basic standard of occ Avoid splashing.	upational hygiene is implemented.
Avoid spidsning.	
	ersonal protection, hygiene and health evaluation
Avoid direct eye contact with product, a	also via contamination on hands., General measures (eye irritants)
6.2.12 Contributing scenario controllir compression, extrusion, pelletisation	ng worker exposure for: PROC14 Production of preparations or articles by tabletting,
Product characteristics	
Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 1 %.
Physical Form (at time of use)	: liquid
Process Temperature	<= 40 °C
Remarks	: Low vapour pressure
Frequency and duration of use	
Exposure duration	: < 8 h
PRC090063327	
Version : 12.00 / GB (EN)	
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Revision Date 02.06.2020

Other operational conditions af Outdoor / Indoor	fecting workers exposure : Indoor		
Technical conditions and meas Provide a basic standard of gen		iges per hour) .	
Organisational measures to pre Assumes a good basic standard Avoid splashing.			
Conditions and measures relate Avoid direct eye contact with pro Risk of aerosols formation, Wea	oduct, also via contamination o	/giene and health evaluation on hands., General measures (eye irrita	ints)
6.3. Exposure estimation and re	eference to its source		

Human Health

Contributing Scenario	Specific conditions	Value type	Level of Exposure	RCR
For all PROC	Qualitative approach used to conclude safe use.	All routes		

RCR = Risk characterisation ratio

For all PROC Exposure Assessment Method : Qualitative approach used to conclude safe use.

6.4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

Risk management measures are based on qualitative risk characterisation. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

Revision Date 02.06.2020

7. ES7 : Industrial use, Use in formulation, Cosmetic products

1. Scenario description		
Main User Groups	: SU 3 Industrial uses: Uses of substances as such or in industrial sites	preparations at
Process category	: PROC8b Transfer of substance or preparation (charging/ di to vessels/ large containers at dedicated facilities	scharging) from
	PROC2 Use in closed, continuous process with occasiona exposure	l controlled
	PROC15 Use as laboratory reagent	
	PROC1 Use in closed process, no likelihood of exposure	
	PROC3 Use in closed batch process (synthesis or formula	tion)
	PROC5 Mixing or blending in batch processes for formular preparations and articles (multistage and/ or signif	tion of
	PROC8a Transfer of substance or preparation (charging/ di to vessels/ large containers at non-dedicated facili	
	PROC9 Transfer of substance or preparation into small co (dedicated filling line, including weighing)	

7.2. Conditions of use affecting exposure

7.2.1 Contributing scenario controlling worker exposure for: PROC5 Mixing or blending in batch processes for formulation of preparations and articles (multistage and/ or significant contact), 100 %

Product characteristics

Concentration of the Substance in Mixture/Article Physical Form (at time of use) Process Temperature Remarks	Covers the percentage of the substance in the product up to 100 % (unless stated differently). : liquid : <= 40 °C : Low vapour pressure
Frequency and duration of use Exposure duration	: <1h
Other operational conditions affecting	
Outdoor / Indoor	: Indoor
Remarks	: Semi-closed system, With occasional controlled exposure.
Technical conditions and measures Provide a basic standard of general vent Organisational measures to prevent /lin Assumes a good basic standard of occu Avoid splashing.	nit releases, dispersion and exposure
	rsonal protection, hygiene and health evaluation so via contamination on hands., General measures (eye irritants), Use
7.2.2 Contributing scenario controlling controlled exposure, 100 %	worker exposure for: PROC2 Use in closed, continuous process with occasional
Product characteristics Concentration of the Substance in	Covers the percentage of the substance in the product up to 100 %

PRCO90063327 Version : 12.00 / GB (EN)



Revision Date 02.06.2020

Nivturo (Articlo	(unless stated differently)
Mixture/Article Physical Form (at time of use)	(unless stated differently). i liquid
Process Temperature	$= 40 ^{\circ}\text{C}$
Remarks	: Low vapour pressure
Frequency and duration of use	
Exposure duration	: < 15 min
Other operational conditions affectir	na workers exposure
Outdoor / Indoor	: Indoor
Remarks	: Use in closed process
Fechnical conditions and measures	
Provide a basic standard of general v	ventilation (1 to 3 air changes per hour).
Organisational measures to prevent Assumes a good basic standard of or Avoid splashing.	/limit releases, dispersion and exposure ccupational hygiene is implemented.
	personal protection, hygiene and health evaluation , also via contamination on hands., General measures (eye irritants)
7.2.3 Contributing scenario controlli	ng worker exposure for: PROC15 Use as laboratory reagent, 100 %
Product characteristics Concentration of the Substance in Mixture/Article Physical Form (at time of use) Process Temperature Remarks	Covers the percentage of the substance in the product up to 100 % (unless stated differently). Iiquid < <= 40 °C Low vapour pressure
Frequency and duration of use	
Exposure duration	: < 15 min
Other operational conditions affectir Outdoor / Indoor	ng workers exposure : Indoor
Technical conditions and measures Provide a basic standard of general v	ventilation (1 to 3 air changes per hour).
Organisational measures to prevent Assumes a good basic standard of or Avoid splashing.	/limit releases, dispersion and exposure ccupational hygiene is implemented.
	personal protection, hygiene and health evaluation , also via contamination on hands., General measures (eye irritants)
7.2.4 Contributing scenario controlli	ng worker exposure for: PROC1 Use in closed process, no likelihood of exposure
	· · · · ·
Product characteristics	
Concentration of the Substance in	Covers the percentage of the substance in the product up to 100 %
Mixture/Article	(unless stated differently).
Physical Form (at time of use)	: liquid
Process Temperature	: <= 40 °C
Remarks	· Low vapour pressure

:

Low vapour pressure

PRCO90063327 Version : 12.00 / GB (EN)

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Remarks



Frequency and duration of use	
Exposure duration	: <1h
Other operational conditions affecting	workers exposure
Outdoor / Indoor	: Indoor
Remarks	: Use in closed process
Technical conditions and measures Provide a basic standard of general ver	ntilation (1 to 3 air changes per hour).
Assumes a good basic standard of occu Avoid splashing.	mit releases, dispersion and exposure upational hygiene is implemented.
	ersonal protection, hygiene and health evaluation Iso via contamination on hands., General measures (eye irritants)
7.2.5 Contributing scenario controlling formulation)	g worker exposure for: PROC3 Use in closed batch process (synthesis or
Product characteristics Concentration of the Substance in	Covers the percentage of the substance in the product up to 100 %
Mixture/Article	(unless stated differently).
Physical Form (at time of use)	: liquid
Process Temperature	$= 40 ^{\circ}\text{C}$
Remarks	: Low vapour pressure
Frequency and duration of use Exposure duration	: <4 h
Other operational conditions affecting	workers exposure
Outdoor / Indoor	: Indoor
Remarks	: Use in closed process
Technical conditions and measures Provide a basic standard of general ver	ntilation (1 to 3 air changes per hour) .
Organisational measures to prevent /li Assumes a good basic standard of occu Avoid splashing.	mit releases, dispersion and exposure upational hygiene is implemented.
	ersonal protection, hygiene and health evaluation Iso via contamination on hands., General measures (eye irritants)
7.2.6 Contributing scenario controlling of preparations and articles (multistag	g worker exposure for: PROC5 Mixing or blending in batch processes for formulation e and/ or significant contact)
.	
Product characteristics	
Concentration of the Substance in Mixture/Article	Covers the percentage of the substance in the product up to 100 %
Physical Form (at time of use)	(unless stated differently). : liquid
Process Temperature	$= 40 ^{\circ}\text{C}$
Remarks	: Low vapour pressure
PRC090063327	
Version : 12.00 / GB (EN)	
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Frequency and duration of use Exposure duration	: <4 h
Other operational conditions affecting v Outdoor / Indoor	vorkers exposure : Indoor
Technical conditions and measures Provide a basic standard of general vention	ilation (1 to 3 air changes per hour) .
Organisational measures to prevent /lim Assumes a good basic standard of occup Avoid splashing.	
	sonal protection, hygiene and health evaluation so via contamination on hands., General measures (eye irritants), Use
7.2.7 Contributing scenario controlling discharging) from/ to vessels/ large con	worker exposure for: PROC8a Transfer of substance or preparation (charging/ tainers at non-dedicated facilities
Product characteristics Concentration of the Substance in	Covers the percentage of the substance in the product up to 25 %.
Mixture/Article	
Physical Form (at time of use) Process Temperature	: liquid : <= 40 °C
Remarks	: Low vapour pressure
Frequency and duration of use	
Exposure duration	: <4 h
Other operational conditions affecting v Outdoor / Indoor	vorkers exposure : Indoor
Technical conditions and measures Provide a basic standard of general vention	ilation (1 to 3 air changes per hour).
Organisational measures to prevent /lim Assumes a good basic standard of occup Avoid splashing.	
	sonal protection, hygiene and health evaluation so via contamination on hands., General measures (eye irritants), Use
7.2.8 Contributing scenario controlling controlled exposure	worker exposure for: PROC2 Use in closed, continuous process with occasional
Product characteristics Concentration of the Substance in	Covers the percentage of the substance in the product up to 25 %.
Mixture/Article	
Physical Form (at time of use) Process Temperature	: liquid : <= 40 °C
Remarks	: Low vapour pressure
Frequency and duration of use	
PRC090063327	
Version : 12.00 / GB (EN)	SOLVAY
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	Revision Date 02.06.202
Exposure duration	: < 15 min
Other operational conditions affecting	workers exposure
Outdoor / Indoor	: Indoor
Remarks	: Use in closed process
Technical conditions and measures Provide a basic standard of general ver	ntilation (1 to 3 air changes per hour).
Organisational measures to prevent /l Assumes a good basic standard of occ Avoid splashing.	imit releases, dispersion and exposure upational hygiene is implemented.
	ersonal protection, hygiene and health evaluation also via contamination on hands., General measures (eye irritants)
7.2.9 Contributing scenario controlling	g worker exposure for: PROC15 Use as laboratory reagent, 5-25 %
Product characteristics	
Concentration of the Substance in	Covers the percentage of the substance in the product up to 25 %.
Mixture/Article	
Physical Form (at time of use) Process Temperature	: liquid : <= 40 °C
Remarks	: Low vapour pressure
Frequency and duration of use	
Exposure duration	: < 15 min
Other operational conditions affecting Outdoor / Indoor	j workers exposure : Indoor
Technical conditions and measures Provide a basic standard of general ve	ntilation (1 to 3 air changes per hour) .
Organisational measures to prevent /l Assumes a good basic standard of occ Avoid splashing.	imit releases, dispersion and exposure upational hygiene is implemented.
	ersonal protection, hygiene and health evaluation also via contamination on hands., General measures (eye irritants)
	ng worker exposure for: PROC8b Transfer of substance or preparation (charging/ ontainers at dedicated facilities, 5-25 %
Product characteristics Concentration of the Substance in	Covers the percentage of the substance in the product up to 25 %
Mixture/Article	(unless stated differently).
Physical Form (at time of use)	: liquid : <= 40 °C
Process Temperature Remarks	: <= 40 °C : Low vapour pressure
Frequency and duration of use	
Exposure duration	: <1h
Other operational conditions affecting	i workers exposure
PRCO90063327	
Version : 12.00 / GB (EN)	
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Revision Dat	e 02.06.2020

Outdoor / Indoor Remarks	 Indoor Semi-closed system, With occasional controlled exposure.
echnical conditions and measures Provide a basic standard of general ver	ntilation (1 to 3 air changes per hour).
Organisational measures to prevent /I Assumes a good basic standard of occ Avoid splashing.	imit releases, dispersion and exposure supational hygiene is implemented.
	ersonal protection, hygiene and health evaluation also via contamination on hands., General measures (eye irritants), Use
2.2.11 Contributing scenario controllin ontainers (dedicated filling line, inclu	ng worker exposure for: PROC9 Transfer of substance or preparation into small Iding weighing)
Product characteristics	
Concentration of the Substance in	Covers the percentage of the substance in the product up to 25 %.
Mixture/Article	. liquid
Physical Form (at time of use) Process Temperature	: liquid : <= 40 °C
Remarks	: Low vapour pressure
requency and duration of use	
Exposure duration	: <1h
Other operational conditions affecting	u workers exposure
Outdoor / Indoor	: Indoor
Remarks	: Semi-closed system, With occasional controlled exposure.
echnical conditions and measures	
Provide a basic standard of general ve	ntilation (1 to 3 air changes per hour).
Drganisational measures to prevent /l Assumes a good basic standard of occ Avoid splashing.	imit releases, dispersion and exposure upational hygiene is implemented.
	ersonal protection, hygiene and health evaluation also via contamination on hands., General measures (eye irritants)

Human Health

Contributing Scenario	Specific conditions	Value type	Level of Exposure	RCR
For all PROC	Qualitative approach used to conclude safe use.	All routes		

RCR = Risk characterisation ratio

For all PROC

Exposure Assessment Method : Qualitative approach used to conclude safe use.

PRC090063327 Version : 12.00 / GB (EN)



7.4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

Risk management measures are based on qualitative risk characterisation.

Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

8. ES8 : Industrial use, end-products

Main User Groups	: SU	3 Industrial uses: Uses of substances as such or in preparations at
		industrial sites
Process category	: P R	OC8b Transfer of substance or preparation (charging/ discharging) from to vessels/ large containers at dedicated facilities
	PR	OC2 Use in closed, continuous process with occasional controlled exposure
	PR	DC8a Transfer of substance or preparation (charging/ discharging) from to vessels/ large containers at non-dedicated facilities
	PR	OC4 Use in batch and other process (synthesis) where opportunity for exposure arises
	PR	DC7 Industrial spraying
	PR	OC10 Roller application or brushing
	PR	DC13 Treatment of articles by dipping and pouring

8.2. Conditions of use affecting exposure

8.2.1 Contributing scenario controlling worker exposure for: PROC8b Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities, CS110 without local exhaust ventilation

Product characteristics Concentration of the Substance in Mixture/Article Physical Form (at time of use)	Covers percentage substance in the product up to 1 %.		
Process Temperature	: <= 40 °C		
Remarks	: Low vapour pressure		
Frequency and duration of use			
Exposure duration	: < 15 min		
Other operational conditions affecting w	•		
Outdoor / Indoor	: Indoor		
Remarks	: Semi-closed system, With occasional controlled exposure.		
Technical conditions and measures Provide a basic standard of general ventilation (1 to 3 air changes per hour).			
Organisational measures to prevent /limit releases, dispersion and exposure Assumes a good basic standard of occupational hygiene is implemented. Avoid splashing.			
Conditions and measures related to personal protection, hygiene and health evaluation Avoid direct eye contact with product, also via contamination on hands., General measures (eye irritants), Use suitable eye protection.			
Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training. (Effectiveness (of a measure): 80 %)			
8.2.2 Contributing scenario controlling worker exposure for: PROC2 Use in closed, continuous process with occasional controlled exposure, <15 min, CS109 with local exhaust ventilation			

Product characteristics

Concentration of the Substance in

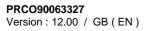
Covers percentage substance in the product up to 1 %.

PRCO90063327 Version : 12.00 / GB (EN)



Revision Date 02.06.2020

Mixture/Article Physical Form (at time of use) Process Temperature	
	: liquid
	: <= 40 °C
Remarks	: Low vapour pressure
Frequency and duration of use	
Exposure duration	: < 15 min
Other operational conditions affecting	
Outdoor / Indoor Remarks	: Indoor : Use in closed process
Remarks	
Technical conditions and measures Provide a basic standard of general ven with local exhaust ventilation (Effectiven	
Organisational measures to prevent /lin Assumes a good basic standard of occu Avoid splashing.	
Avoid direct eye contact with product, al	ersonal protection, hygiene and health evaluation Iso via contamination on hands., General measures (eye irritants) d to EN374) in combination with 'basic' employee training. (Effectiveness (of
controlled exposure, <15 min, CS110 v Product characteristics Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 1 %.
Physical Form (at time of use) Process Temperature	: liquid : <= 40 °C
Physical Form (at time of use) Process Temperature Remarks	
Process Temperature Remarks	<= 40 °C
Process Temperature Remarks	<= 40 °C
Process Temperature Remarks Frequency and duration of use Exposure duration	 : <= 40 °C : Low vapour pressure : < 15 min
Process Temperature Remarks Frequency and duration of use Exposure duration Other operational conditions affecting	 : <= 40 °C : Low vapour pressure : < 15 min workers exposure
Process Temperature Remarks Frequency and duration of use Exposure duration	 : <= 40 °C : Low vapour pressure : < 15 min workers exposure : Indoor
Process Temperature Remarks Frequency and duration of use Exposure duration Other operational conditions affecting Outdoor / Indoor	 = 40 °C : Low vapour pressure : < 15 min workers exposure : Indoor : Use in closed process
Process Temperature Remarks Frequency and duration of use Exposure duration Other operational conditions affecting Outdoor / Indoor Remarks Technical conditions and measures	 : <= 40 °C : Low vapour pressure : < 15 min workers exposure : Indoor : Use in closed process atilation (1 to 3 air changes per hour). mit releases, dispersion and exposure



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8.2.4 Contributing scenario controlling worker exposure for: PROC8a Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities, OC9 Outdoor Product characteristics Concentration of the Substance in Covers percentage substance in the product up to 1 %. Mixture/Article Physical Form (at time of use) : liquid Process Temperature <= 40 °C Remarks : Low vapour pressure Frequency and duration of use Exposure duration : <1h Other operational conditions affecting workers exposure Outdoor / Indoor : Outdoor Organisational measures to prevent /limit releases, dispersion and exposure Assumes a good basic standard of occupational hygiene is implemented. Avoid splashing. Conditions and measures related to personal protection, hygiene and health evaluation Avoid direct eye contact with product, also via contamination on hands., General measures (eye irritants), Use suitable eye protection. Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training. (Effectiveness (of a measure): 80 %) 8.2.5 Contributing scenario controlling worker exposure for: PROC4 Use in batch and other process (synthesis) where opportunity for exposure arises, OC9 Outdoor **Product characteristics** Concentration of the Substance in Covers percentage substance in the product up to 1 %. Mixture/Article Physical Form (at time of use) 2 liquid <= 40 °C **Process Temperature** Remarks : Low vapour pressure Frequency and duration of use Exposure duration : <8h Other operational conditions affecting workers exposure Outdoor / Indoor Outdoor 2 Remarks Semi-closed system, With occasional controlled exposure. Organisational measures to prevent /limit releases, dispersion and exposure Assumes a good basic standard of occupational hygiene is implemented. Avoid splashing. Conditions and measures related to personal protection, hygiene and health evaluation Avoid direct eye contact with product, also via contamination on hands., General measures (eye irritants), Use suitable eve protection. Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training. (Effectiveness (of a measure): 80 %)

PRCO90063327 Version : 12.00 / GB (EN)

8.2.6 Contributing scenario controlling worker exposure for: PROC8a Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities, <1 hr:, CS110 without local exhaust ventilation Product characteristics Concentration of the Substance in Covers percentage substance in the product up to 1 %. Mixture/Article Physical Form (at time of use) liquid : Process Temperature <= 40 °C Remarks Low vapour pressure Frequency and duration of use Exposure duration : <1h Other operational conditions affecting workers exposure Outdoor / Indoor : Indoor Technical conditions and measures Provide a basic standard of general ventilation (1 to 3 air changes per hour). Organisational measures to prevent /limit releases, dispersion and exposure Assumes a good basic standard of occupational hygiene is implemented. Avoid splashing. Conditions and measures related to personal protection, hygiene and health evaluation Avoid direct eye contact with product, also via contamination on hands., General measures (eye irritants), Use suitable eye protection. Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training. (Effectiveness (of a measure): 80 %) 8.2.7 Contributing scenario controlling worker exposure for: PROC7 Industrial spraying, OC9 Outdoor **Product characteristics** Concentration of the Substance in Covers percentage substance in the product up to 1 %. Mixture/Article Physical Form (at time of use) : liquid Process Temperature <= 40 °C Remarks : Low vapour pressure Frequency and duration of use Exposure duration : <1h Other operational conditions affecting workers exposure Outdoor / Indoor : Outdoor **Technical conditions and measures** Provide a basic standard of general ventilation (1 to 3 air changes per hour) . Organisational measures to prevent /limit releases, dispersion and exposure Assumes a good basic standard of occupational hygiene is implemented. Avoid splashing.

Conditions and measures related to personal protection, hygiene and health evaluation

Avoid direct eye contact with product, also via contamination on hands., General measures (eye irritants) Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training. (Effectiveness (of a measure): 80 %)



PRC090063327 Version : 12.00 / GB (EN)

8.2.8 Contributing scenario controlling worker exposure for: PROC10 Roller application or brushing, OC9 Outdoor

 Product characteristics Concentration of the Substance in Mixture/Article Physical Form (at time of use) Process Temperature Remarks Frequency and duration of use Exposure duration 	Covers percentage substance in the product up to 1 %. : liquid : <= 40 °C : Low vapour pressure : < 8 h	
Other operational conditions affecting v Outdoor / Indoor	: Outdoor	
Organisational measures to prevent /lin Assumes a good basic standard of occup Avoid splashing.		
Avoid direct eye contact with product, als suitable eye protection.	rsonal protection, hygiene and health evaluation so via contamination on hands., General measures (eye irritants), Use I to EN374) in combination with 'basic' employee training. (Effectiveness (of	
	worker exposure for: PROC4 Use in batch and other process (synthesis) where adoor, CS110 without local exhaust ventilation	
Product characteristics Concentration of the Substance in Mixture/Article Physical Form (at time of use) Process Temperature Remarks	Covers percentage substance in the product up to 1 %. : liquid : <= 40 °C : Low vapour pressure	
Frequency and duration of use Exposure duration	: <8h	
Other operational conditions affecting v Outdoor / Indoor Remarks	workers exposure Indoor Semi-closed system, With occasional controlled exposure. 	
Technical conditions and measures Provide a basic standard of general ventilation (1 to 3 air changes per hour).		
Organisational measures to prevent /lin Assumes a good basic standard of occup Avoid splashing.		
	rsonal protection, hygiene and health evaluation so via contamination on hands., General measures (eye irritants), Use	



PRCO90063327 Version : 12.00 / GB (EN)

8.2.10 Contributing scenario controlling worker exposure for: PROC8a Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities, <15 min, CS110 without local exhaust ventilation
 Product characteristics
 Concentration of the Substance in
 Covers percentage substance in the product up to 1 %.

Mixture/Article		
Physical Form (at time of use)	: liguid	
Process Temperature	: <= 40 °C	
Remarks	: Low vapour pressure	
Frequency and duration of use		
Exposure duration	: < 15 min	
Other operational conditions affectin Outdoor / Indoor	g workers exposure : Indoor	
Technical conditions and measures Provide a basic standard of general ventilation (1 to 3 air changes per hour).		
Assumes a good basic standard of oc	/limit releases, dispersion and exposure cupational hygiene is implemented.	
Avoid splashing.		

Conditions and measures related to personal protection, hygiene and health evaluation

Avoid direct eye contact with product, also via contamination on hands., General measures (eye irritants), Use suitable eye protection. Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training. (Effectiveness (of

a measure): 80 %)

8.2.11 Contributing scenario controlling worker exposure for: PROC7 Industrial spraying, Chain maintenance product

Product characteristics Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 1 %.
Physical Form (at time of use)	: liquid
Process Temperature	<= 40 °C
Remarks	: Low vapour pressure
Frequency and duration of use Exposure duration	: < 8 h
Other operational conditions affecting Outdoor / Indoor	workers exposure : Indoor
Technical conditions and measures Provide a basic standard of general ver	ntilation (1 to 3 air changes per hour) .

Organisational measures to prevent /limit releases, dispersion and exposure Assumes a good basic standard of occupational hygiene is implemented. Avoid splashing.

Conditions and measures related to personal protection, hygiene and health evaluation

Avoid direct eye contact with product, also via contamination on hands., General measures (eye irritants)



PRCO90063327 Version : 12.00 / GB (EN)

Product characteristics	
Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 1 %.
Physical Form (at time of use)	: liquid
Process Temperature	: <= 40 °C
Remarks	: Low vapour pressure
requency and duration of use	
Exposure duration	: <1h
ther operational conditions affectin	q workers exposure
Outdoor / Indoor	: Indoor
echnical conditions and measures	
Provide a basic standard of general v	entilation (1 to 3 air changes per hour).
with local exhaust ventilation (Effectiv	eness (of a measure): 90 %)
Drganisational measures to prevent	/limit releases, dispersion and exposure
Assumes a good basic standard of oc	cupational hygiene is implemented.
Assumes a good basic standard of oc Avoid splashing.	cupational hygiene is implemented.
Avoid splashing. Conditions and measures related to Avoid direct eye contact with product, suitable eye protection.	personal protection, hygiene and health evaluation also via contamination on hands., General measures (eye irritants), Use
Avoid splashing. Conditions and measures related to Avoid direct eye contact with product, suitable eye protection.	personal protection, hygiene and health evaluation
Avoid splashing. Conditions and measures related to Avoid direct eye contact with product, suitable eye protection. Wear chemically resistant gloves (tes a measure): 80 %)	personal protection, hygiene and health evaluation also via contamination on hands., General measures (eye irritants), Use
Avoid splashing. Conditions and measures related to Avoid direct eye contact with product, suitable eye protection. Wear chemically resistant gloves (tes a measure): 80 %) B.2.13 Contributing scenario controll vithout local exhaust ventilation	personal protection, hygiene and health evaluation also via contamination on hands., General measures (eye irritants), Use ted to EN374) in combination with 'basic' employee training. (Effectiveness (of
Avoid splashing. Conditions and measures related to Avoid direct eye contact with product, suitable eye protection. Wear chemically resistant gloves (tes a measure): 80 %) C.2.13 Contributing scenario controlly vithout local exhaust ventilation Product characteristics Concentration of the Substance in	personal protection, hygiene and health evaluation also via contamination on hands., General measures (eye irritants), Use ted to EN374) in combination with 'basic' employee training. (Effectiveness (of
Avoid splashing. Conditions and measures related to Avoid direct eye contact with product, suitable eye protection. Wear chemically resistant gloves (tes a measure): 80 %) C.2.13 Contributing scenario controlly without local exhaust ventilation Product characteristics Concentration of the Substance in Mixture/Article	personal protection, hygiene and health evaluation also via contamination on hands., General measures (eye irritants), Use ted to EN374) in combination with 'basic' employee training. (Effectiveness (of ing worker exposure for: PROC7 Industrial spraying, OC8 Indoor, <15 min, CS110 Covers percentage substance in the product up to 1 %.
Avoid splashing. Conditions and measures related to Avoid direct eye contact with product, suitable eye protection. Wear chemically resistant gloves (tes a measure): 80 %) C.2.13 Contributing scenario controlly without local exhaust ventilation Product characteristics Concentration of the Substance in Mixture/Article Physical Form (at time of use)	personal protection, hygiene and health evaluation also via contamination on hands., General measures (eye irritants), Use ted to EN374) in combination with 'basic' employee training. (Effectiveness (of ing worker exposure for: PROC7 Industrial spraying, OC8 Indoor, <15 min, CS110 Covers percentage substance in the product up to 1 %. : liquid
Avoid splashing. Conditions and measures related to Avoid direct eye contact with product, suitable eye protection. Wear chemically resistant gloves (tes a measure): 80 %) C.2.13 Contributing scenario controlly without local exhaust ventilation Product characteristics Concentration of the Substance in Mixture/Article	personal protection, hygiene and health evaluation also via contamination on hands., General measures (eye irritants), Use ted to EN374) in combination with 'basic' employee training. (Effectiveness (of ing worker exposure for: PROC7 Industrial spraying, OC8 Indoor, <15 min, CS110 Covers percentage substance in the product up to 1 %.
Avoid splashing. Conditions and measures related to Avoid direct eye contact with product, suitable eye protection. Wear chemically resistant gloves (tes a measure): 80 %) B.2.13 Contributing scenario controll vithout local exhaust ventilation Product characteristics Concentration of the Substance in Mixture/Article Physical Form (at time of use) Process Temperature Remarks	personal protection, hygiene and health evaluation also via contamination on hands., General measures (eye irritants), Use ted to EN374) in combination with 'basic' employee training. (Effectiveness (of ing worker exposure for: PROC7 Industrial spraying, OC8 Indoor, <15 min, CS110 Covers percentage substance in the product up to 1 %. : liquid : <= 40 °C
Avoid splashing. Conditions and measures related to Avoid direct eye contact with product, suitable eye protection. Wear chemically resistant gloves (tes a measure): 80 %) B.2.13 Contributing scenario controll vithout local exhaust ventilation Product characteristics Concentration of the Substance in Mixture/Article Physical Form (at time of use) Process Temperature	personal protection, hygiene and health evaluation also via contamination on hands., General measures (eye irritants), Use ted to EN374) in combination with 'basic' employee training. (Effectiveness (of ing worker exposure for: PROC7 Industrial spraying, OC8 Indoor, <15 min, CS110 Covers percentage substance in the product up to 1 %. : liquid : <= 40 °C
Avoid splashing. Conditions and measures related to Avoid direct eye contact with product, suitable eye protection. Wear chemically resistant gloves (tes a measure): 80 %) C.2.13 Contributing scenario controlly without local exhaust ventilation Product characteristics Concentration of the Substance in Mixture/Article Physical Form (at time of use) Process Temperature Remarks Frequency and duration of use Exposure duration	personal protection, hygiene and health evaluation also via contamination on hands., General measures (eye irritants), Use ted to EN374) in combination with 'basic' employee training. (Effectiveness (of ing worker exposure for: PROC7 Industrial spraying, OC8 Indoor, <15 min, CS110 Covers percentage substance in the product up to 1 %. : liquid : <= 40 °C : Low vapour pressure : < 15 min
Avoid splashing. Conditions and measures related to Avoid direct eye contact with product, suitable eye protection. Wear chemically resistant gloves (tes a measure): 80 %) 3.2.13 Contributing scenario controll without local exhaust ventilation Product characteristics Concentration of the Substance in Mixture/Article Physical Form (at time of use) Process Temperature Remarks Frequency and duration of use Exposure duration Other operational conditions affectim	personal protection, hygiene and health evaluation also via contamination on hands., General measures (eye irritants), Use ted to EN374) in combination with 'basic' employee training. (Effectiveness (of ing worker exposure for: PROC7 Industrial spraying, OC8 Indoor, <15 min, CS110 Covers percentage substance in the product up to 1 %. : liquid : <= 40 °C : Low vapour pressure : < 15 min g workers exposure

Assumes a good basic standard of occupational hygiene is implemented. Avoid splashing.

Conditions and measures related to personal protection, hygiene and health evaluation

PRCO90063327 Version : 12.00 / GB (EN)

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Avoid direct eye contact with product, also via contamination on hands., General measures (eye irritants) Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training. (Effectiveness (of a measure): 80 %)

Respirator, APF 10 (Effectiveness (of a measure): 90 %)

8.2.14 Contributing scenario controlling worker exposure for: PROC7 Industrial spraying, OC8 Indoor, <15 min, CS109 with local exhaust ventilation

Product characteristics Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 1 %.
Physical Form (at time of use) Process Temperature	: liquid : <= 40 °C
Remarks	: Low vapour pressure
Frequency and duration of use	
Exposure duration	: < 15 min
Other operational conditions affecting	workers exposure
Outdoor / Indoor	: Indoor
with local exhaust ventilation (Effective) Organisational measures to prevent /li Assumes a good basic standard of occu Avoid splashing.	mit releases, dispersion and exposure
Avoid direct eye contact with product, a	ersonal protection, hygiene and health evaluation Iso via contamination on hands., General measures (eye irritants) d to EN374) in combination with 'basic' employee training. (Effectiveness (of
8.2.15 Contributing scenario controllin without local exhaust ventilation	ng worker exposure for: PROC10 Roller application or brushing, OC8 Indoor, CS110

Product characteristics		
Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 1 %.	
Physical Form (at time of use)	: liquid	
Process Temperature	: <= 40 °C	
Remarks	: Low vapour pressure	
Frequency and duration of use		
Exposure duration	: <8h	
Other operational conditions affecting w Outdoor / Indoor	vorkers exposure : Indoor	
Technical conditions and measures Provide a basic standard of general ventilation (1 to 3 air changes per hour).		
Organisational measures to prevent /lim Assumes a good basic standard of occup Avoid splashing.		



PRCO90063327

Version : 12.00 / GB (EN)

Conditions and measures related to personal protection, hygiene and health evaluation

Avoid direct eye contact with product, also via contamination on hands., General measures (eye irritants), Use suitable eye protection.

8.2.16 Contributing scenario controlling worker exposure for: PROC7 Industrial spraying, general surface cleaning products

Product characteristics Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 1 %.	
Physical Form (at time of use)	: liquid	
Process Temperature	: <= 40 °C	
Remarks	: Low vapour pressure	
Frequency and duration of use		
Exposure duration	: <8h	
Other operational conditions affecting Outdoor / Indoor	workers exposure : Indoor	
Technical conditions and measures Provide a basic standard of general ventilation (1 to 3 air changes per hour).		
Organisational measures to prevent /limit releases, dispersion and exposure Assumes a good basic standard of occupational hygiene is implemented. Avoid splashing.		

Conditions and measures related to personal protection, hygiene and health evaluation

Avoid direct eye contact with product, also via contamination on hands., General measures (eye irritants) Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training. (Effectiveness (of a measure): 80 %)

Respirator, APF 10 (Effectiveness (of a measure): 90 %)

8.2.17 Contributing scenario controlling worker exposure for: PROC8a Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities, <15 min, CS109 with local exhaust ventilation

Product characteristics Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 1 %.
Physical Form (at time of use)	: liquid
Process Temperature	<= 40 °C
Remarks	: Low vapour pressure
Frequency and duration of use Exposure duration	: < 15 min
Other operational conditions affecting we	rkers exposure
Outdoor / Indoor	: Indoor
Technical conditions and measures	

Provide a basic standard of general ventilation (1 to 3 air changes per hour) . with local exhaust ventilation (Effectiveness (of a measure): 90 %)

Organisational measures to prevent /limit releases, dispersion and exposure

PRCO90063327 Version : 12.00 / GB (EN)



Assumes a good basic standard of occupational hygiene is implemented. Avoid splashing.

Conditions and measures related to personal protection, hygiene and health evaluation

Avoid direct eye contact with product, also via contamination on hands., General measures (eye irritants), Use suitable eye protection.

Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training. (Effectiveness (of a measure): 80 %)

8.2.18 Contributing scenario controlling worker exposure for: PROC10 Roller application or brushing, OC8 Indoor, CS109 with local exhaust ventilation

Product characteristics

Concentration of the Substance in	Covers percentage substance in the product up to 1 %.
Mixture/Article	
Physical Form (at time of use)	: liquid
Process Temperature	: <= 40 °C
Remarks	: Low vapour pressure
Frequency and duration of use	
Exposure duration	: <8h
Other energianal conditions offecting	

Other operational conditions affecting workers exposure Outdoor / Indoor : Indoor

Technical conditions and measures

Provide a basic standard of general ventilation (1 to 3 air changes per hour). with local exhaust ventilation, Inhalation exposure (Effectiveness (of a measure): 90 %)

Organisational measures to prevent /limit releases, dispersion and exposure

Assumes a good basic standard of occupational hygiene is implemented. Avoid splashing.

Conditions and measures related to personal protection, hygiene and health evaluation

Avoid direct eye contact with product, also via contamination on hands., General measures (eye irritants), Use suitable eye protection.

Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training. (Effectiveness (of a measure): 80 %)

8.2.19 Contributing scenario controlling worker exposure for: PROC8b Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities, CS109 with local exhaust ventilation

Product characteristics Concentration of the Substance in Mixture/Article		Covers percentage substance in the product up to 1 %.
Physical Form (at time of use)	:	liquid
Process Temperature	:	<= 40 °C
Remarks	:	Low vapour pressure
Frequency and duration of use Exposure duration	:	< 15 min
Other operational conditions affecting wo Outdoor / Indoor Remarks	:	xers exposure Indoor Semi-closed system, With occasional controlled exposure.



PRCO90063327 Version : 12.00 / GB (EN)

Revision Date 02.06.2020

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Fechnical conditions and measures Provide a basic standard of general ver with local exhaust ventilation (Effective	
Drganisational measures to prevent /li Assumes a good basic standard of occ Avoid splashing.	imit releases, dispersion and exposure supational hygiene is implemented.
	ersonal protection, hygiene and health evaluation
Avoid direct eye contact with product, a suitable eye protection.	also via contamination on hands., General measures (eye irritants), Use
	ed to EN374) in combination with 'basic' employee training. (Effectiveness (of
	ng worker exposure for: PROC4 Use in batch and other process (synthesis) where Indoor, CS109 with local exhaust ventilation
Product characteristics Concentration of the Substance in	Covers percentage substance in the product up to 1 %.
Mixture/Article	
Physical Form (at time of use) Process Temperature	: liquid : <= 40 °C
Remarks	: Low vapour pressure
requerey and duration of use	
requency and duration of use Exposure duration	: <8h
ther operational conditions affecting	a workers exposure
Outdoor / Indoor	: Indoor
Remarks	: Semi-closed system, With occasional controlled exposure.
echnical conditions and measures Provide a basic standard of general ver	ntilation (1 to 3 air changes per hour)
with local exhaust ventilation (Effective	
	imit releases, dispersion and exposure
Assumes a good basic standard of occ Avoid splashing.	upational hygiene is implemented.
conditions and measures related to p	ersonal protection, hygiene and health evaluation
Avoid direct eye contact with product, a	also via contamination on hands., General measures (eye irritants), Use
suitable eye protection.	ed to EN374) in combination with 'basic' employee training. (Effectiveness (of
a measure): 80 %)	
2.2.21 Contributing scenario controllir controlled exposure, < 8h	ng worker exposure for: PROC2 Use in closed, continuous process with occasiona
· · · · · · · · · · · · · · · · · · ·	
Product characteristics	
Concentration of the Substance in	Covers percentage substance in the product up to 1 %.
Mixture/Article	· limited
Mixture/Article Physical Form (at time of use) Process Temperature	: liquid : <= 40 °C

PRCO90063327 Version : 12.00 / GB (EN)



-	
Frequency and duration of use	
Exposure duration	: <8h
Other operational conditions affecting Outdoor / Indoor Remarks	workers exposure : Indoor : Use in closed process
Technical conditions and measures Provide a basic standard of general ven with local exhaust ventilation (Effectiven	
Organisational measures to prevent /lin Assumes a good basic standard of occu Avoid splashing.	
•	rsonal protection, hygiene and health evaluation so via contamination on hands., General measures (eye irritants)

Avoid direct eye contact with product, also via contamination on hands., General measures (eye irritants) Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training. (Effectiveness (of a measure): 80 %)

8.3. Exposure estimation and reference to its source

Human Health

Contributing Scenario	Specific conditions	Value type	Level of Exposure	RCR
For all PROC	Qualitative approach used to conclude safe use.	All routes		

RCR = Risk characterisation ratio

For all PROC Exposure Assessment Method : Qualitative approach used to conclude safe use.

8.4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

Risk management measures are based on qualitative risk characterisation. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

PRC090063327 Version : 12.00 / GB (EN)

9. ES9 : Professional use, end-products

Main User Groups	: SU 22	Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
Process category	: PROC8a	Transfer of substance or preparation (charging/ discharging) from to vessels/ large containers at non-dedicated facilities
	PROC11	Non industrial spraving
	PROC10	Roller application or brushing
	PROC8b	Transfer of substance or preparation (charging/ discharging) from to vessels/ large containers at dedicated facilities
	PROC2	Use in closed, continuous process with occasional controlled exposure
	PROC13	Treatment of articles by dipping and pouring
	PROC4	Use in batch and other process (synthesis) where opportunity for exposure arises

9.2. Conditions of use affecting exposure

9.2.1 Contributing scenario controlling worker exposure for: PROC8a Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities, <15 min, OC8 Indoor, CS110 without local exhaust ventilation, Gloves

Product characteristics

. .

Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 1 %.
Physical Form (at time of use)	: liquid
Process Temperature	: <= 40 °C
Remarks	: Low vapour pressure
Frequency and duration of use	
Exposure duration	: < 15 min
Other operational conditions affecting	•
Outdoor / Indoor	: Indoor
Technical conditions and measures Provide a basic standard of general ven	tilation (1 to 3 air changes per hour) .
Organisational measures to prevent /lin Assumes a good basic standard of occu Avoid splashing.	· · ·
	rsonal protection, hygiene and health evaluation so via contamination on hands., General measures (eye irritants), Use

Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training. (Effectiveness (of a measure): 80 %)

9.2.2 Contributing scenario controlling worker exposure for: PROC8a Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities, PROC10 Roller application or brushing, PROC13 Treatment of articles by dipping and pouring, <1 hr:, OC8 Indoor, CS110 without local exhaust ventilation, Gloves

PRC090063327 Version : 12.00 / GB (EN)



Product characteristics	
Concentration of the Substance in	Covers percentage substance in the product up to 1 %.
Mixture/Article Physical Form (at time of use) Process Temperature	: liquid : <= 40 °C
Remarks	: Low vapour pressure
Frequency and duration of use Exposure duration	: <1h
Other operational conditions affecting v Outdoor / Indoor	vorkers exposure : Indoor
Technical conditions and measures Provide a basic standard of general vention	lation (1 to 3 air changes per hour).
Organisational measures to prevent /lim Assumes a good basic standard of occup Avoid splashing.	
Avoid direct eye contact with product, als suitable eye protection.	sonal protection, hygiene and health evaluation to via contamination on hands., General measures (eye irritants), Use to EN374) in combination with 'basic' employee training. (Effectiveness (of
a measure): 80 %)	
	worker exposure for: PROC8a Transfer of substance or preparation (charging/ tainers at non-dedicated facilities, <15 min, OC8 Indoor, CS110 without local
Product characteristics Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 1 %.
Physical Form (at time of use) Process Temperature	: liquid : <= 40 °C
Remarks	: Low vapour pressure
Frequency and duration of use Exposure duration	: < 15 min
Other operational conditions affecting v Outdoor / Indoor	vorkers exposure : Indoor
	: Indoor
Outdoor / Indoor Technical conditions and measures	: Indoor ilation (1 to 3 air changes per hour) . hit releases, dispersion and exposure
Outdoor / Indoor Technical conditions and measures Provide a basic standard of general venti Organisational measures to prevent /lim Assumes a good basic standard of occup Avoid splashing. Conditions and measures related to per	: Indoor ilation (1 to 3 air changes per hour) . hit releases, dispersion and exposure
Outdoor / Indoor Technical conditions and measures Provide a basic standard of general venti Organisational measures to prevent /lim Assumes a good basic standard of occup Avoid splashing. Conditions and measures related to per Avoid direct eye contact with product, also	: Indoor ilation (1 to 3 air changes per hour) . nit releases, dispersion and exposure pational hygiene is implemented. sonal protection, hygiene and health evaluation

PRC090063327 Version : 12.00 / GB (EN)

9.2.4 Contributing scenario controlling worker exposure for: PROC11 Non industrial spraying, <1 hr:, OC8 Indoor, Without gloves		
Product characteristics Concentration of the Substance in Mixture/Article Physical Form (at time of use) Process Temperature Remarks	Covers percentage substance in the product up to 1 %. : liquid : <= 40 °C : Low vapour pressure	
Frequency and duration of use Exposure duration	: <1h	
Other operational conditions affecting w Outdoor / Indoor	/orkers exposure : Indoor	
Technical conditions and measures Provide a basic standard of general venti	lation (1 to 3 air changes per hour) .	
Organisational measures to prevent /lim Assumes a good basic standard of occup Avoid splashing.		
	sonal protection, hygiene and health evaluation o via contamination on hands., General measures (eye irritants)	
9.2.5 Contributing scenario controlling v Gloves	worker exposure for: PROC10 Roller application or brushing, < 8h, OC8 Indoor,	
Product characteristics Concentration of the Substance in Mixture/Article Physical Form (at time of use) Process Temperature Remarks	Covers percentage substance in the product up to 1 %. : liquid : <= 40 °C : Low vapour pressure	
Frequency and duration of use Exposure duration	: <8h	
Other operational conditions affecting w Outdoor / Indoor	/orkers exposure : Indoor	
Technical conditions and measures Provide a basic standard of general venti	lation (1 to 3 air changes per hour) .	
Organisational measures to prevent /lim Assumes a good basic standard of occup Avoid splashing.		
Avoid direct eye contact with product, als suitable eye protection.	sonal protection, hygiene and health evaluation o via contamination on hands., General measures (eye irritants), Use to EN374) in combination with 'basic' employee training. (Effectiveness (of	
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9.2.6 Contributing scenario controlling worker exposure for: PROC8b Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities

Product characteristics Concentration of the Substance in Mixture/Article Physical Form (at time of use) Process Temperature Remarks	Covers percentage substance in the product up to 1 %. : liquid : <= 40 °C : Low vapour pressure
Frequency and duration of use Exposure duration	: < 15 min
Other operational conditions affecting v Outdoor / Indoor Remarks	workers exposure Indoor Semi-closed system, With occasional controlled exposure.
Technical conditions and measures Provide a basic standard of general vent	ilation (1 to 3 air changes per hour) .
Avoid direct eye contact with product, als suitable eye protection.	
9.2.7 Contributing scenario controlling controlled exposure	worker exposure for: PROC2 Use in closed, continuous process with occasional
Product characteristics Concentration of the Substance in Mixture/Article Physical Form (at time of use) Process Temperature Remarks Frequency and duration of use	Covers percentage substance in the product up to 1 %. : liquid : <= 40 °C : Low vapour pressure
Exposure duration	· < 15 min

Exposure duration	: < 15 min
Other operational conditions a	affecting workers exposure

•	o 1
Outdoor / Indoor	: Indoor
Remarks	: Use in closed process

Technical conditions and measures

Provide a basic standard of general ventilation (1 to 3 air changes per hour) .

Organisational measures to prevent /limit releases, dispersion and exposure

Assumes a good basic standard of occupational hygiene is implemented. Avoid splashing.

Conditions and measures related to personal protection, hygiene and health evaluation

PRC090063327 Version : 12.00 / GB (EN)



Revision Date 02.06.2020

Avoid direct eye contact with product, also via contamination on hands., General measures (eye irritants)

9.2.8 Contributing scenario controlling worker exposure for: PROC5 Mixing or blending in batch processes for formulation of preparations and articles (multistage and/ or significant contact), < 8h, OC8 Indoor, Without gloves

Product characteristics	
Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 1 %.
Physical Form (at time of use)	: liquid
Process Temperature	: <= 40 °C
Remarks	: Low vapour pressure
Frequency and duration of use	
Exposure duration	: <8h
Other operational conditions affecting Outdoor / Indoor	g workers exposure : Indoor
Technical conditions and measures Provide a basic standard of general ve	entilation (1 to 3 air changes per hour)
Assumes a good basic standard of occ	limit releases, dispersion and exposure cupational hygiene is implemented.
Avoid splashing.	
Conditions and measures related to p	personal protection, hygiene and health evaluation
	also via contamination on hands., General measures (eye irritants), Use
0.2.0 Contributing according controllin	a warker experies for PDOC11 Nep industrial encoding15 min_OC9 Indeer
CS110 without local exhaust ventilatio	g worker exposure for: PROC11 Non industrial spraying, <15 min, OC8 Indoor, on, Gloves
Product characteristics	
Concentration of the Substance in	Covers percentage substance in the product up to 1 %.
Mixture/Article	
Physical Form (at time of use)	: liquid : <= 40 °C
Process Temperature Remarks	: Low vapour pressure
Frequency and duration of use Exposure duration	: < 15 min
Exposure duration	. < 1511111
Other operational conditions affecting	
Outdoor / Indoor	: Indoor
Technical conditions and measures Provide a basic standard of general ve	entilation (1 to 3 air changes per hour).
Organisational measures to prevent /I Assumes a good basic standard of occ	limit releases, dispersion and exposure
Avoid splashing.	
	personal protection, hygiene and health evaluation also via contamination on hands., General measures (eye irritants)
	ed to EN374) in combination with 'basic' employee training. (Effectiveness (of
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a measure): 80 %)

9.2.10 Contributing scenario controlling worker exposure for: PROC10 Roller application or brushing, Kitchen cleaner

Product characteristics Concentration of the Substance in	
Concentration of the Substance in	
	Covers percentage substance in the product up to 1 %.
Mixture/Article	
Physical Form (at time of use)	: liquid
Process Temperature Remarks	: <= 40 °C : Low vapour pressure
Remarks	. Low vapour pressure
Frequency and duration of use	
Exposure duration	: <4 h
Other operational conditions affecting Outdoor / Indoor	g workers exposure : Indoor
	. 11000
Technical conditions and measures Provide a basic standard of general ve	ntilation (1 to 3 air changes per hour).
Organisational measures to prevent /I Assumes a good basic standard of occ Avoid splashing.	imit releases, dispersion and exposure supational hygiene is implemented.
	ersonal protection, hygiene and health evaluation also via contamination on hands., General measures (eye irritants), Use
	ng worker exposure for: PROC8a Transfer of substance or preparation (charging/ ontainers at non-dedicated facilities, <1 hr:, OC8 Indoor, CS110 without local
oxination france gioree	
Product characteristics	
Concentration of the Substance in	Covers percentage substance in the product up to 1 %.
Mixture/Article	
Mixture/Article Physical Form (at time of use)	: liquid
Mixture/Article	: liquid : <= 40 °C
Mixture/Article Physical Form (at time of use) Process Temperature Remarks	: liquid
Mixture/Article Physical Form (at time of use) Process Temperature Remarks Frequency and duration of use	: liquid : <= 40 °C : Low vapour pressure
Mixture/Article Physical Form (at time of use) Process Temperature Remarks	: liquid : <= 40 °C
Mixture/Article Physical Form (at time of use) Process Temperature Remarks Frequency and duration of use Exposure duration	 liquid <= 40 °C Low vapour pressure < 1 h
Mixture/Article Physical Form (at time of use) Process Temperature Remarks Frequency and duration of use	 liquid <= 40 °C Low vapour pressure < 1 h
Mixture/Article Physical Form (at time of use) Process Temperature Remarks Frequency and duration of use Exposure duration Other operational conditions affecting Outdoor / Indoor	 : liquid : <= 40 °C : Low vapour pressure : < 1 h g workers exposure
Mixture/Article Physical Form (at time of use) Process Temperature Remarks Frequency and duration of use Exposure duration Other operational conditions affecting Outdoor / Indoor Technical conditions and measures	 liquid <= 40 °C Low vapour pressure < 1 h gworkers exposure Indoor
Mixture/Article Physical Form (at time of use) Process Temperature Remarks Frequency and duration of use Exposure duration Other operational conditions affecting Outdoor / Indoor	 liquid <= 40 °C Low vapour pressure < 1 h gworkers exposure Indoor
Mixture/Article Physical Form (at time of use) Process Temperature Remarks Frequency and duration of use Exposure duration Other operational conditions affecting Outdoor / Indoor Technical conditions and measures Provide a basic standard of general ve	 liquid <= 40 °C Low vapour pressure < 1 h gworkers exposure Indoor ntilation (1 to 3 air changes per hour) .
Mixture/Article Physical Form (at time of use) Process Temperature Remarks Frequency and duration of use Exposure duration Other operational conditions affecting Outdoor / Indoor Technical conditions and measures Provide a basic standard of general ve Organisational measures to prevent /I	 liquid <= 40 °C Low vapour pressure < 1 h gworkers exposure Indoor ntilation (1 to 3 air changes per hour) . imit releases, dispersion and exposure
Mixture/Article Physical Form (at time of use) Process Temperature Remarks Frequency and duration of use Exposure duration Other operational conditions affecting Outdoor / Indoor Technical conditions and measures Provide a basic standard of general ve Organisational measures to prevent // Assumes a good basic standard of occ	 liquid <= 40 °C Low vapour pressure < 1 h gworkers exposure Indoor ntilation (1 to 3 air changes per hour) . imit releases, dispersion and exposure
Mixture/Article Physical Form (at time of use) Process Temperature Remarks Frequency and duration of use Exposure duration Other operational conditions affecting Outdoor / Indoor Technical conditions and measures Provide a basic standard of general ve Organisational measures to prevent /I	 liquid <= 40 °C Low vapour pressure < 1 h gworkers exposure Indoor ntilation (1 to 3 air changes per hour) . imit releases, dispersion and exposure
Mixture/Article Physical Form (at time of use) Process Temperature Remarks Frequency and duration of use Exposure duration Other operational conditions affecting Outdoor / Indoor Technical conditions and measures Provide a basic standard of general ve Organisational measures to prevent // Assumes a good basic standard of occ	 liquid <= 40 °C Low vapour pressure < 1 h gworkers exposure Indoor ntilation (1 to 3 air changes per hour) . imit releases, dispersion and exposure
Mixture/Article Physical Form (at time of use) Process Temperature Remarks Frequency and duration of use Exposure duration Other operational conditions affecting Outdoor / Indoor Technical conditions and measures Provide a basic standard of general ve Organisational measures to prevent // Assumes a good basic standard of occ Avoid splashing.	 liquid <= 40 °C Low vapour pressure < 1 h gworkers exposure Indoor ntilation (1 to 3 air changes per hour) . imit releases, dispersion and exposure
Mixture/Article Physical Form (at time of use) Process Temperature Remarks Frequency and duration of use Exposure duration Other operational conditions affecting Outdoor / Indoor Technical conditions and measures Provide a basic standard of general ve Organisational measures to prevent /I Assumes a good basic standard of occ Avoid splashing. Conditions and measures related to p Avoid direct eye contact with product, a suitable eye protection. PRC090063327	 liquid <= 40 °C Low vapour pressure < 1 h gworkers exposure indoor Indoor ntilation (1 to 3 air changes per hour). imit releases, dispersion and exposure upational hygiene is implemented.
Mixture/Article Physical Form (at time of use) Process Temperature Remarks Frequency and duration of use Exposure duration Other operational conditions affecting Outdoor / Indoor Technical conditions and measures Provide a basic standard of general ve Organisational measures to prevent /I Assumes a good basic standard of occ Avoid splashing. Conditions and measures related to p Avoid direct eye contact with product, a suitable eye protection. PRC090063327 Version : 12.00 / GB (EN)	 iliquid <= 40 °C Low vapour pressure < 1 h gworkers exposure Indoor Indoor ntilation (1 to 3 air changes per hour). imit releases, dispersion and exposure supational hygiene is implemented.
Mixture/Article Physical Form (at time of use) Process Temperature Remarks Frequency and duration of use Exposure duration Other operational conditions affecting Outdoor / Indoor Technical conditions and measures Provide a basic standard of general ve Organisational measures to prevent /I Assumes a good basic standard of occ Avoid splashing. Conditions and measures related to p Avoid direct eye contact with product, a suitable eye protection. PRC090063327	 liquid <= 40 °C Low vapour pressure < 1 h yworkers exposure indoor intilation (1 to 3 air changes per hour). imit releases, dispersion and exposure upational hygiene is implemented.

9.2.12 Contributing scenario controlling worker exposure for: PROC11 Non industrial spraying, <1 hr., OC8 Indoor, Gloves Product characteristics Concentration of the Substance in Covers percentage substance in the product up to 1 %. Mixture/Article Physical Form (at time of use) : liquid Process Temperature <= 40 °C 2 Remarks : Low vapour pressure Frequency and duration of use Exposure duration : <1h Other operational conditions affecting workers exposure Outdoor / Indoor : Indoor Technical conditions and measures Provide a basic standard of general ventilation (1 to 3 air changes per hour). Organisational measures to prevent /limit releases, dispersion and exposure Assumes a good basic standard of occupational hygiene is implemented. Avoid splashing. Conditions and measures related to personal protection, hygiene and health evaluation Avoid direct eye contact with product, also via contamination on hands., General measures (eye irritants) Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training. (Effectiveness (of a measure): 80 %) 9.2.13 Contributing scenario controlling worker exposure for: PROC8a Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities, OC9 Outdoor **Product characteristics** Concentration of the Substance in Covers percentage substance in the product up to 1 %. Mixture/Article

Physical Form (at time of use)	: liquid
Process Temperature	: <= 40 °C
Remarks	: Low vapour pressure
Frequency and duration of use Exposure duration	: <1h

Other operational conditions	affecting workers exposure
Outdoor / Indoor	: Outdoor

Organisational measures to prevent /limit releases, dispersion and exposure

Assumes a good basic standard of occupational hygiene is implemented. Avoid splashing.

Conditions and measures related to personal protection, hygiene and health evaluation

Avoid direct eye contact with product, also via contamination on hands., General measures (eye irritants), Use suitable eye protection.

Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training. (Effectiveness (of a measure): 80 %)

PRC090063327 Version : 12.00 / GB (EN)



9.2.14 Contributing scenario controlling worker exposure for: PROC4 Use in batch and other process (synthesis) where opportunity for exposure arises	
Product characteristics	
Concentration of the Substance in	Covers percentage substance in the product up to 1 %.
Mixture/Article	. Kandal
Physical Form (at time of use)	: liquid : <= 40 °C
Process Temperature Remarks	
Remarks	: Low vapour pressure
Frequency and duration of use	
Exposure duration	: <8h
Other energianal conditions offections	
Other operational conditions affecting v Outdoor / Indoor	: Outdoor
Remarks	: Semi-closed system, With occasional controlled exposure.
Remarks	. Semi-closed system, with occasional controlled exposure.
Organisational measures to prevent /lin	nit releases, dispersion and exposure
Assumes a good basic standard of occu	
Avoid splashing.	
	rsonal protection, hygiene and health evaluation
	so via contamination on hands., General measures (eye irritants), Use
suitable eye protection.	to ENIORA) in complete stimulation with the side and have a training of (Effective second of
	to EN374) in combination with 'basic' employee training. (Effectiveness (of
a measure): 80 %)	
9.2.15 Contributing scenario controlling	worker exposure for: PROC11 Non industrial spraying, Gloves
Product characteristics	
Concentration of the Substance in	Covers percentage substance in the product up to 1 %.
Mixture/Article	
Physical Form (at time of use)	: liquid
Process Temperature	: <= 40 °C
Remarks	: Low vapour pressure
Frequency and duration of use	
Exposure duration	: <1h
Other energianal conditions offecting	
Other operational conditions affecting v Outdoor / Indoor	: Outdoor
Organisational measures to prevent /lin	nit releases, dispersion and exposure
Assumes a good basic standard of occu	
Avoid splashing.	
	sonal protection, hygiene and health evaluation
	so via contamination on hands., General measures (eye irritants)
	to EN374) in combination with 'basic' employee training. (Effectiveness (of
a measure): 80 %)	

9.2.16 Contributing scenario controlling worker exposure for: PROC10 Roller application or brushing, OC9 Outdoor

Product characteristics

PRCO90063327 Version : 12.00 / GB (EN)



Revision Date 02.06.2020

Concentration of the Substance in	Covers percentage substance in the product up to 1 %.
Mixture/Article	
Physical Form (at time of use) Process Temperature	: liquid : <= 40 °C
Remarks	: <= 40 °C : Low vapour pressure
requency and duration of use	
Exposure duration	: <8h
ther operational conditions affecting	workers exposure
Outdoor / Indoor	: Outdoor
Arganisational measures to prevent /lin Assumes a good basic standard of occu Avoid splashing.	mit releases, dispersion and exposure upational hygiene is implemented.
Avoid direct eye contact with product, al suitable eye protection.	ersonal protection, hygiene and health evaluation Iso via contamination on hands., General measures (eye irritants), Use d to EN374) in combination with 'basic' employee training. (Effectiveness (of
	g worker exposure for: PROC8a Transfer of substance or preparation (charging/ ntainers at non-dedicated facilities, OC9 Outdoor
roduct characteristics	
Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 1 %.
Physical Form (at time of use)	: liquid
Process Temperature	: <= 40 °C
Remarks	: Low vapour pressure
requency and duration of use Exposure duration	: < 15 min
-	
other operational conditions affecting Outdoor / Indoor	: Outdoor
Drganisational measures to prevent /lin Assumes a good basic standard of occu Avoid splashing.	mit releases, dispersion and exposure upational hygiene is implemented.
Avoid direct eye contact with product, al suitable eye protection.	ersonal protection, hygiene and health evaluation Iso via contamination on hands., General measures (eye irritants), Use d to EN374) in combination with 'basic' employee training. (Effectiveness (of
).2.18 Contributing scenario controllin	g worker exposure for: PROC11 Non industrial spraying
Product characteristics	
Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 1 %.
Physical Form (at time of use)	: liquid
Process Temperature	: <= 40 °C
Remarks	: Low vapour pressure
RCO90063327	
/ersion : 12.00 / GB (EN)	SOLVAY



Revision Date 02.06.2020

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Frequency and duration of use Exposure duration	: <8h
Other operational conditions affectin Outdoor / Indoor	n g workers exposure : Outdoor
Organisational measures to prevent Assumes a good basic standard of or Avoid splashing.	/limit releases, dispersion and exposure ccupational hygiene is implemented.
Avoid direct eye contact with product	personal protection, hygiene and health evaluation , also via contamination on hands., General measures (eye irritants) sted to EN374) in combination with 'basic' employee training. (Effectiveness (of of a measure): 90 %)
	ling worker exposure for: PROC8a Transfer of substance or preparation (charging/ containers at non-dedicated facilities, <1 hr:, OC8 Indoor, CS109 with local exhaust
Product characteristics Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 1 %.
Physical Form (at time of use) Process Temperature Remarks	: liquid : <= 40 °C : Low vapour pressure
Frequency and duration of use Exposure duration	: <1h
Other operational conditions affectin Outdoor / Indoor	ng workers exposure : Indoor
Technical conditions and measures Provide a basic standard of general with local exhaust ventilation (Effective	ventilation (1 to 3 air changes per hour) . veness (of a measure): 80 %)
Organisational measures to prevent Assumes a good basic standard of or Avoid splashing.	/limit releases, dispersion and exposure ccupational hygiene is implemented.
Avoid direct eye contact with product suitable eye protection.	personal protection, hygiene and health evaluation , also via contamination on hands., General measures (eye irritants), Use sted to EN374) in combination with 'basic' employee training. (Effectiveness (of
9.2.20 Contributing scenario control opportunity for exposure arises	ling worker exposure for: PROC4 Use in batch and other process (synthesis) where
Product characteristics Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 1 %.

Mixture/ArticlePhysical Form (at time of use): liquidProcess Temperature: <= 40 °C</td>Remarks: Low vapour pressure

PRCO90063327 Version : 12.00 / GB (EN)



Fraguancy and duration of use	
Frequency and duration of use Exposure duration	: <4 h
Other operational conditions affecting	workers exposure
Outdoor / Indoor	: Indoor
Remarks	: Semi-closed system, With occasional controlled exposure.
Fechnical conditions and measures Provide a basic standard of general ven with local exhaust ventilation (Effectiven	
Organisational measures to prevent /lir Assumes a good basic standard of occu Avoid splashing.	
Avoid direct eye contact with product, al suitable eye protection.	rsonal protection, hygiene and health evaluation so via contamination on hands., General measures (eye irritants), Use
Wear chemically resistant gloves (tested a measure): 80 %)	d to EN374) in combination with 'basic' employee training. (Effectiveness (of
	ntainers at non-dedicated facilities, <15 min, OC8 Indoor, CS109 with local exhaus
Product characteristics	ntainers at non-dedicated facilities, <15 min, OC8 Indoor, CS109 with local exhaus
Product characteristics Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 1 %.
Product characteristics Concentration of the Substance in Mixture/Article Physical Form (at time of use)	Covers percentage substance in the product up to 1 %.
Product characteristics Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 1 %.
Product characteristics Concentration of the Substance in Mixture/Article Physical Form (at time of use)	Covers percentage substance in the product up to 1 %.
Product characteristics Concentration of the Substance in Mixture/Article Physical Form (at time of use) Process Temperature Remarks Frequency and duration of use	Covers percentage substance in the product up to 1 %. : liquid : <= 40 °C : Low vapour pressure
Product characteristics Concentration of the Substance in Mixture/Article Physical Form (at time of use) Process Temperature Remarks	Covers percentage substance in the product up to 1 %. : liquid : <= 40 °C
Product characteristics Concentration of the Substance in Mixture/Article Physical Form (at time of use) Process Temperature Remarks Frequency and duration of use	Covers percentage substance in the product up to 1 %. : liquid : <= 40 °C : Low vapour pressure : < 15 min workers exposure
ventilation Product characteristics Concentration of the Substance in Mixture/Article Physical Form (at time of use) Process Temperature Remarks Frequency and duration of use Exposure duration Other operational conditions affecting	Covers percentage substance in the product up to 1 %. : liquid : <= 40 °C : Low vapour pressure : < 15 min workers exposure : Indoor tilation (1 to 3 air changes per hour).
Product characteristics Concentration of the Substance in Mixture/Article Physical Form (at time of use) Process Temperature Remarks Frequency and duration of use Exposure duration Other operational conditions affecting Outdoor / Indoor Fechnical conditions and measures Provide a basic standard of general vert	Covers percentage substance in the product up to 1 %. : liquid : <= 40 °C : Low vapour pressure : < 15 min workers exposure : Indoor tilation (1 to 3 air changes per hour) . tess (of a measure): 80 %) mit releases, dispersion and exposure
Product characteristics Concentration of the Substance in Mixture/Article Physical Form (at time of use) Process Temperature Remarks Frequency and duration of use Exposure duration Other operational conditions affecting Outdoor / Indoor Fechnical conditions and measures Provide a basic standard of general veri with local exhaust ventilation (Effectiven Organisational measures to prevent /lir Assumes a good basic standard of occu Avoid splashing. Conditions and measures related to pe	Covers percentage substance in the product up to 1 %. : liquid : <= 40 °C : Low vapour pressure : < 15 min workers exposure : Indoor tilation (1 to 3 air changes per hour) . tess (of a measure): 80 %) mit releases, dispersion and exposure

PRCO90063327 Version : 12.00 / GB (EN)



9.2.22 Contributing scenario controlling medical devices	g worker exposure for: PROC13 Treatment of articles by dipping and pouring,
Product characteristics Concentration of the Substance in	Covers percentage substance in the product up to 1 %.
Mixture/Article Physical Form (at time of use) Process Temperature	: liquid : <= 40 °C
Remarks	: Low vapour pressure
Frequency and duration of use Exposure duration	: <4 h
Other operational conditions affecting v Outdoor / Indoor	workers exposure : Indoor
Technical conditions and measures Provide a basic standard of general vent with local exhaust ventilation (Effectivene	
Organisational measures to prevent /lin Assumes a good basic standard of occu Avoid splashing.	
Avoid direct eye contact with product, als suitable eye protection.	rsonal protection, hygiene and health evaluation so via contamination on hands., General measures (eye irritants), Use I to EN374) in combination with 'basic' employee training. (Effectiveness (of
9.2.23 Contributing scenario controlling CS110 without local exhaust ventilation	g worker exposure for: PROC11 Non industrial spraying, <15 min, OC8 Indoor, , Without gloves
Product characteristics Concentration of the Substance in Mixture/Article	Covers percentage substance in the product up to 1 %.
Physical Form (at time of use)	: liquid
Process Temperature Remarks	: <= 40 °C : Low vapour pressure
Frequency and duration of use Exposure duration	: < 15 min
Other operational conditions affecting v Outdoor / Indoor	workers exposure : Indoor
Technical conditions and measures Provide a basic standard of general vent with local exhaust ventilation	ilation (1 to 3 air changes per hour) .
Organisational measures to prevent /lin Assumes a good basic standard of occu Avoid splashing.	
Conditions and measures related to per	rsonal protection, hygiene and health evaluation
PRCO90063327 Version : 12.00 / GB (EN)	





Avoid direct eye contact with product, also via contamination on hands., General measures (eye irritants)

9.3. Exposure estimation and reference to its source

Human Health

Contributing Scenario	Specific conditions	Value type	Level of Exposure	RCR
For all PROC	Qualitative approach used to conclude safe use.	All routes		

RCR = Risk characterisation ratio

For all PROC Exposure Assessment Method : Qualitative approach used to conclude safe use.

9.4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

Risk management measures are based on qualitative risk characterisation. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

10. ES10 : Use at industrial site, Use in Cleaning Agents

Main User Groups	: SU 3	Industrial uses: Uses of substances as such or in preparations at industrial sites
Process category	: PROC1	Use in closed process, no likelihood of exposure
	PROC2	Use in closed, continuous process with occasional controlled exposure
	PROC3	Use in closed batch process (synthesis or formulation)
	PROC4	Use in batch and other process (synthesis) where opportunity for exposure arises
	PROC7	Industrial spraying
	PROC8a	Transfer of substance or preparation (charging/ discharging) from to vessels/ large containers at non-dedicated facilities
	PROC8b	Transfer of substance or preparation (charging/ discharging) from to vessels/ large containers at dedicated facilities
	PROC10	Roller application or brushing
	PROC13	Treatment of articles by dipping and pouring

10.2. Conditions of use affecting exposure

10.2.1 Contributing scenario controlling worker exposure for: PROC1 Use in closed process, no likelihood of exposure, PROC2 Use in closed, continuous process with occasional controlled exposure, PROC3 Use in closed batch process (synthesis or formulation)

Product characteristics Concentration of the Substance in Mixture/Article Physical Form (at time of use) Process Temperature Remarks	Covers the percentage of the substance in the product up to 100 % (unless stated differently). : liquid : <= 40 °C : Low vapour pressure
Frequency and duration of use	
Exposure duration	: <8h
Other operational conditions affecting	workers exposure
Outdoor / Indoor	Indoor
Remarks	: Use in closed process
Organisational measures to prevent /li Assumes a good basic standard of occu Avoid splashing.	
	ersonal protection, hygiene and health evaluation Iso via contamination on hands., General measures (eye irritants)
	ng worker exposure for: PROC4 Use in batch and other process (synthesis) where C8b Transfer of substance or preparation (charging/ discharging) from/ to vessels/

Product characteristics

PRCO90063327 Version : 12.00 / GB (EN)



Revision Date 02.06.2020

Concentration of the Substance in	Covers the percentage of the substance in the product up to 100 %
Mixture/Article	(unless stated differently).
Physical Form (at time of use)	: liquid
Process Temperature	: <= 40 °C
Remarks	: Low vapour pressure
requency and duration of use	
Exposure duration	: <8h
Other operational conditions affecting	workers exposure
Outdoor / Indoor	: Indoor
Remarks	: Semi-closed system, With occasional controlled exposure.
echnical conditions and measures Provide a basic standard of general ven	ntilation (1 to 3 air changes per hour).
Drganisational measures to prevent /li Assumes a good basic standard of occu Avoid splashing.	mit releases, dispersion and exposure upational hygiene is implemented.
	ersonal protection, hygiene and health evaluation Iso via contamination on hands., General measures (eye irritants), Use
suitable eye protection.	iso via contamination on hands., General measures (eye initants), Ose
10.2.3 Contributing scenario controllin	g worker exposure for: PROC7 Industrial spraying
Product characteristics	Covers the percentage of the substance in the product up to $100.\%$
Concentration of the Substance in Mixture/Article	Covers the percentage of the substance in the product up to 100 % (unless stated differently).
Physical Form (at time of use)	: liquid
Process Temperature	$= 40 ^{\circ}\text{C}$
Remarks	: Low vapour pressure
Frequency and duration of use	
Exposure duration	: <8h
Other operational conditions affecting	
Outdoor / Indoor	: Indoor
Fechnical conditions and measures Provide a basic standard of general ven	tilation (1 to 3 air changes per hour).
Organisational measures to prevent /li Assumes a good basic standard of occu Avoid splashing.	mit releases, dispersion and exposure upational hygiene is implemented.
Conditions and measures related to pe	ersonal protection, hygiene and health evaluation
	Iso via contamination on hands., General measures (eye irritants)
Risk of aerosols formation, Wear respire	
10.2.4 Contributing scenario controllin discharging) from/ to vessels/ large co PROC13 Treatment of articles by dippi	g worker exposure for: PROC8a Transfer of substance or preparation (charging/ ontainers at non-dedicated facilities, PROC10 Roller application or brushing, ng and pouring
Product characteristics	
PRCO90063327	

PRCO90063327 Version : 12.00 / GB (EN)



Revision Date 02.06.2020

Concentration of the Substance in Mixture/Article	Covers the percentage of the substance in the product up to 100 % (unless stated differently).
Physical Form (at time of use)	: liquid
Process Temperature	: <= 40 °C
Remarks	: Low vapour pressure
Frequency and duration of use	
Exposure duration	: <8h
Other operational conditions affectin	g workers exposure
Outdoor / Indoor	: Indoor
Technical conditions and measures	
Provide a basic standard of general ve	entilation (1 to 3 air changes per hour).
i i o fido di babio o dalladara or gonorar re	

Organisational measures to prevent /limit releases, dispersion and exposure Assumes a good basic standard of occupational hygiene is implemented.

Avoid splashing.

Conditions and measures related to personal protection, hygiene and health evaluation

Avoid direct eye contact with product, also via contamination on hands., General measures (eye irritants), Use suitable eye protection.

10.3. Exposure estimation and reference to its source

Human Health

Contributing Scenario	Specific conditions	Value type	Level of Exposure	RCR
For all PROC	Qualitative approach used to conclude safe use.	All routes		

RCR = Risk characterisation ratio

For all PROC Exposure Assessment Method : Qualitative approach used to conclude safe use.

10.4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

Risk management measures are based on qualitative risk characterisation. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

11. ES11 : Use at industrial site, Industrial use, Use as an intermediate

Main User Groups	: SU 3	Industrial uses: Uses of substances as such or in preparations at industrial sites
Process category	: PROC1	Use in closed process, no likelihood of exposure
0.1	PROC2	Use in closed, continuous process with occasional controlled exposure
	PROC3	Use in closed batch process (synthesis or formulation)
	PROC4	Use in batch and other process (synthesis) where opportunity for exposure arises
	PROC8b	Transfer of substance or preparation (charging/ discharging) from to vessels/ large containers at dedicated facilities
	PROC15	Use as laboratory reagent
	PROC8a	Transfer of substance or preparation (charging/ discharging) from to vessels/ large containers at non-dedicated facilities

11.2. Conditions of use affecting exposure

11.2.1 Contributing scenario controlling worker exposure for: PROC1 Use in closed process, no likelihood of exposure, PROC2 Use in closed, continuous process with occasional controlled exposure, PROC3 Use in closed batch process (synthesis or formulation), General process exposures from enclosed processes, OC9 Outdoor

Product characteristics Concentration of the Substance in Covers the percentage of the substance in the product up to 100 % (unless stated differently). Mixture/Article Physical Form (at time of use) : liquid Process Temperature : <= 40 °C : Low vapour pressure Remarks Frequency and duration of use Exposure duration : <1h Other operational conditions affecting workers exposure Outdoor / Indoor : Outdoor Remarks : Use in closed process Organisational measures to prevent /limit releases, dispersion and exposure Assumes a good basic standard of occupational hygiene is implemented. Avoid splashing. Conditions and measures related to personal protection, hygiene and health evaluation Avoid direct eye contact with product, also via contamination on hands., General measures (eye irritants) 11.2.2 Contributing scenario controlling worker exposure for: PROC3 Use in closed batch process (synthesis or formulation), OC8 Indoor **Product characteristics** Concentration of the Substance in Covers the percentage of the substance in the product up to 100 % (unless stated differently). Mixture/Article Physical Form (at time of use) liquid **Process Temperature** <= 40 °C Remarks : Low vapour pressure

Frequency and duration of use

PRC090063327 Version : 12.00 / GB (EN)

Revision Date 02.06.2020

	Revision Date 02.06.20
Exposure duration	: <1h
Other operational conditions affecting	workers expective
Outdoor / Indoor	: Indoor
Remarks	: Use in closed process
echnical conditions and measures	
Provide a basic standard of general ve	ntilation (1 to 3 air changes per hour).
Drganisational measures to prevent /I Assumes a good basic standard of occ Avoid splashing.	imit releases, dispersion and exposure supational hygiene is implemented.
	ersonal protection, hygiene and health evaluation also via contamination on hands., General measures (eye irritants)
1.2.3 Contributing scenario controllin opportunity for exposure arises, PRO arge containers at dedicated facilities	ng worker exposure for: PROC4 Use in batch and other process (synthesis) where C8b Transfer of substance or preparation (charging/ discharging) from/ to vessels/ s, <1 hr:, OC8 Indoor
Product characteristics	
Concentration of the Substance in	Covers the percentage of the substance in the product up to 100 %
Mixture/Article	(unless stated differently).
Physical Form (at time of use)	: liquid
Process Temperature	: <= 40 °C
Remarks	: Low vapour pressure
requency and duration of use	
Exposure duration	: <1h
Other operational conditions affecting	workers expective
Outdoor / Indoor	: Indoor
Remarks	: Semi-closed system, With occasional controlled exposure.
echnical conditions and measures Provide a basic standard of general ver	ntilation (1 to 3 air changes per hour)
	imit releases, dispersion and exposure
Assumes a good basic standard of occ Avoid splashing.	upational hygiene is implemented.
	ersonal protection, hygiene and health evaluation
suitable eye protection.	also via contamination on hands., General measures (eye irritants), Use
1.2.4 Contributing scenario controlli	ng worker exposure for: PROC4 Use in batch and other process (synthesis) where
	C8b Transfer of substance or preparation (charging/ discharging) from/ to vessels
arge containers at dedicated facilities	
Product characteristics	
Concentration of the Substance in	Covers the percentage of the substance in the product up to 100 %
Mixture/Article	(unless stated differently).
Physical Form (at time of use)	: liquid
Process Temperature	$= 40 ^{\circ}\text{C}$
Remarks	: Low vapour pressure
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/ersion : 12.00 / GB (EN)	
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Frequency and duration of use	
Exposure duration	: <1h
Other operational conditions affecting	a workers exposure
Outdoor / Indoor	: Outdoor
Remarks	: Semi-closed system, With occasional controlled exposure.
Organisational measures to prevent /l	imit releases, dispersion and exposure
Assumes a good basic standard of occ	
Avoid splashing.	
	ersonal protection, hygiene and health evaluation also via contamination on hands., General measures (eye irritants), Use
suitable eye protection.	also via contamination on nanus., General measures (eye initants), Ose
11.2.5 Contributing scenario controllir	ng worker exposure for: PROC8b Transfer of substance or preparation (charging/
	ontainers at dedicated facilities, <15 min, OC8 Indoor
Product characteristics	
Concentration of the Substance in	Covers the percentage of the substance in the product up to 100 %
Mixture/Article	(unless stated differently).
Physical Form (at time of use)	: liquid
Process Temperature Remarks	: <= 40 °C
Remarks	: Low vapour pressure
Frequency and duration of use	
Exposure duration	: < 15 min
Other operational conditions affecting	
Outdoor / Indoor	: Indoor
Remarks	: Semi-closed system, With occasional controlled exposure.
Technical conditions and measures	
Provide a basic standard of general ver	ntilation (1 to 3 air changes per hour).
Organisational measures to prevent /	imit releases, dispersion and exposure
Assumes a good basic standard of occ	upational hygiene is implemented.
Avoid splashing.	
Conditions and measures related to p	ersonal protection, hygiene and health evaluation
	also via contamination on hands., General measures (eye irritants), Use
suitable eye protection.	
11.2.6 Contributing scenario controllir	ng worker exposure for: PROC8b Transfer of substance or preparation (charging/
discharging) from/ to vessels/ large co	ontainers at dedicated facilities, <15 min, OC9 Outdoor
Product characteristics	
Concentration of the Substance in	Covers the percentage of the substance in the product up to 100 %
Mixture/Article	(unless stated differently).
Physical Form (at time of use)	: liquid
Process Temperature	: <= 40 °C
Remarks	: Low vapour pressure
Frequency and duration of use	
Exposure duration	: < 15 min
PRC090063327	
Version : 12.00 / GB (EN)	
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Outdoor / Indoor	: Outdoor
Remarks	: Semi-closed system, With occasional controlled exposure.
rganisational measures to prevent /l Assumes a good basic standard of occ Avoid splashing.	imit releases, dispersion and exposure supational hygiene is implemented.
3	
	ersonal protection, hygiene and health evaluation also via contamination on hands., General measures (eye irritants), Use
1.2.7 Contributing scenario controllin	ng worker exposure for: PROC15 Use as laboratory reagent
Product characteristics	
Concentration of the Substance in	Covers the percentage of the substance in the product up to 100 %
Mixture/Article	(unless stated differently).
Physical Form (at time of use) Process Temperature	: liquid : <= 40 °C
Remarks	: Low vapour pressure
iroquonov and duration of use	
requency and duration of use Exposure duration	: <1h
Other operational conditions affecting Outdoor / Indoor	j workers exposure : Indoor
echnical conditions and measures Provide a basic standard of general ver	ntilation (1 to 3 air changes per hour).
Provide a basic standard of general ve	imit releases, dispersion and exposure
Provide a basic standard of general ver Drganisational measures to prevent /I Assumes a good basic standard of occ Avoid splashing. Conditions and measures related to p Avoid direct eye contact with product, a	imit releases, dispersion and exposure supational hygiene is implemented. ersonal protection, hygiene and health evaluation also via contamination on hands., General measures (eye irritants)
Provide a basic standard of general ver Drganisational measures to prevent /I Assumes a good basic standard of occ Avoid splashing. Conditions and measures related to p Avoid direct eye contact with product, a 1.2.8 Contributing scenario controllin	imit releases, dispersion and exposure aupational hygiene is implemented. ersonal protection, hygiene and health evaluation
Provide a basic standard of general ver Organisational measures to prevent /I Assumes a good basic standard of occ Avoid splashing. Conditions and measures related to p Avoid direct eye contact with product, a 1.2.8 Contributing scenario controllin lischarging) from/ to vessels/ large co	imit releases, dispersion and exposure supational hygiene is implemented. ersonal protection, hygiene and health evaluation also via contamination on hands., General measures (eye irritants) ng worker exposure for: PROC8a Transfer of substance or preparation (charging ontainers at non-dedicated facilities, OC8 Indoor
Provide a basic standard of general ver Organisational measures to prevent /I Assumes a good basic standard of occ Avoid splashing. Conditions and measures related to p Avoid direct eye contact with product, a 1.2.8 Contributing scenario controllin lischarging) from/ to vessels/ large co Product characteristics Concentration of the Substance in	imit releases, dispersion and exposure supational hygiene is implemented. ersonal protection, hygiene and health evaluation also via contamination on hands., General measures (eye irritants) ng worker exposure for: PROC8a Transfer of substance or preparation (charging ontainers at non-dedicated facilities, OC8 Indoor Covers the percentage of the substance in the product up to 100 %
Provide a basic standard of general ver Organisational measures to prevent /I Assumes a good basic standard of occ Avoid splashing. Conditions and measures related to p Avoid direct eye contact with product, a 1.2.8 Contributing scenario controllin lischarging) from/ to vessels/ large co Product characteristics Concentration of the Substance in Mixture/Article	imit releases, dispersion and exposure supational hygiene is implemented. ersonal protection, hygiene and health evaluation also via contamination on hands., General measures (eye irritants) ng worker exposure for: PROC8a Transfer of substance or preparation (charging ontainers at non-dedicated facilities, OC8 Indoor Covers the percentage of the substance in the product up to 100 % (unless stated differently).
Provide a basic standard of general ver Prganisational measures to prevent /I Assumes a good basic standard of occ Avoid splashing. Conditions and measures related to p Avoid direct eye contact with product, a 1.2.8 Contributing scenario controllin ischarging) from/ to vessels/ large co Product characteristics Concentration of the Substance in	imit releases, dispersion and exposure supational hygiene is implemented. ersonal protection, hygiene and health evaluation also via contamination on hands., General measures (eye irritants) ng worker exposure for: PROC8a Transfer of substance or preparation (charging ontainers at non-dedicated facilities, OC8 Indoor Covers the percentage of the substance in the product up to 100 %
Provide a basic standard of general ver Prganisational measures to prevent /I Assumes a good basic standard of occ Avoid splashing. Conditions and measures related to p Avoid direct eye contact with product, a 1.2.8 Contributing scenario controllin lischarging) from/ to vessels/ large co Product characteristics Concentration of the Substance in Mixture/Article Physical Form (at time of use)	imit releases, dispersion and exposure supational hygiene is implemented. ersonal protection, hygiene and health evaluation also via contamination on hands., General measures (eye irritants) ng worker exposure for: PROC8a Transfer of substance or preparation (charging ontainers at non-dedicated facilities, OC8 Indoor Covers the percentage of the substance in the product up to 100 % (unless stated differently). : liquid
Provide a basic standard of general ver Prganisational measures to prevent /I Assumes a good basic standard of occ Avoid splashing. Conditions and measures related to p Avoid direct eye contact with product, a 1.2.8 Contributing scenario controllin ischarging) from/ to vessels/ large co Product characteristics Concentration of the Substance in Mixture/Article Physical Form (at time of use) Process Temperature Remarks	<pre>imit releases, dispersion and exposure supational hygiene is implemented. ersonal protection, hygiene and health evaluation also via contamination on hands., General measures (eye irritants) mg worker exposure for: PROC8a Transfer of substance or preparation (charging ontainers at non-dedicated facilities, OC8 Indoor Covers the percentage of the substance in the product up to 100 % (unless stated differently). : liquid : <= 40 °C</pre>
Provide a basic standard of general ver Prganisational measures to prevent /I Assumes a good basic standard of occ Avoid splashing. Conditions and measures related to p Avoid direct eye contact with product, a 1.2.8 Contributing scenario controllin lischarging) from/ to vessels/ large co Product characteristics Concentration of the Substance in Mixture/Article Physical Form (at time of use) Process Temperature Remarks	<pre>imit releases, dispersion and exposure supational hygiene is implemented. ersonal protection, hygiene and health evaluation also via contamination on hands., General measures (eye irritants) mg worker exposure for: PROC8a Transfer of substance or preparation (charging ontainers at non-dedicated facilities, OC8 Indoor Covers the percentage of the substance in the product up to 100 % (unless stated differently). : liquid : <= 40 °C</pre>
Provide a basic standard of general ver Prganisational measures to prevent // Assumes a good basic standard of occ Avoid splashing. Conditions and measures related to p Avoid direct eye contact with product, a 1.2.8 Contributing scenario controllin lischarging) from/ to vessels/ large co Product characteristics Concentration of the Substance in Mixture/Article Physical Form (at time of use) Process Temperature Remarks Frequency and duration of use Exposure duration	<pre>imit releases, dispersion and exposure upational hygiene is implemented. ersonal protection, hygiene and health evaluation also via contamination on hands., General measures (eye irritants) mg worker exposure for: PROC8a Transfer of substance or preparation (charging ontainers at non-dedicated facilities, OC8 Indoor Covers the percentage of the substance in the product up to 100 % (unless stated differently). I liquid Covers the percentage of the substance in the product up to 100 % (unless stated differently). I liquid Covers the percentage of the substance in the product up to 100 % (unless stated differently). Covers the percentage of the substance in the product up to 100 % (unless stated differently). Covers the percentage of the substance in the product up to 100 % (unless stated differently). Covers the percentage of the substance in the product up to 100 % (unless stated differently). Covers the percentage of the substance in the product up to 100 % (unless stated differently). Covers the percentage of the substance in the product up to 100 % (unless stated differently). Covers the percentage of the substance in the product up to 100 % (unless stated differently). Covers the percentage of the substance in the product up to 100 % (unless stated differently). Covers the percentage of the substance in the product up to 100 % (unless the percentage of the substance in the product up to 100 % (unless the percentage of the substance in the product up to 100 % (unless the percentage of the substance in the product up to 100 % (unless the percentage of the substance in the product up to 100 % (unless the percentage of the substance in the product up to 100 % (unless the percentage of the substance in the product up to 100 % (unless the percentage of the substance in the product up to 100 % (unless the percentage of the substance in the percentage of the sub</pre>
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Organisational measures to prevent /I Assumes a good basic standard of occ Avoid splashing.	imit releases, dispersion and exposure supational hygiene is implemented.
	ersonal protection, hygiene and health evaluation also via contamination on hands., General measures (eye irritants), Use
	ng worker exposure for: PROC8a Transfer of substance or preparation (charging/ ontainers at non-dedicated facilities, OC9 Outdoor
Product characteristics Concentration of the Substance in Mixture/Article Physical Form (at time of use) Process Temperature Remarks	Covers the percentage of the substance in the product up to 100 % (unless stated differently). : liquid : <= 40 °C : Low vapour pressure
Frequency and duration of use Exposure duration	: <1 h
Other operational conditions affecting Outdoor / Indoor	g workers exposure : Outdoor
	eupational hygiene is implemented. ersonal protection, hygiene and health evaluation also via contamination on hands., General measures (eye irritants), Use
	ing worker exposure for: PROC1 Use in closed process, no likelihood of exposure, cess with occasional controlled exposure, Storage, CS56 with sample collection,
Product characteristics Concentration of the Substance in Mixture/Article Physical Form (at time of use) Process Temperature Remarks	Covers the percentage of the substance in the product up to 100 % (unless stated differently). : liquid : <= 40 °C : Low vapour pressure
Frequency and duration of use Exposure duration	: < 8 h
Other operational conditions affecting Outdoor / Indoor Remarks	j workers exposure : Indoor : Use in closed process
Technical conditions and measures Provide a basic standard of general ver	ntilation (1 to 3 air changes per hour) .
	imit releases, dispersion and exposure
PRCO90063327	

PRCO90063327 Version : 12.00 / GB (EN)

Assumes a good basic standard of occupational hygiene is implemented. Avoid splashing.

Conditions and measures related to personal protection, hygiene and health evaluation Avoid direct eye contact with product, also via contamination on hands., General measures (eye irritants)

11.2.11 Contributing scenario controlling worker exposure for: PROC1 Use in closed process, no likelihood of exposure, PROC2 Use in closed, continuous process with occasional controlled exposure, Storage, CS56 with sample collection, OC9 Outdoor

Product characteristics	
Concentration of the Substance in	Covers the percentage of the substance in the product up to 100 %
Mixture/Article	(unless stated differently).
Physical Form (at time of use)	: liquid
Process Temperature	: <= 40 °C
Remarks	: Low vapour pressure
Frequency and duration of use	
Exposure duration	: < 8 h
Other operational conditions affectin	ig workers exposure
Outdoor / Indoor	: Outdoor
Remarks	: Use in closed process

Assumes a good basic standard of occupational hygiene is implemented. Avoid splashing.

Conditions and measures related to personal protection, hygiene and health evaluation Avoid direct eye contact with product, also via contamination on hands., General measures (eye irritants)

11.3. Exposure estimation and reference to its source

Human Health

Contributing Scenario	Specific conditions	Value type	Level of Exposure	RCR
For all PROC	Qualitative approach used to conclude safe use.	All routes		

RCR = Risk characterisation ratio

For all PROC Exposure Assessment Method : Qualitative approach used to conclude safe use.

11.4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

Risk management measures are based on qualitative risk characterisation. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

PRC090063327 Version : 12.00 / GB (EN)



12. ES12 : Consumers end-use of washing and cleaning products (IFRA GES 6)

12.1. Scenario description			
Main User Groups	:	SU 21	Consumer uses: Private households (= general public = consumers)
Product category	:	PC35	Washing and cleaning products (including solvent based products)

12.2. Conditions of use affecting exposure

12.2.1 Contributing scenario controlling consumer exposure for: PC35 Washing and cleaning products (including solvent based products),

According to REACH regulation, there is no limit of concentration to use the product in all usages described in the exposure scenarios present in this document, once the safety assessment was done as a mandatory request for the Chemical Safety Report.

Conditions and measures related to protection of consumer (e.g. behavioural advice, personal protection and hygiene)

Consumer Measures

 Assumes a good basic standard of occupational hygiene is implemented., General measures (eye irritants), Avoid direct eye contact with product, also via contamination on hands., Avoid splashing.

12.3. Exposure estimation and reference to its source



Revision Date 02.06.2020

13. ES13 : Consumer end-use of air care products (IFRA GES 7)

13.1. Scenario description				
Main User Groups	:	SU 21	Consumer uses: Private households (= general public = consumers)	
Product category	:	PC3	Air care products	

13.2. Conditions of use affecting exposure

13.2.1 Contributing scenario controlling consumer exposure for: PC3 Air care products,

According to REACH regulation, there is no limit of concentration to use the product in all usages described in the exposure scenarios present in this document, once the safety assessment was done as a mandatory request for the Chemical Safety Report.

Conditions and measures related to protection of consumer (e.g. behavioural advice, personal protection and hygiene)

Consumer	Measures

 Assumes a good basic standard of occupational hygiene is implemented., General measures (eye irritants), Avoid direct eye contact with product, also via contamination on hands., Avoid splashing.

13.3. Exposure estimation and reference to its source

PRCO90063327 Version : 12.00 / GB (EN)

Revision Date 02.06.2020

14. ES14 : Consumers end-use polishes and wax blends (IFRA GES 9)

14.1. Scenario description			
Main User Groups	:	SU 21	Consumer uses: Private households (= general public = consumers)
Product category	:	PC31	Polishes and wax blends

14.2. Conditions of use affecting exposure

14.2.1 Contributing scenario controlling consumer exposure for: PC31 Polishes and wax blends ,

According to REACH regulation, there is no limit of concentration to use the product in all usages described in the exposure scenarios present in this document, once the safety assessment was done as a mandatory request for the Chemical Safety Report.

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14.3. Exposure estimation and reference to its source
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15. ES15 : Consumer use, End use of cosmetic products

5.1. Scenario description	
Main User Groups	: SU 21 Consumer uses: Private households (= general public = consumers)
Product category	: PC39 Cosmetics, personal care products PC28 Perfumes, fragrances
Further information	 In accordance to the Article 14 (5b) of the REACh Regulation (EC) No 1907/2006, exposure estimation and risk characterisation for human health does not need to be performed for end uses in cosmetic products within the scope of Directive 76/768/EEC., Covered by the Cosmetic Regulation (European Regulation (EC) N°1223/2009).

15.2. Conditions of use affecting exposure

