according to REACH Regulation (EC) No. 1907/2006, as amended by UK REACH Regulations SI 2019/758



Neopentyl glycol molten

10480

Version / Revision5.01Revision Date26-Jan-2023Supersedes Version5.00\*\*\*Issuing date26-Jan-2023

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

## 1.1. Product identifier

undertaking

Identification of the substance/preparation

Neopentyl glycol molten

Chemical Name 2,2-Dimethylpropane-1,3-diol

**CAS-No** 126-30-7 **EC No.** 204-781-0

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

Identified uses Intermediate

Formulation

Distribution of substance laboratory chemicals Polymerization

Uses advised against None

1.3. Details of the supplier of the safety data sheet

Company/Undertaking

**Product Information** 

Identification

**OQ Chemicals GmbH** Rheinpromenade 4A

D-40789 Monheim

Germany

Product Stewardship FAX: +49 (0)208 693 2053 email: sc.psq@oq.com

1.4. Emergency telephone number

**Emergency telephone number** +44 (0) 1235 239 670 (UK)

available 24/7

### **SECTION 2: Hazards identification**

### 2.1. Classification of the substance or mixture

This substance is classified based on Directive 1272/2008/EC and its amendments (CLP Regulation)

Serious eye damage/eye irritation Category 1, H318

### **Additional information**

For full text of Hazard- and EU Hazard-statements see SECTION 16.

### 2.2. Label elements

Labelling according to Regulation 1272/2008/EC and its amendments (CLP Regulation).

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### Hazard pictograms



Signal word Danger

**Hazard statements** H318: Causes serious eye damage.

**Precautionary statements** P280: Wear protective gloves/protective clothing/eye protection/face protection.

P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310: Immediately call a POISON CENTER/doctor.

### 2.3. Other hazards

Caution Hot!

Contact with product at elevated temperatures can result in thermal burns

Components of the product may be absorbed into the body by inhalation and ingestion

PBT and vPvB assessment This substance is not considered to be persistent, bioaccumulating nor toxic

(PBT), nor very persistent nor very bioaccumulating (vPvB)

**Endocrine disrupting** 

assessments

The substance is not listed on the candidate list according to Art. 59(1), REACh. The substance was not assessed as having endocrine disrupting properties

according to regulation 2017/2100/EU or 2018/605/EU.

## **SECTION 3: Composition / information on ingredients**

### 3.1. Substances

Component	CAS-No	1272/2008/EC	Concentration (%)
2,2-Dimethylpropane-1,3-diol	126-30-7	Eye Dam. 1; H318	> 99,0

For full text of Hazard- and EU Hazard-statements see SECTION 16.

### SECTION 4: First aid measures

### 4.1. Description of first aid measures

### Inhalation

Keep at rest. Aerate with fresh air. When symptoms persist or in all cases of doubt seek medical advice.

#### Skin

Contact with product at elevated temperatures can result in thermal burns. Wash off immediately with plenty of water. Immediate medical attention is required.

#### **Eves**

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses. Immediate medical attention is required.

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### Ingestion

Call a physician immediately. Do not induce vomiting without medical advice.

### 4.2. Most important symptoms and effects, both acute and delayed

### **Main symptoms**

cough.

### Special hazard

Lung irritation, Contact with product at elevated temperatures can result in thermal burns.

### 4.3. Indication of any immediate medical attention and special treatment needed

#### General advice

Remove contaminated, soaked clothing immediately and dispose of safely. First aider needs to protect himself.

Treat symptomatically. If ingested, irrigate the stomach using activated charcoal.

### SECTION 5: Firefighting measures

### 5.1. Extinguishing media

### Suitable extinguishing media

foam, dry chemical, carbon dioxide (CO2), water spray

### **Unsuitable Extinguishing Media**

Do not use a solid water stream as it may scatter and spread fire.

### 5.2. Special hazards arising from the substance or mixture

Under conditions giving incomplete combustion, hazardous gases produced may consist of: carbon monoxide (CO)

carbon dioxide (CO2)

Combustion gases of organic materials must in principle be graded as inhalation poisons Vapours are heavier than air and may spread along floors

### 5.3. Advice for firefighters

### Special protective equipment for firefighters

Fire fighter protection should include a self-contained breathing apparatus (NIOSH-approved or EN 133) and full fire-fighting turn out gear.

### **Precautions for firefighting**

Cool containers / tanks with water spray. Dike and collect water used to fight fire. Keep people away from and upwind of fire.

### SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel: For personal protective equipment see section 8. Avoid contact with skin and eyes. Avoid breathing vapors or mists. Keep people away from and upwind of spill/leak. Ensure adequate ventilation, especially in confined areas. Keep away from heat and sources of ignition. For emergency responders: Personal protection see section 8.

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### 6.2. Environmental precautions

Prevent further leakage or spillage. Do not discharge product into the aquatic environment without pretreatment (biological treatment plant).

### 6.3. Methods and material for containment and cleaning up

#### **Methods for containment**

Stop the flow of material, if possible without risk. Dike spilled material, where this is possible.

### Methods for cleaning up

Soak up with inert absorbent material. Keep in suitable, closed containers for disposal. If liquid has been spilt in large quantities clean up promptly by scoop or vacuum. Dispose of in accordance with local regulations. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapours).

### 6.4. Reference to other sections

For personal protective equipment see section 8.

### SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Further info may be available in the appropriate Exposure scenarios in the annex to this SDS.

### Advice on safe handling

Do not handle hot or molten material without appropriate protective equipment. Do not exceed recommended process temperatures to minimize release of decomposition products. Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product. Provide sufficient air exchange and/or exhaust in work rooms.

### Hygiene measures

When using, do not eat, drink or smoke. Take off all contaminated clothing immediately. Wash hands before breaks and immediately after handling the product.

### Advice on the protection of the environment

See Section 8: Environmental exposure controls.

### Incompatible products

strong oxidizing agents

### 7.2. Conditions for safe storage, including any incompatibilities

### Advice on protection against fire and explosion

Keep away from sources of ignition - No smoking. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapours). In case of fire, emergency cooling with water spray should be available. Ground and bond containers when transferring material.

### **Technical measures/Storage conditions**

Keep containers tightly closed in a cool, well-ventilated place. Handle and open container with care. Protect from moisture.

### Temperature class

T2

### 7.3. Specific end use(s)

according to REACH Regulation (EC) No. 1907/2006, as amended by UK REACH Regulations SI 2019/758



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Intermediate
Formulation
Distribution of substance
laboratory chemicals
Polymerization
For specific end use information see the annex of this safety data sheet

### SECTION 8: Exposure controls / personal protection

### 8.1. Control parameters

### **Exposure limits European Union**

No exposure limits established

### **Exposure limits UK**

No exposure limits established.

### **DNEL & PNEC**

## 2,2-Dimethylpropane-1,3-diol, CAS: 126-30-7 Workers

**DN(M)EL - long-term exposure - systemic effects - Inhalation** 35 mg/m<sup>3</sup>

**DN(M)EL - acute / short-term exposure - systemic effects - Inhalation**Low hazard (no threshold derived)

DN(M)EL - long-term exposure - local effects - Inhalation No hazard identified

DN(M)EL - acute / short-term exposure - local effects - Inhalation No hazard identified

**DN(M)EL - long-term exposure - systemic effects - Dermal** 10 mg/kg bw/day

DN(M)EL - acute / short-term exposure - systemic effects - Dermal No hazard identified

DN(M)EL - long-term exposure - local effects - Dermal

No hazard identified

No hazard identified
No hazard identified

DN(M)EL - local effects - eyes Medium hazard (no threshold

derived)

### **General population**

**DN(M)EL - long-term exposure - systemic effects - Inhalation** 8,7 mg/m<sup>3</sup>

**DN(M)EL - acute / short-term exposure - systemic effects - Inhalation** Low hazard (no threshold

derived)

DN(M)EL - long-term exposure - local effects - Inhalation No hazard identified

DN(M)EL - acute / short-term exposure - local effects - Inhalation No hazard identified

**DN(M)EL - long-term exposure - systemic effects - Dermal** 5 mg/kg bw/day

DN(M)EL - acute / short-term exposure - systemic effects - Dermal No hazard identified

**DN(M)EL - long-term exposure - local effects - Dermal**No hazard identified

**DN(M)EL - acute / short-term exposure - local effects - Dermal**No hazard identified

DN(M)EL - long-term exposure - systemic effects - Oral 5 mg/kg bw/day

DN(M)EL - acute / short-term exposure - systemic effects - Oral

Low hazard (no threshold derived)

DN(M)EL - local effects - eyes Medium hazard (no threshold

according to REACH Regulation (EC) No. 1907/2006, as amended by UK REACH Regulations SI 2019/758



### Neopentyl glycol molten

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derived)

#### **Environment**

PNEC aqua - freshwater 5 mg/l
PNEC aqua - marine water 0,5 mg/l
PNEC aqua - intermittent releases 5 mg/l
PNEC STP 20 mg/l
PNEC sediment - freshwater 18,5 mg/kg dw

PNEC sediment - marine water

PNEC Air

No hazard identified

PNEC soil

1,85 mg/kg dw

No hazard identified

0,77 mg/kg dw

Secondary poisoning

No potential for bioaccumulation

### 8.2. Exposure controls

### Special adaptations (REACh)

Not applicable.

### **Appropriate Engineering controls**

General or dilution ventilation is frequently insufficient as the sole means of controlling employee exposure. Local ventilation is usually preferred. Explosion-proof equipment (for example fans, switches, and grounded ducts) should be used in mechanical ventilation systems.

#### Personal protective equipment

### General industrial hygiene practice

Avoid contact with skin, eyes and clothing. Do not breathe vapours or spray mist. Ensure that eyewash stations and safety showers are close to the workstation location.

### Hygiene measures

When using, do not eat, drink or smoke. Take off all contaminated clothing immediately. Wash hands before breaks and immediately after handling the product.

### Eye protection

Tightly fitting safety goggles. In addition to goggles, wear a face shield if there is a reasonable chance for splash to the face.

Equipment should conform to EN 166

### **Hand protection**

Wear protective gloves. Recommendations are listed below. Other protective material may be used, depending on the situation, if adequate degradation and permeation data is available. If other chemicals are used in conjunction with this chemical, material selection should be based on protection for all chemicals present.

Suitable material Heat resistant gloves

### Skin and body protection

Impervious clothing. Wear face-shield and protective suit for abnormal processing problems.

### Respiratory protection

Respirator with A filter. Full mask with above mentioned filter according to producers using requirements or self-contained breathing apparatus. Equipment should conform to EN 136 or EN 140 and EN 143.

#### **Thermal Hazard**

according to REACH Regulation (EC) No. 1907/2006, as amended by UK REACH Regulations SI 2019/758



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Heat only in areas with appropriate exhaust ventilation. When handling hot material, use heat resistant gloves.

### **Environmental exposure controls**

If possible use in closed systems. If leakage can not be prevented, the substance needs to be suck off at the emersion point, if possible without danger. Observe the exposure limits, clean exhaust air if needed. If recycling is not practicable, dispose of in compliance with local regulations. Inform the responsible authorities in case of leakage into the atmosphere, or of entry into waterways, soil or drains.

#### Additional advice

Further details on substance data can be found in the registration dossier under the following link: http://echa.europa.eu/information-on-chemicals/registered-substances. For specific exposure controls see the annex to this safety data sheet.

### SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state Hot liquid Colour colourless Odour sweet

**Odour threshold** No data available

Melting point/freezing point 128 °C Method DIN 53171

**Boiling point or initial boiling** 208,5 °C @ 1013 hPa

point and boiling range

Method DIN 53171

**Flammability** Even if not classified as flammable, the product is capable of catching fire or

being set on fire.\*\*\*

Lower explosion limit 1,1 Vol % **Upper explosion limit** 11,4 Vol % Flash point 107 °C closed cup Method 375 °C **Autoignition temperature** 

**Decomposition temperature** No data available not applicable pН

6,213 mm<sup>2</sup>/s @ 139 °C **Kinematic Viscosity** 830 g/l @ 20 °C, in water Solubility 0 @ 25 °C (77 °F) OECD 107 **Partition coefficient** 

n-octanol/water (log value)

Vapour pressure

Values [hPa]	Values [kPa] Values [atn	n] @ °C	@ °F	Method
0,03	0,003 < 0,001	20	68	OECD 104
6,9	0,69 0,007	90	194	OECD 104
88	8,8 0,087	140	284	OECD 104

Density and/or relative density

Method Values @ °C @ °F 1.035 20 **OECD 109** 68

Relative vapour density No data available Particle characteristics not applicable

### 9.2. Other information

**Explosive properties** Does not apply, substance is not explosive. There are no chemical groups

associated with explosive properties

Oxidizing properties Does not apply, substance is not oxidising. There are no chemical groups

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associated with oxidizing properties

Molecular weight104,15Molecular formulaC5 H12 O2

Minimum ignition energy 150 mJ < E min. < 260 mJ with inductivity

**log Koc** 0,019 @ 25°C (77 °F) calculated

**Surface tension** 72 mN/m (1 g/l @ 20°C (68°F)), OECD 115

**Evaporation rate** No data available

hygroscopic.

### SECTION 10: Stability and Reactivity

### 10.1. Reactivity

The reactivity of the product corresponds to the typical reactivity shown by the substance group as described in any text book on organic chemistry.

### 10.2. Chemical stability

Stable under recommended storage conditions.

### 10.3. Possibility of hazardous reactions

Hazardous polymerisation does not occur.

### 10.4. Conditions to avoid

Avoid contact with heat, sparks, open flame and static discharge. Avoid any source of ignition.

### 10.5. Incompatible materials

strong oxidizing agents.

### 10.6. Hazardous decomposition products

No decomposition if stored and applied as directed.

### SECTION 11: Toxicological information

### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

**Likely routes of exposure** Ingestion, Skin contact, Inhalation, Eye contact

Acute toxicity						
2,2-Dimethylpropane-1,3-diol (126-30-7)						
Routes of Exposure	Endpoint	Values	Species	Method		
Oral	LD50	> 6400 mg/kg	rat, male/female	OECD 401		
Oral	LD50	6920 mg/kg	rat, male/female	OECD 401		
Inhalative	LC0	140 mg/m³ (8 h)	rat, male/female	OECD 403		
Dermal	LD50	> 4000 mg/kg	guinea pig	OECD 402		

### 2,2-Dimethylpropane-1,3-diol, CAS: 126-30-7

### Assessment

Based on available data, the classification criteria are not met for:

Acute oral toxicity

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Acute dermal toxicity
Acute inhalation toxicity

Irritation and corrosion					
2,2-Dimethylpropane-1,	3-diol (126-30-7)				
Target Organ Effects	Species	Result	Method		
Skin	rabbit	Mild skin irritation	OECD 404	4h	
Eyes	rabbit	severe irritation	OECD 405		

### 2,2-Dimethylpropane-1,3-diol, CAS: 126-30-7

### **Assessment**

The available data lead to the classification given in section 2 Based on available data, the classification criteria are not met for: skin irritation/corrosion

Sensitization					
2,2-Dimethylpropane-1,3	3-diol (126-30-7)				
Target Organ Effects	Species	Evaluation	Method		
Skin	mouse	not sensitizing	OECD 429		

### 2,2-Dimethylpropane-1,3-diol, CAS: 126-30-7

### **Assessment**

Based on available data, the classification criteria are not met for:

Skin sensitization

For respiratory sensitization, no data are available

Subacute, subchronic and prolonged toxicity					
2,2-Dimethylpropane-1,3-diol (126-30-7)					
Туре	Dose	Species	Method		
Subchronic toxicity	NOAEL: 1000 mg/kg/d	rat, male/female	OECD 408	Oral	
Subacute toxicity	NOAEL: 300 mg/kg	g/d rat, male	OECD 422	Inhalation Oral	

### 2,2-Dimethylpropane-1,3-diol, CAS: 126-30-7

### **Assessment**

Based on available data, the classification criteria are not met for:

STOT RE

Carcinogenicity, Muta	Carcinogenicity, Mutagenicity, Reproductive toxicity				
2,2-Dimethylpropane-1	1,3-diol (126-30-7	<u>'</u> )			
Туре	Dose	Species	Evaluation	Method	
Mutagenicity		Salmonella typhimurium	negative	OECD 471 (Ames)	In vitro study
Mutagenicity		CHO (Chinese Hamster Ovary) cells	negative	OECD 476 (Mammalian Gene Mutation)	In vitro study
Mutagenicity		CHL	negative	Chromosomal Aberration	In vitro study
, ,	NOAEL 1000 mg/kg/d	rat		OECD 422, Oral	Reproduction / developmental Toxicity
Developmental Toxicity	NOAEL 1000 mg/kg/d	rat		OECD 414	Maternal toxicity Developmental toxicity

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### 2,2-Dimethylpropane-1,3-diol, CAS: 126-30-7

### **CMR Classification**

The available data on CMR properties are summarized in the table above. They do not indicate a classification into categories 1A or 1B

#### **Evaluation**

Did not show reprotoxic or mutagenic effects in animal experiments In the absence of specific alerts no cancer testing is required

### 2,2-Dimethylpropane-1,3-diol, CAS: 126-30-7

### **Main symptoms**

cough.

### **Target Organ Systemic Toxicant - Single exposure**

Based on available data, the classification criteria are not met for:

STOT SE

### **Target Organ Systemic Toxicant - Repeated exposure**

Based on available data, the classification criteria are not met for:

STOT RE

### 11.2. Information on other hazards

### **Endocrine disrupting properties**

The substance has not been identified as having endocrine disrupting properties in accordance with section 2.3.

### 2,2-Dimethylpropane-1,3-diol, CAS: 126-30-7

### Other adverse effects

Components of the product may be absorbed into the body by inhalation and ingestion.

#### Note

Handle in accordance with good industrial hygiene and safety practice. Further details on substance data can be found in the registration dossier under the following link:

http://echa.europa.eu/information-on-chemicals/registered-substances.

### SECTION 12: Ecological information

### 12.1. Toxicity

Acute aquatic toxicity					
2,2-Dimethylpropane-1,3-diol (126-30-7)					
Species	Exposure time	Dose	Method		
Daphnia magna (Water flea)	48h	EC50: > 500 mg/l	84/449/EEC C.2		
Desmodesmus subspicatus	72h	EC20: > 500 mg/l	DIN 38412, part 9		
Oryzias latipes (Medaka)	48h	LC50: > 10000 mg/l	JIS		
Leuciscus idus (Golden orfe)	48h	LC0: 10000 mg/l			
Activated sludge (domestic)	24h	TTC: 2000 mg/l	ETAD Fermentation tube		
			method		

Long term toxicity				
2,2-Dimethylpropane-1,3	-diol (126-30-7)			
Type	Species	Dose	Method	
Mortality	Daphnia magna	NOEC: > 1000 mg/l		
	(Water flea)	(21 d)		

### 12.2. Persistence and degradability

### 2,2-Dimethylpropane-1,3-diol, CAS: 126-30-7

according to REACH Regulation (EC) No. 1907/2006, as amended by UK REACH Regulations SI 2019/758



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### **Biodegradation**

80-90 % (28 d), activated sludge, domestic, aerobic, non-adapted, Readily biodegradable, OECD 301 B.

Abiotic Degradation						
2,2-Dimethylpropane-1,3-diol (126-30-7						
Туре	Result	Method				
Hydrolysis	Half-life (DT50): t1/2 (pH 4 ): 1 yr @ 25°C	OECD 111				
Hydrolysis	Half-life (DT50): t1/2 (pH 7 ): 1 yr @ 25°C	OECD 111				
Hydrolysis	Half-life (DT50): t1/2 (pH 9 ): 1 yr @ 25°C	OECD 111				
Photolysis	Photochemical reaction with OH Radicals Half-life (DT50): 1,851 d @ 25°C	SRC AOP v1.92				

### 12.3. Bioaccumulative potential

2,2-Dimethylpropane-1,3-diol (126-30-7)				
Туре	Result	Method		
log Pow	0 @ 25 °C (77 °F)	OECD 107		
BCF	< 9	OECD 305 C		

### 12.4. Mobility in soil

2,2-Dimethylpropane-1,3-diol (126	-30-7)	
Туре	Result	Method
Distribution to environmental compartments	Air: 0,001 Soil: 0,0627 % Water: 99,9 % Sediment: 0,001%, Suspended sediment: < 0,001% Biota: < 0,001%	Calculation according Mackay, Level I
Adsorption/Desorption	log koc: 0,019 @ 25 °C ( 77 °F)	calculated
Surface tension	72 mN/m (1 g/l @ 20°C (68°F))	OECD 115

### 12.5. Results of PBT and vPvB assessment

### 2,2-Dimethylpropane-1,3-diol, CAS: 126-30-7

### PBT and vPvB assessment

This substance is not considered to be persistent, bioaccumulating nor toxic (PBT), nor very persistent nor very bioaccumulating (vPvB)

### 12.6. Endocrine disrupting properties

The substance has not been identified as having endocrine disrupting properties in accordance with section 2.3.

### 12.7. Other adverse effects

### 2,2-Dimethylpropane-1,3-diol, CAS: 126-30-7

No data available

according to REACH Regulation (EC) No. 1907/2006, as amended by UK REACH Regulations SI 2019/758



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### SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

### **Product Information**

Disposal required in compliance with all waste management related state and local regulations. The choice of the appropriate method of disposal depends on the product composition by the time of disposal as well as the local statutes and possibilities for disposal.

Hazardous waste according to European Waste Catalogue (EWC)

### Uncleaned empty packaging

Contaminated packaging should be emptied as far as possible and after appropriate cleansing may be taken for reuse.

### SECTION 14: Transport information

### ADR/RID

14.1. UN number or ID number UN 3256

**14.2. UN proper shipping name** Elevated temperature liquid, flammable, n.o.s.

(Neopentylglycol)

14.3. Transport hazard class(es) 3
14.4. Packing group

14.5. Environmental hazards

14.6. Special precautions for user

Marking Elevated temperature substance

ADR Tunnel restriction code (D/E)
Classification Code F2
Hazard Number 30

ADN: Container and Tanker

14.1. UN number or ID number UN 3256

**14.2. UN proper shipping name** Elevated temperature liquid, flammable, n.o.s.

(Neopentylglycol)

14.3. Transport hazard class(es)

14.4. Packing group

14.5. Environmental hazards

14.6. Special precautions for user

Marking Elevated temperature substance

Classification Code F2 Hazard Number 30

### ICAO-TI / IATA-DGR forbidden

### **IMDG**

14.1. UN number or ID number UN 3256

**14.2. UN proper shipping name** Elevated temperature liquid, flammable, n.o.s.

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(Neopentylglycol)

14.3. Transport hazard class(es)
14.4. Packing group
14.5. Environmental hazards

14.6. Special precautions for user

EmS F-E, S-D

14.7. Maritime transport in bulk according

to IMO instruments

Product name 2,2-Dimethylpropane-1,3-diol

Ship type 3
Pollution category Z
Hazard class P

### SECTION 15: Regulatory information

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

### Regulation 1272/2008, Annex VI

not listed

DI 2012/18/EU (Seveso III)

Category not subject

DI 1999/13/EC (VOC Guideline)

Status
not subject

The REACH etc. (Amendment etc.) (EU Exit) Regulations 2019 No. 758

Component	Status
2,2-Dimethylpropane-1,3-diol	The substance will not be pre-registered
CAS: 126-30-7	

For details and further information please refer to the original regulation.

### **International Inventories**

2,2-Dimethylpropane-1,3-diol, CAS: 126-30-7

AICS (AU)

DSL (CA)

IECSC (CN)

EC-No. 2047810 (EU)

ENCS (2)-240 (JP)

ISHL (2)-240 (JP)

KECI KE-11811 (KR)

INSQ (MX)

PICCS (PH)

TSCA (ÙS)

NZIoC (NZ)

TCSI (TW)

according to REACH Regulation (EC) No. 1907/2006, as amended by UK REACH Regulations SI 2019/758



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### **National regulatory information Great Britain**

### Releases to air (Pollution Inventory Substances)

Component	Annual reporting level threshold
2,2-Dimethylpropane-1,3-diol	not listed
CAS: 126-30-7	

### Releases to water (Pollution Inventory Substances)

Component	Annual reporting level threshold
2,2-Dimethylpropane-1,3-diol	not listed
CAS: 126-30-7	

### Releases to sewer (Pollution Inventory Substances)

Component	Annual reporting level threshold
2,2-Dimethylpropane-1,3-diol	not listed
CAS: 126-30-7	

For details and further information please refer to the original regulation

### 15.2. Chemical safety assessment

The Chemical Safety Report (CSR) has been generated. For Exposure Scenarios see the annex.

### SECTION 16: Other information

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

H318: Causes serious eye damage.

#### **Abbreviations**

A table of terms and abbreviations can be found under the following link: http://echa.europa.eu/documents/10162/13632/information\_requirements\_r20\_en.pdf

#### Training advice

For effective first-aid, special training / education is needed.

### Sources of key data used to compile the datasheet

Information contained in this safety data sheet is based on OQ owned data and public sources deemed valid or acceptable. The absence of data elements required by OSHA, ANSI or Annex II, Regulation 1907/2006/EC indicates, that no data meeting these requirements is available.

### Further information for the safety data sheet

Changes against the previous version are marked by \*\*\*. Observe national and local legal requirements. For more information, other material safety data sheets or technical data sheets please consult the OQ homepage (www.chemicals.oq.com).

### Disclaimer

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### **End of Safety Data Sheet**

# Annex to the extended Safety Data Sheet (eSDS)

### **General information**

**Environmental compartment** 

In the absense of environmental hazards no environmental risk assessment was carried out A quantitative approach used to conclude safe use for:

Long-term Systemic effects via inhalation

Long-term Systemic effects via skin

### Operational conditions and risk management measures

Wear suitable gloves tested to EN 374 for activities, where direct contact with substance is possible Wear suitable eye protection, where direct contact (e.g. splashes) with substance is possible

### Exposure scenario identification

- 1 Industrial use resulting in manufacture of another substance (use of intermediates)
- 2 Formulation & (re)packing of substances and mixtures
- 3 Distribution of substance
- 4 Use in laboratories
- 5 Use in laboratories
- 6 Polymerisation

### Number of the ES 1

Short title of the exposure scenario

## Industrial use resulting in manufacture of another substance (use of intermediates)

### List of use descriptors

#### Sector of uses [SU]

SU3: Industrial uses: Uses of substances as such or in preparations at industrial sites

SU8: Manufacture of bulk, large scale chemicals (including petroleum products)

SU9: Manufacture of fine chemicals

### **Process categories [PROC]**

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

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

PROC8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

PROC14: production of preparations or articles by tabletting, compression, extrusion, pelettisation

PROC15: Use as laboratory reagent

### **Product characteristics**

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Refer to attached safety data sheets

#### Processes and activities covered by the exposure scenario

Use as an intermediate (not related to Strictly Controlled Conditions). Includes incidental exposures during recycling/ recovery, material transfers, storage, sampling, associated laboratory activities, maintenance and loading (ncluding marine vessel/barge, road/rail car and bulk container).

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2

### **Further explanations**

Industrial use

### Number of the contributing scenario

Contributing exposure scenario controlling worker exposure for

PROC 1

### **Further specification**

Assessment tool used: Chesar 2.2

#### **Product characteristics**

Covers percentage substance in the product up to 100 % (unless stated differently)

Liquid, vapour pressure 0,5 - 10 kPa at STP

### Frequency and duration of use

8 h (full shift)

### Human factors not influenced by risk management

Area potentially exposed: corresponds to palm of 1 hand (240 cm²)

### Other given operational conditions affecting workers exposure

Indoor and outdoor use

### Technical conditions and measures to control dispersion from source towards the worker

Without local exhaust ventilation. provide a basic standard of general ventilation (1 to 3 air changes per hour). provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).

### Number of the contributing scenario

Contributing exposure scenario controlling worker exposure for

PROC 2

#### **Further specification**

Assessment tool used: Chesar 2.2

#### **Product characteristics**

Covers percentage substance in the product up to 100 % (unless stated differently)

Liquid, vapour pressure 0,5 - 10 kPa at STP

### Frequency and duration of use

4 h (half shift)

### Human factors not influenced by risk management

Area potentially exposed: corresponds to palm of 2 hands (480 cm²)

### Other given operational conditions affecting workers exposure

Indoor use

### Technical conditions and measures to control dispersion from source towards the worker

Without local exhaust ventilation. provide a good standard of controlled ventilation (5 to 10 air changes per hour) .

### Number of the contributing scenario

Contributing exposure scenario controlling worker exposure for

PROC 3

#### **Further specification**

Assessment tool used: Chesar 2.2

#### **Product characteristics**

Covers percentage substance in the product up to 100 % (unless stated differently)

Liquid, vapour pressure 0,5 - 10 kPa at STP

### Frequency and duration of use

4 h (half shift)

#### Human factors not influenced by risk management

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Area potentially exposed: corresponds to palm of 1 hand (240 cm²)

### Other given operational conditions affecting workers exposure

Indoor use

### Technical conditions and measures to control dispersion from source towards the worker

provide a good standard of controlled ventilation (5 to 10 air changes per hour) . Effectiveness of LEV (local exhaust ventilation): 90 % (inhalative); 0 % (dermal).

### Number of the contributing scenario

4

## Contributing exposure scenario controlling worker exposure for PROC 4

**Further specification** 

Assessment tool used: Chesar 2.2

**Product characteristics** 

Covers percentage substance in the product up to 100 % (unless stated differently)

Liquid, vapour pressure 0,5 - 10 kPa at STP

Frequency and duration of use

4 h (half shift)

Human factors not influenced by risk management

Area potentially exposed: corresponds to palm of 2 hands (480 cm<sup>2</sup>)

Other given operational conditions affecting workers exposure

Indoor use

Technical conditions and measures to control dispersion from source towards the worker

Effectiveness of LEV (local exhaust ventilation): 90 % (inhalative); 0 % (dermal). provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).

### Number of the contributing scenario

5

## Contributing exposure scenario controlling worker exposure for PROC 5

### **Further specification**

Assessment tool used: Chesar 2.2

### **Product characteristics**

Covers percentage substance in the product up to 100 % (unless stated differently)

Liquid, vapour pressure 0,5 - 10 kPa at STP

### Frequency and duration of use

4 h (half shift)

### Human factors not influenced by risk management

Area potentially exposed: corresponds to palm of 2 hands (480 cm²)

### Other given operational conditions affecting workers exposure

Indoor use

### Technical conditions and measures to control dispersion from source towards the worker

Effectiveness of LEV (local exhaust ventilation): 90 % (inhalative); 0 % (dermal). provide a good standard of controlled ventilation (5 to 10 air changes per hour) .

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

Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training.

### Number of the contributing scenario

6

## Contributing exposure scenario controlling worker exposure for PROC 8a

### **Further specification**

Assessment tool used: Chesar 2.2

### **Product characteristics**

Covers percentage substance in the product up to 100 % (unless stated differently)

Liquid, vapour pressure 0,5 - 10 kPa at STP

### Frequency and duration of use

4 h (half shift)

#### Human factors not influenced by risk management

Area potentially exposed: corresponds to 2 hands (960 cm²)

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### Other given operational conditions affecting workers exposure

### Technical conditions and measures to control dispersion from source towards the worker

Effectiveness of LEV (local exhaust ventilation): 90 % (inhalative); 0 % (dermal). provide a good standard of controlled ventilation (5 to 10 air changes per hour) .

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

Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training.

### Number of the contributing scenario

Contributing exposure scenario controlling worker exposure for PROC 8b

#### **Further specification**

Assessment tool used: Chesar 2.2

#### **Product characteristics**

Covers percentage substance in the product up to 100 % (unless stated differently)

Liquid, vapour pressure 0,5 - 10 kPa at STP

### Frequency and duration of use

4 h (half shift)

#### Human factors not influenced by risk management

Area potentially exposed: corresponds to palm of 2 hands (480 cm²)

### Other given operational conditions affecting workers exposure

Indoor use

### Technical conditions and measures to control dispersion from source towards the worker

Effectiveness of LEV (local exhaust ventilation): 95 % (inhalative); 0 % (dermal), provide a basic standard of general ventilation (1 to 3 air changes per hour).

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

Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training.

### Number of the contributing scenario

Contributing exposure scenario controlling worker exposure for

PROC 14

### Further specification

Assessment tool used: Chesar 2.2

#### **Product characteristics**

Covers percentage substance in the product up to 100 % (unless stated differently)

Liquid, vapour pressure 0,5 - 10 kPa at STP

### Frequency and duration of use

4 h (half shift)

#### Human factors not influenced by risk management

Area potentially exposed: corresponds to palm of 2 hands (480 cm²)

### Other given operational conditions affecting workers exposure

### Technical conditions and measures to control dispersion from source towards the worker

provide a good standard of controlled ventilation (5 to 10 air changes per hour) . Effectiveness of LEV (local exhaust ventilation): 90 % (inhalative); 0 % (dermal).

### Number of the contributing scenario

Contributing exposure scenario controlling worker exposure for

**PROC 15** 

#### **Further specification**

Assessment tool used: Chesar 2.2

#### **Product characteristics**

Covers percentage substance in the product up to 100 % (unless stated differently)

Liquid, vapour pressure 0,5 - 10 kPa at STP

### Frequency and duration of use

8 h (full shift)

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#### Human factors not influenced by risk management

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Area potentially exposed: corresponds to palm of 1 hand (240 cm²) Other given operational conditions affecting workers exposure Indoor use

Technical conditions and measures to control dispersion from source towards the worker

Effectiveness of LEV (local exhaust ventilation): 90 % (inhalative); 0 % (dermal). provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).

### Exposure estimation and reference to its source

### Human exposure prediction (oral, dermal, inhalative)

Oral exposure is not expected to occur. EE(inhal): Estimated inhalative long-term exposure [mg/m³]; EE(derm): Estimated dermal long-term exposure [mg/kg b.w./d]. Exposure estimates are given for either short-term or long-term exposure depending on which lead to more conservative risk characterisation ratios. The RMMs described above suffice to control risks for both local and systemic effects.

Proc 1	EE(inhal): 0.030 ; EE(derm): 0.034
Proc 2	EE(inhal): 19.5; EE(derm): 0.822
Proc 3	EE(inhal): 3.9; EE(derm): 0.414
Proc 4	EE(inhal): 18.2; EE(derm): 4.116
Proc 5	EE(inhal): 19.5; EE(derm): 1.645
Proc 8a	EE(inhal): 19.5; EE(derm): 1.645
Proc 8b	EE(inhal): 13.65; EE(derm): 1.645
Proc 14	EE(inhal): 19.5; EE(derm): 2.058
Proc 15	EE(inhal): 15.17; EE(derm): 0.34

### Risk characterisation

RCR(inhal): inhalative risk characterisation ratio; RCR(derm): dermal risk characterisation ratio; total RCR= RCR(inhal) +RCR(derm). Where required local and systemic effects were evaluated both for short-term and long-term exposure. The RCR's given correspond in each case to the most conservative calculated values.

Proc 1	RCR(inhal): 0.01 ; RCR(derm): 0.01
Proc 2	RCR(inhal): 0.557; RCR(derm): 0.082
Proc 3	RCR(inhal): 0.111; RCR(derm): 0.041
Proc 4	RCR(inhal): 0.52; RCR(derm): 0.412
Proc 5	RCR(inhal): 0.557; RCR(derm): 0.164
Proc 8a	RCR(inhal): 0.557; RCR(derm): 0.164
Proc 8b	RCR(inhal): 0.39 ; RCR(derm): 0.164
Proc 14	RCR(inhal): 0.557; RCR(derm): 0.206
Proc 15	RCR(inhal): 0.433 ; RCR(derm): 0.034

Guidance to Downstream User to evaluate whether he works inside the boundaries set by the ES Usage of relase factors allows downstream users to verify in a first approximation, if the combination of local usage and production conditions meets the defined release quantities resulting from this exposure scenario (calculated as M(site) [see amounts used, contributing scenario 1] x release factor [Technical conditions and measures at process level (source) to prevent release; contributing scenario 1])

### associated uses:

Other combinations of operational conditions may also be safe. Please contact OQ in case your local operational conditions differ from the ones described above and you are unsure if they are also safe

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### Number of the ES 2

Short title of the exposure scenario

### Formulation & (re)packing of substances and mixtures

### List of use descriptors

### Sector of uses [SU]

SU3: Industrial uses: Uses of substances as such or in preparations at industrial sites SU10: Formulation [mixing] of preparations and/or re-packaging (excluding alloys)

### **Process categories [PROC]**

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

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

PROC8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

PROC14: production of preparations or articles by tabletting, compression, extrusion, pelettisation

PROC15: Use as laboratory reagent

### Environmental release categories [ERC]

ERC2: Formulation of preparations (mixtures)

ERC3: Formulation in materials

### **Product characteristics**

Refer to attached safety data sheets

### Processes and activities covered by the exposure scenario

Formulation, packing and re-packing of the substance and its mixtures in batch or continuous operations, including storage, materials transfers, mixing, tabletting, compression, pelletisation, extrusion, large and small scale packing, sampling, maintenanance and associated laboratory activities.

#### **Further explanations**

Industrial use

### Contributing Scenarios

### Number of the contributing scenario

1

## Contributing exposure scenario controlling worker exposure for PROC 1

### **Further specification**

Assessment tool used: Chesar 2.2

### **Product characteristics**

Covers percentage substance in the product up to 100 % (unless stated differently)

Liquid, vapour pressure 0,5 - 10 kPa at STP

### Frequency and duration of use

8 h (full shift)

### Human factors not influenced by risk management

Area potentially exposed: corresponds to palm of 1 hand (240 cm²)

### Other given operational conditions affecting workers exposure

Indoor and outdoor use

### Technical conditions and measures to control dispersion from source towards the worker

Without local exhaust ventilation. provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).

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Number of the contributing scenario

2

Contributing exposure scenario controlling worker exposure for PROC 2

**Further specification** 

Assessment tool used: Chesar 2.2

**Product characteristics** 

Covers percentage substance in the product up to 100 % (unless stated differently)

Liquid, vapour pressure 0,5 - 10 kPa at STP

Frequency and duration of use

4 h (half shift)

Human factors not influenced by risk management

Area potentially exposed: corresponds to palm of 2 hands (480 cm²)

Other given operational conditions affecting workers exposure

Indoor use

Technical conditions and measures to control dispersion from source towards the worker

provide a good standard of controlled ventilation (5 to 10 air changes per hour) .

### Number of the contributing scenario

3

Contributing exposure scenario controlling worker exposure for PROC 3

**Further specification** 

Assessment tool used: Chesar 2.2

**Product characteristics** 

Covers percentage substance in the product up to 100 % (unless stated differently)

Liquid, vapour pressure 0,5 - 10 kPa at STP

Frequency and duration of use

4 h (half shift)

Human factors not influenced by risk management

Area potentially exposed: corresponds to palm of 1 hand (240 cm²)

Other given operational conditions affecting workers exposure

Indoor use

Technical conditions and measures to control dispersion from source towards the worker

Effectiveness of LEV (local exhaust ventilation): 90 % (inhalative); 0 % (dermal). provide a good standard of controlled ventilation (5 to 10 air changes per hour) .

### Number of the contributing scenario

4

Contributing exposure scenario controlling worker exposure for PROC 4

**Further specification** 

Assessment tool used: Chesar 2.2

**Product characteristics** 

Covers percentage substance in the product up to 100 % (unless stated differently)

Liquid, vapour pressure 0,5 - 10 kPa at STP

Frequency and duration of use

4 h (half shift)

Human factors not influenced by risk management

Area potentially exposed: corresponds to palm of 2 hands (480 cm<sup>2</sup>)

Other given operational conditions affecting workers exposure

Indoor use

Technical conditions and measures to control dispersion from source towards the worker

Effectiveness of LEV (local exhaust ventilation): 90 % (inhalative); 0 % (dermal). provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).

Number of the contributing scenario

5

Contributing exposure scenario controlling worker exposure for PROC 5

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### **Further specification**

Assessment tool used: Chesar 2.2

### **Product characteristics**

Covers percentage substance in the product up to 100 % (unless stated differently)

Liquid, vapour pressure 0,5 - 10 kPa at STP

#### Frequency and duration of use

4 h (half shift)

#### Human factors not influenced by risk management

Area potentially exposed: corresponds to palm of 2 hands (480 cm<sup>2</sup>)

### Other given operational conditions affecting workers exposure

Indoor use

#### Technical conditions and measures to control dispersion from source towards the worker

Effectiveness of LEV (local exhaust ventilation): 90 % (inhalative); 0 % (dermal). provide a good standard of controlled ventilation (5 to 10 air changes per hour) .

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

Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training.

### Number of the contributing scenario

Contributing exposure scenario controlling worker exposure for PROC 8a

### **Further specification**

Assessment tool used: Chesar 2.2

#### **Product characteristics**

Covers percentage substance in the product up to 100 % (unless stated differently)

Liquid, vapour pressure 0,5 - 10 kPa at STP

### Frequency and duration of use

4 h (half shift)

### Human factors not influenced by risk management

Area potentially exposed: corresponds to 2 hands (960 cm²)

### Other given operational conditions affecting workers exposure

Indoor use

### Technical conditions and measures to control dispersion from source towards the worker

Effectiveness of LEV (local exhaust ventilation): 90 % (inhalative); 0 % (dermal). provide a good standard of controlled ventilation (5 to 10 air changes per hour) .

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

Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training.

### Number of the contributing scenario

Contributing exposure scenario controlling worker exposure for PROC 8b

### **Further specification**

Assessment tool used: Chesar 2.2

### **Product characteristics**

Covers percentage substance in the product up to 100 % (unless stated differently)

Liquid, vapour pressure 0,5 - 10 kPa at STP

### Frequency and duration of use

4 h (half shift)

#### Human factors not influenced by risk management

Area potentially exposed: corresponds to palm of 2 hands (480 cm²)

### Other given operational conditions affecting workers exposure

Indoor use

### Technical conditions and measures to control dispersion from source towards the worker

Effectiveness of LEV (local exhaust ventilation): 97 % (inhalative); 0 % (dermal).

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

Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training.

### Number of the contributing scenario

Contributing exposure scenario controlling worker exposure for

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### PROC 14

#### **Further specification**

Assessment tool used: Chesar 2.2

### **Product characteristics**

Covers percentage substance in the product up to 100 % (unless stated differently)

Liquid, vapour pressure 0,5 - 10 kPa at STP

### Frequency and duration of use

4 h (half shift)

#### Human factors not influenced by risk management

Area potentially exposed: corresponds to palm of 2 hands (480 cm²)

### Other given operational conditions affecting workers exposure

Indoor use

### Technical conditions and measures to control dispersion from source towards the worker

provide a good standard of controlled ventilation (5 to 10 air changes per hour). Effectiveness of LEV (local exhaust ventilation): 90 % (inhalative); 0 % (dermal).

9

### Number of the contributing scenario

Contributing exposure scenario controlling worker exposure for

### **PROC 15**

#### **Further specification**

Assessment tool used: Chesar 2.2

#### **Product characteristics**

Covers percentage substance in the product up to 100 % (unless stated differently)

Liquid, vapour pressure 0,5 - 10 kPa at STP

### Frequency and duration of use

8 h (full shift)

### Human factors not influenced by risk management

Area potentially exposed: corresponds to palm of 1 hand (240 cm²)

### Other given operational conditions affecting workers exposure

Indoor use

### Technical conditions and measures to control dispersion from source towards the worker

Effectiveness of LEV (local exhaust ventilation): 90 % (inhalative); 0 % (dermal). provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).

### Human exposure prediction (oral, dermal, inhalative)

Oral exposure is not expected to occur. EE(inhal): Estimated inhalative long-term exposure [mg/m³]; EE(derm): Estimated dermal long-term exposure [mg/kg b.w./d]. Exposure estimates are given for either short-term or long-term exposure depending on which lead to more conservative risk characterisation ratios. The RMMs described above suffice to control risks for both local and systemic effects.

Proc 1	EE(inhal): 0.03 ; EE(derm): 0.034
Proc 2	EE(inhal): 19.5; EE(derm): 0.822
Proc 3	EE(inhal): 3.9; EE(derm): 0.414
Proc 4	EE(inhal): 18.2 ; EE(derm): 4.116
Proc 5	EE(inhal): 19.5; EE(derm): 1.645
Proc 8a	EE(inhal): 19.5; EE(derm): 1.645
Proc 8b	EE(inhal): 13.65 ; EE(derm): 1.645
Proc 14	EE(inhal): 19.5; EE(derm): 2.058
Proc 15	EE(inhal): 15.17; EE(derm): 0.34

#### Risk characterisation

RCR(inhal): inhalative risk characterisation ratio; RCR(derm): dermal risk characterisation ratio; total RCR= RCR(inhal) +RCR(derm). Where required local and systemic effects were evaluated both for short-term and long-term exposure. The RCR's given correspond in each case to the most conservative calculated values.

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Proc 1	RCR(inhal): 0.01; RCR(derm): 0.01
Proc 2	RCR(inhal): 0.557; RCR(derm): 0.082
Proc 3	RCR(inhal): 0.111; RCR(derm): 0.041
Proc 4	RCR(inhal): 0.52; RCR(derm): 0.412
Proc 5	RCR(inhal): 0.557; RCR(derm): 0.164
Proc 8a	RCR(inhal): 0.557; RCR(derm): 0.164
Proc 8b	RCR(inhal): 0.39 ; RCR(derm): 0.164
Proc 14	RCR(inhal): 0.557; RCR(derm): 0.206
Proc 15	RCR(inhal): 0.433; RCR(derm): 0.034

### Guidance to Downstream User to evaluate whether he works inside the boundaries set by the ES

Usage of relase factors allows downstream users to verify in a first approximation, if the combination of local usage and production conditions meets the defined release quantities resulting from this exposure scenario (calculated as M(site) [see amounts used, contributing scenario 1] x release factor [Technical conditions and measures at process level (source) to prevent release; contributing scenario 1])

### associated uses:

Other combinations of operational conditions may also be safe. Please contact OQ in case your local operational conditions differ from the ones described above and you are unsure if they are also safe

### Number of the ES 3

Short title of the exposure scenario

### Distribution of substance

### List of use descriptors

### Sector of uses [SU]

SU8: Manufacture of bulk, large scale chemicals (including petroleum products)

SU9: Manufacture of fine chemicals

SU10: Formulation [mixing] of preparations and/or re-packaging (excluding alloys)

### **Process categories [PROC]**

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)

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

PROC8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

PROC14: production of preparations or articles by tabletting, compression, extrusion, pelettisation

PROC15: Use as laboratory reagent

### Environmental release categories [ERC]

ERC2: Formulation of preparations (mixtures)

#### **Product characteristics**

Refer to attached safety data sheets

### Processes and activities covered by the exposure scenario

Formulation, packing and re-packing of the substance and its mixtures in batch or continuous operations, including storage, materials transfers, mixing, tabletting, compression, pelletisation, extrusion, large and small scale packing, sampling, maintenanance and associated laboratory activities.

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### **Further explanations**

Industrial use

### **Contributing Scenarios**

### Number of the contributing scenario

1

## Contributing exposure scenario controlling worker exposure for PROC 1

### **Further specification**

Assessment tool used: Chesar 2.2

#### **Product characteristics**

Covers percentage substance in the product up to 100 % (unless stated differently)

Liquid, vapour pressure 0,5 - 10 kPa at STP

### Frequency and duration of use

8 h (full shift)

### Human factors not influenced by risk management

Area potentially exposed: corresponds to palm of 1 hand (240 cm²)

### Other given operational conditions affecting workers exposure

Indoor and outdoor use

### Technical conditions and measures to control dispersion from source towards the worker

Without local exhaust ventilation. provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).

### Number of the contributing scenario

2

### Contributing exposure scenario controlling worker exposure for

PROC 2

### **Further specification**

Assessment tool used: Chesar 2.2

#### **Product characteristics**

Covers percentage substance in the product up to 100 % (unless stated differently)

Liquid, vapour pressure 0,5 - 10 kPa at STP

### Frequency and duration of use

4 h (half shift)

### Human factors not influenced by risk management

Area potentially exposed: corresponds to palm of 2 hands (480 cm²)

### Other given operational conditions affecting workers exposure

Indoor use

### Technical conditions and measures to control dispersion from source towards the worker

Effectiveness of LEV (local exhaust ventilation): 90 % (inhalative); 0 % (dermal). provide a good standard of controlled ventilation (5 to 10 air changes per hour) .

#### Number of the contributing scenario

3

## Contributing exposure scenario controlling worker exposure for PROC 3

### Further specification

Assessment tool used: Chesar 2.2

### **Product characteristics**

Covers percentage substance in the product up to 100 % (unless stated differently)

Liquid, vapour pressure 0,5 - 10 kPa at STP

### Frequency and duration of use

4 h (half shift)

#### Human factors not influenced by risk management

Area potentially exposed: corresponds to palm of 1 hand (240 cm²)

### Other given operational conditions affecting workers exposure

Indoor use

### Technical conditions and measures to control dispersion from source towards the worker

Effectiveness of LEV (local exhaust ventilation): 90 % (inhalative); 0 % (dermal). provide a good standard of controlled

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ventilation (5 to 10 air changes per hour) .

### Number of the contributing scenario

4

Contributing exposure scenario controlling worker exposure for PROC 5

**Further specification** 

Assessment tool used: Chesar 2.2

**Product characteristics** 

Covers percentage substance in the product up to 100 % (unless stated differently)

Liquid, vapour pressure 0,5 - 10 kPa at STP

Frequency and duration of use

4 h (half shift)

Human factors not influenced by risk management

Area potentially exposed: corresponds to palm of 2 hands (480 cm²)

Other given operational conditions affecting workers exposure

Indoor use

Technical conditions and measures to control dispersion from source towards the worker

Effectiveness of LEV (local exhaust ventilation): 90 % (inhalative); 0 % (dermal). provide a good standard of controlled ventilation (5 to 10 air changes per hour) .

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

Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training.

### Number of the contributing scenario

5

Contributing exposure scenario controlling worker exposure for PROC 8a

**Further specification** 

Assessment tool used: Chesar 2.2

**Product characteristics** 

Covers percentage substance in the product up to 100 % (unless stated differently)

Liquid, vapour pressure 0,5 - 10 kPa at STP

Human factors not influenced by risk management

Area potentially exposed: corresponds to 2 hands (960 cm²)

Other given operational conditions affecting workers exposure

Indoor use

Technical conditions and measures to control dispersion from source towards the worker

Effectiveness of LEV (local exhaust ventilation): 90 % (inhalative); 0 % (dermal). provide a good standard of controlled ventilation (5 to 10 air changes per hour) .

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

Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training.

### Number of the contributing scenario

6

Contributing exposure scenario controlling worker exposure for PROC 8b

**Further specification** 

Assessment tool used: Chesar 2.2

**Product characteristics** 

Covers percentage substance in the product up to 100 % (unless stated differently)

Liquid, vapour pressure 0,5 - 10 kPa at STP

Frequency and duration of use

4 h (half shift)

Human factors not influenced by risk management

Area potentially exposed: corresponds to palm of 2 hands (480 cm<sup>2</sup>)

Other given operational conditions affecting workers exposure

Indoor use

Technical conditions and measures to control dispersion from source towards the worker

Effectiveness of LEV (local exhaust ventilation): 97 % (inhalative); 0 % (dermal). provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).

according to REACH Regulation (EC) No. 1907/2006, as amended by UK REACH Regulations SI 2019/758



### Neopentyl glycol molten

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

Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training.

### Contributing exposure scenario controlling worker exposure for

#### PROC 14

#### **Further specification**

Assessment tool used: Chesar 2.2

### **Product characteristics**

Covers percentage substance in the product up to 100 % (unless stated differently)

Liquid, vapour pressure 0,5 - 10 kPa at STP

### Frequency and duration of use

4 h (half shift)

### Human factors not influenced by risk management

Area potentially exposed: corresponds to palm of 2 hands (480 cm<sup>2</sup>)

### Technical conditions and measures to control dispersion from source towards the worker

Effectiveness of LEV (local exhaust ventilation): 90 % (inhalative); 0 % (dermal). provide a good standard of controlled ventilation (5 to 10 air changes per hour) .

8

### Number of the contributing scenario

Contributing exposure scenario controlling worker exposure for PROC 15

### **Further specification**

Assessment tool used: Chesar 2.2

#### **Product characteristics**

Covers percentage substance in the product up to 100 % (unless stated differently)

Liquid, vapour pressure 0,5 - 10 kPa at STP

### Frequency and duration of use

8 h (full shift)

### Human factors not influenced by risk management

Area potentially exposed: corresponds to palm of 1 hand (240 cm²)

### Other given operational conditions affecting workers exposure

Indoor use

### Technical conditions and measures to control dispersion from source towards the worker

Effectiveness of LEV (local exhaust ventilation): 90 % (inhalative); 0 % (dermal). provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).

### Human exposure prediction (oral, dermal, inhalative)

Oral exposure is not expected to occur. EE(inhal): Estimated inhalative long-term exposure [mg/m³]; EE(derm): Estimated dermal long-term exposure [mg/kg b.w./d]. Exposure estimates are given for either short-term or long-term exposure depending on which lead to more conservative risk characterisation ratios. The RMMs described above suffice to control risks for both local and systemic effects.

EE(inhal): 0.03; EE(derm): 0.034
EE(inhal): 19.5 ; EE(derm): 0.822
EE(inhal): 3.9 ; EE(derm): 0.414
EE(inhal): 19.5; EE(derm): 1.645
EE(inhal): 19.5 ; EE(derm): 1.645
EE(inhal): 13.65; EE(derm): 1.645
EE(inhal): 19.5; EE(derm): 2.058
EE(inhal): 15.17; EE(derm): 0.34

### Risk characterisation

RCR(inhal): inhalative risk characterisation ratio; RCR(derm): dermal risk characterisation ratio; total RCR= RCR(inhal) +RCR(derm). Where required local and systemic effects were evaluated both for short-term and long-term exposure. The RCR's given correspond in each case to the most conservative calculated values.

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Proc 1	RCR(inhal): 0.01 ; RCR(derm): 0.01
Proc 2	RCR(inhal): 0.557; RCR(derm): 0.082
Proc 3	RCR(inhal): 0.111; RCR(derm): 0.041
Proc 5	RCR(inhal): 0.557; RCR(derm): 0.164
Proc 8a	RCR(inhal): 0.557; RCR(derm): 0.164
Proc 8b	RCR(inhal): 0.39; RCR(derm): 0.164
Proc 14	RCR(inhal): 0.557; RCR(derm): 0.206
Proc 15	RCR(inhal): 0.433 ; RCR(derm): 0.034

Guidance to Downstream User to evaluate whether he works inside the boundaries set by the ES

Usage of relase factors allows downstream users to verify in a first approximation, if the combination of local usage and production conditions meets the defined release quantities resulting from this exposure scenario (calculated as M(site) [see amounts used, contributing scenario 1] x release factor [Technical conditions and measures at process level (source) to prevent release; contributing scenario 1])

### associated uses:

Other combinations of operational conditions may also be safe. Please contact OQ in case your local operational conditions differ from the ones described above and you are unsure if they are also safe

### Number of the ES 4

Short title of the exposure scenario

### Use in laboratories

### List of use descriptors

### Sector of uses [SU]

SU3: Industrial uses: Uses of substances as such or in preparations at industrial sites

#### **Process categories [PROC]**

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

PROC14: production of preparations or articles by tabletting, compression, extrusion, pelettisation

PROC15: Use as laboratory reagent

#### Environmental release categories [ERC]

ERC4: Industrial use of processing aids in processes and products, not becoming part of articles

#### **Product characteristics**

Refer to attached safety data sheets

### Processes and activities covered by the exposure scenario

Use of the substance within laboratory settings, including material transfers and equipment cleaning

### **Further explanations**

Industrial use

### **Contributing Scenarios**

Number of the contributing scenario
Contributing exposure scenario controlling worker exposure for
PROC 8a

1

according to REACH Regulation (EC) No. 1907/2006, as amended by UK REACH Regulations SI 2019/758



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**Further specification** 

Assessment tool used: Chesar 2.2

**Product characteristics** 

Covers percentage substance in the product up to 100 % (unless stated differently)

Liquid, vapour pressure 0,5 - 10 kPa at STP

Frequency and duration of use

4 h (half shift)

Human factors not influenced by risk management

Area potentially exposed: corresponds to 2 hands (960 cm²)

Other given operational conditions affecting workers exposure

Indoor use

Technical conditions and measures to control dispersion from source towards the worker

Effectiveness of LEV (local exhaust ventilation): 90 % (inhalative); 0 % (dermal). provide a good standard of controlled ventilation (5 to 10 air changes per hour) .

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

Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training.

### Number of the contributing scenario

Contributing exposure scenario controlling worker exposure for PROC 8b

1 1100 00

**Further specification** 

Assessment tool used: Chesar 2.2

**Product characteristics** 

Covers percentage substance in the product up to 100 % (unless stated differently)

Liquid, vapour pressure 0,5 - 10 kPa at STP

Frequency and duration of use

4 h (half shift)

Human factors not influenced by risk management

Area potentially exposed: corresponds to palm of 2 hands (480 cm²)

Other given operational conditions affecting workers exposure

Indoor use

Technical conditions and measures to control dispersion from source towards the worker

Effectiveness of LEV (local exhaust ventilation): 97 % (inhalative); 0 % (dermal). provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).

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

Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training.

### Number of the contributing scenario

3

2

Contributing exposure scenario controlling worker exposure for

PROC 15

**Further specification** 

Assessment tool used: Chesar 2.2

**Product characteristics** 

Covers percentage substance in the product up to 100 % (unless stated differently)

Liquid, vapour pressure 0,5 - 10 kPa at STP

Frequency and duration of use

8 h (full shift)

Human factors not influenced by risk management

Area potentially exposed: corresponds to palm of 1 hand (240 cm²)

Other given operational conditions affecting workers exposure

Indoor use

Technical conditions and measures to control dispersion from source towards the worker

Effectiveness of LEV (local exhaust ventilation): 90 % (inhalative); 0 % (dermal). provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).

**Further specification** 

Assessment tool used: Chesar 2.2

**Product characteristics** 

according to REACH Regulation (EC) No. 1907/2006, as amended by UK REACH Regulations SI 2019/758



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Covers percentage substance in the product up to 100 % (unless stated differently)

Liquid, vapour pressure 0,5 - 10 kPa at STP

Frequency and duration of use

4 h (half shift)

Human factors not influenced by risk management

Area potentially exposed: corresponds to palm of 2 hands (480 cm²)

Other given operational conditions affecting workers exposure

Indoor use

Technical conditions and measures to control dispersion from source towards the worker

Effectiveness of LEV (local exhaust ventilation): 90 % (inhalative); 0 % (dermal). provide a good standard of controlled ventilation (5 to 10 air changes per hour) .

### Human exposure prediction (oral, dermal, inhalative)

Oral exposure is not expected to occur. EE(inhal): Estimated inhalative long-term exposure [mg/m³]; EE(derm): Estimated dermal long-term exposure [mg/kg b.w./d]. Exposure estimates are given for either short-term or long-term exposure depending on which lead to more conservative risk characterisation ratios. The RMMs described above suffice to control risks for both local and systemic effects.

 Proc 8a
 EE(inhal): 19.5 ; EE(derm): 1.645

 Proc 8b
 EE(inhal): 13.65 ; EE(derm): 1.645

 Proc 14
 EE(inhal): 19.5 ; EE(derm): 2.058

 Proc 15
 EE(inhal): 15.17 ; EE(derm): 0.34

### **Risk characterisation**

RCR(inhal): inhalative risk characterisation ratio; RCR(derm): dermal risk characterisation ratio; total RCR= RCR(inhal) +RCR(derm). Where required local and systemic effects were evaluated both for short-term and long-term exposure. The RCR's given correspond in each case to the most conservative calculated values.

 Proc 8a
 RCR(inhal): 0.557; RCR(derm): 0.164

 Proc 8b
 RCR(inhal): 0.39; RCR(derm): 0.164

 Proc 14
 RCR(inhal): 0.557; RCR(derm): 0.206

 Proc 15
 RCR(inhal): 0.433; RCR(derm): 0.034

### Guidance to Downstream User to evaluate whether he works inside the boundaries set by the ES

Usage of relase factors allows downstream users to verify in a first approximation, if the combination of local usage and production conditions meets the defined release quantities resulting from this exposure scenario (calculated as M(site) [see amounts used, contributing scenario 1] x release factor [Technical conditions and measures at process level (source) to prevent release; contributing scenario 1])

### associated uses:

Other combinations of operational conditions may also be safe. Please contact OQ in case your local operational conditions differ from the ones described above and you are unsure if they are also safe

### Number of the ES 5

Short title of the exposure scenario

### Use in laboratories

### Sector of uses [SU]

SU22: Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

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### Process categories [PROC]

PROC14: production of preparations or articles by tabletting, compression, extrusion, pelettisation PROC15: Use as laboratory reagent

#### Environmental release categories [ERC]

ERC8a: Wide dispersive indoor use of processing aids in open systems

#### **Product characteristics**

Refer to attached safety data sheets

### Processes and activities covered by the exposure scenario

Use of small quantities within laboratory settings, including material transfers and equipment cleaning

### **Further explanations**

Professional use

### Contributing Scenarios

### Number of the contributing scenario

Contributing exposure scenario controlling worker exposure for

**PROC 14** 

### **Further specification**

Assessment tool used: Chesar 2.2

### **Product characteristics**

Covers percentage substance in the product up to 100 % (unless stated differently)

Liquid, vapour pressure 0,5 - 10 kPa at STP

#### Frequency and duration of use

4 h (half shift)

### Human factors not influenced by risk management

Area potentially exposed: corresponds to palm of 2 hands (480 cm<sup>2</sup>)

### Other given operational conditions affecting workers exposure

Indoor use

### Technical conditions and measures to control dispersion from source towards the worker

provide a good standard of controlled ventilation (5 to 10 air changes per hour)

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

Wear respiratory protection (Efficiency: 95 %).

### Number of the contributing scenario

Contributing exposure scenario controlling worker exposure for

**PROC 15** 

### **Further specification**

Assessment tool used: Chesar 2.2

### **Product characteristics**

Covers percentage substance in the product up to 100 % (unless stated differently)

Liquid, vapour pressure 0,5 - 10 kPa at STP

### Frequency and duration of use

Avoid carrying out activities involving exposure for more than 1 hour

### Human factors not influenced by risk management

Area potentially exposed: corresponds to palm of 1 hand (240 cm²)

### Technical conditions and measures to control dispersion from source towards the worker

provide a good standard of controlled ventilation (5 to 10 air changes per hour).

### Human exposure prediction (oral, dermal, inhalative)

Oral exposure is not expected to occur. EE(inhal): Estimated inhalative long-term exposure [mg/m³]; EE(derm): Estimated dermal long-term exposure [mg/kg b.w./d]. Exposure estimates are given for either short-term or

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long-term exposure depending on which lead to more conservative risk characterisation ratios. The RMMs described above suffice to control risks for both local and systemic effects.

EE(inhal): 19.5 : EE(derm): 2.058 Proc 14 Proc 15 EE(inhal): 13; EE(derm): 0.068

#### Risk characterisation

RCR(inhal): inhalative risk characterisation ratio; RCR(derm): dermal risk characterisation ratio; total RCR= RCR(inhal) +RCR(derm). Where required local and systemic effects were evaluated both for short-term and long-term exposure. The RCR's given correspond in each case to the most conservative calculated values.

RCR(inhal): 0.557; RCR(derm): 0.206 Proc 14 Proc 15 RCR(inhal): 0.557; RCR(derm): 0.206

### Guidance to Downstream User to evaluate whether he works inside the boundaries set by the ES

Usage of relase factors allows downstream users to verify in a first approximation, if the combination of local usage and production conditions meets the defined release quantities resulting from this exposure scenario (calculated as M(site) [see amounts used, contributing scenario 1] x release factor [Technical conditions and measures at process level (source) to prevent release; contributing scenario 1])

#### associated uses:

Other combinations of operational conditions may also be safe. Please contact OQ in case your local operational conditions differ from the ones described above and you are unsure if they are also safe

### Number of the ES

Short title of the exposure scenario

### **Polymerisation**

### Sector of uses [SU]

SU3: Industrial uses: Uses of substances as such or in preparations at industrial sites

SU11: Manufacture of rubber products

SU12: Manufacture of plastics products, including compounding and conversion

### Process categories [PROC]

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

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

PROC8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

PROC14: production of preparations or articles by tabletting, compression, extrusion, pelettisation

PROC15: Use as laboratory reagent

### **Environmental release categories [ERC]**

ERC6c: Industrial use of monomers for manufacture of thermoplastics

### **Product characteristics**

Refer to attached safety data sheets

### Processes and activities covered by the exposure scenario

Processing of formulated polymers including material transfers, moulding and forming activities, material re-works and

according to REACH Regulation (EC) No. 1907/2006, as amended by UK REACH Regulations SI 2019/758



### Neopentyl glycol molten

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associated maintenance

### **Further explanations**

Industrial use

Number of the contributing scenario

1

2

Contributing exposure scenario controlling worker exposure for

PROC 1

### **Further specification**

Assessment tool used: Chesar 2.2

#### **Product characteristics**

Covers percentage substance in the product up to 100 % (unless stated differently)

Liquid, vapour pressure 0,5 - 10 kPa at STP

### Frequency and duration of use

8 h (full shift)

#### Human factors not influenced by risk management

Area potentially exposed: corresponds to palm of 1 hand (240 cm²)

### Other given operational conditions affecting workers exposure

Indoor and outdoor use

#### Technical conditions and measures to control dispersion from source towards the worker

Without local exhaust ventilation. provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).

#### Number of the contributing scenario

Contributing exposure scenario controlling worker exposure for

PROC 2

### **Further specification**

Assessment tool used: Chesar 2.2

#### **Product characteristics**

Covers percentage substance in the product up to 100 % (unless stated differently)

Liquid, vapour pressure 0,5 - 10 kPa at STP

### Frequency and duration of use

4 h (half shift)

#### Human factors not influenced by risk management

Area potentially exposed: corresponds to palm of 2 hands (480 cm²)

### Other given operational conditions affecting workers exposure

ndoor use

### Technical conditions and measures to control dispersion from source towards the worker

provide a good standard of controlled ventilation (5 to 10 air changes per hour) .

### Number of the contributing scenario

3

### Contributing exposure scenario controlling worker exposure for

PROC 3

### **Further specification**

Assessment tool used: Chesar 2.2

#### **Product characteristics**

Covers percentage substance in the product up to 100 % (unless stated differently)

Liquid, vapour pressure 0,5 - 10 kPa at STP

### Frequency and duration of use

4 h (half shift)

### Human factors not influenced by risk management

Area potentially exposed: corresponds to palm of 1 hand (240 cm<sup>2</sup>)

### Other given operational conditions affecting workers exposure

Indoor use

### Technical conditions and measures to control dispersion from source towards the worker

provide a good standard of controlled ventilation (5 to 10 air changes per hour) .

### Number of the contributing scenario

4

Contributing exposure scenario controlling worker exposure for

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### PROC 4

#### **Further specification**

Assessment tool used: Chesar 2.2

### **Product characteristics**

Covers percentage substance in the product up to 100 % (unless stated differently)

Liquid, vapour pressure 0,5 - 10 kPa at STP

### Frequency and duration of use

4 h (half shift)

#### Human factors not influenced by risk management

Area potentially exposed: corresponds to palm of 2 hands (480 cm²)

### Other given operational conditions affecting workers exposure

Indoor use

### Technical conditions and measures to control dispersion from source towards the worker

Effectiveness of LEV (local exhaust ventilation): 90 % (inhalative); 0 % (dermal), provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).

#### Number of the contributing scenario

Contributing exposure scenario controlling worker exposure for

PROC 5

#### **Further specification**

Assessment tool used: Chesar 2.2

#### **Product characteristics**

Covers percentage substance in the product up to 100 % (unless stated differently)

Liquid, vapour pressure 0,5 - 10 kPa at STP

### Frequency and duration of use

4 h (half shift)

### Human factors not influenced by risk management

Area potentially exposed: corresponds to palm of 2 hands (480 cm<sup>2</sup>)

### Other given operational conditions affecting workers exposure

Indoor use

### Technical conditions and measures to control dispersion from source towards the worker

Effectiveness of LEV (local exhaust ventilation): 90 % (inhalative); 0 % (dermal). provide a good standard of controlled ventilation (5 to 10 air changes per hour) .

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

Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training.

### Number of the contributing scenario

Contributing exposure scenario controlling worker exposure for

PROC 8a

### **Further specification**

Assessment tool used: Chesar 2.2

### **Product characteristics**

Covers percentage substance in the product up to 100 % (unless stated differently)

Liquid, vapour pressure 0,5 - 10 kPa at STP

### Frequency and duration of use

4 h (half shift)

### Human factors not influenced by risk management

Area potentially exposed: corresponds to 2 hands (960 cm²)

#### Other given operational conditions affecting workers exposure

Indoor use

#### Technical conditions and measures to control dispersion from source towards the worker

Effectiveness of LEV (local exhaust ventilation): 90 % (inhalative); 0 % (dermal), provide a good standard of controlled ventilation (5 to 10 air changes per hour) .

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

Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training.

### Number of the contributing scenario

5

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## Contributing exposure scenario controlling worker exposure for PROC 8b

#### **Further specification**

Assessment tool used: Chesar 2.2

### **Product characteristics**

Covers percentage substance in the product up to 100 % (unless stated differently)

Liquid, vapour pressure 0,5 - 10 kPa at STP

### Frequency and duration of use

4 h (half shift)

#### Human factors not influenced by risk management

Area potentially exposed: corresponds to palm of 2 hands (480 cm²)

### Other given operational conditions affecting workers exposure

Indoor use

### Technical conditions and measures to control dispersion from source towards the worker

Effectiveness of LEV (local exhaust ventilation): 97  $\stackrel{\circ}{w}$  (inhalative); 0 % (dermal). provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).

8

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

Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training.

### Number of the contributing scenario

## Contributing exposure scenario controlling worker exposure for PROC 15

**Further specification** 

Assessment tool used: Chesar 2.2

#### **Product characteristics**

Covers percentage substance in the product up to 100 % (unless stated differently)

Liquid, vapour pressure 0,5 - 10 kPa at STP

### Frequency and duration of use

8 h (full shift)

### Human factors not influenced by risk management

Area potentially exposed: corresponds to palm of 1 hand (240 cm²)

### Other given operational conditions affecting workers exposure

Indoor use

### Technical conditions and measures to control dispersion from source towards the worker

Effectiveness of LEV (local exhaust ventilation): 90 % (inhalative); 0 % (dermal). provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).

## Contributing exposure scenario controlling worker exposure for PROC 14

### **Further specification**

Assessment tool used: Chesar 2.2

### **Product characteristics**

Covers percentage substance in the product up to 100 % (unless stated differently)

Liquid, vapour pressure 0,5 - 10 kPa at STP

### Frequency and duration of use

4 h (half shift)

### Human factors not influenced by risk management

Area potentially exposed: corresponds to palm of 2 hands (480 cm²)

#### Other given operational conditions affecting workers exposure

Indoor use

#### Technical conditions and measures to control dispersion from source towards the worker

Effectiveness of LEV (local exhaust ventilation): 90 % (inhalative); 0 % (dermal). provide a good standard of controlled ventilation (5 to 10 air changes per hour) .

### Human exposure prediction (oral, dermal, inhalative)

Oral exposure is not expected to occur. EE(inhal): Estimated inhalative long-term exposure [mg/m³]; EE(derm): Estimated dermal long-term exposure [mg/kg b.w./d]. Exposure estimates are given for either short-term or

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long-term exposure depending on which lead to more conservative risk characterisation ratios. The RMMs described above suffice to control risks for both local and systemic effects.

Proc 1	EE(inhal): 0.03; EE(derm): 0.034
Proc 2	EE(inhal): 19.5; EE(derm): 0.822
Proc 3	EE(inhal): 3.9; EE(derm): 0.414
Proc 4	EE(inhal): 18.2; EE(derm): 4.116
Proc 5	EE(inhal): 19.5; EE(derm): 1.645
Proc 8a	EE(inhal): 19.5; EE(derm): 1.645
Proc 8b	EE(inhal): 13.65; EE(derm): 1.645
Proc 14	EE(inhal): 19.5; EE(derm): 2.058
Proc 15	EE(inhal): 15.17; EE(derm): 0.34

### **Risk characterisation**

RCR(inhal): inhalative risk characterisation ratio; RCR(derm): dermal risk characterisation ratio; total RCR= RCR(inhal) +RCR(derm). Where required local and systemic effects were evaluated both for short-term and long-term exposure. The RCR's given correspond in each case to the most conservative calculated values.

Proc 1	RCR(inhal): 0.01; RCR(derm): 0.01
Proc 2	RCR(inhal): 0.557; RCR(derm): 0.082
Proc 3	RCR(inhal): 0.111; RCR(derm): 0.041
Proc 4	RCR(inhal): 0.52; RCR(derm): 0.412
Proc 5	RCR(inhal): 0.557; RCR(derm): 0.164
Proc 8a	RCR(inhal): 0.557; RCR(derm): 0.164
Proc 8b	RCR(inhal): 0.39; RCR(derm): 0.164
Proc 14	RCR(inhal): 0.557; RCR(derm): 0.206
Proc 15	RCR(inhal): 0.433; RCR(derm): 0.034

Guidance to Downstream User to evaluate whether he works inside the boundaries set by the ES Usage of relase factors allows downstream users to verify in a first approximation, if the combination of local usage and production conditions meets the defined release quantities resulting from this exposure scenario (calculated as M(site) [see amounts used, contributing scenario 1] x release factor [Technical conditions and measures at process level (source) to prevent release; contributing scenario 1])

### associated uses:

Other combinations of operational conditions may also be safe. Please contact OQ in case your local operational conditions differ from the ones described above and you are unsure if they are also safe

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