

Version 4.0 EN
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Print date 10 November 2017

1. Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

Trade name InSpec OX
REACH Registration No: if available listed in Chapter. 3

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

Relevant applications identified Disinfectant
Function For detailed exposure scenarios see Annexes.
Sporicide

1.3. Details of the supplier of the safety data sheet

Company Redditch Medical (A
Division of Entaco) Unit 90
Heming Road, Washford
Redditch UK B98 0EA,

Telephone +44 (0)1527 830940
Email Address craig.thomas@redditchmedical.com

1.4. Emergency telephone number 07908 176679**2. Hazards identification****2.1. Classification of the substance or mixture****Classification according to Regulation (EC) No. 1272/2008 [CLP]**

EU-CLP as per Regulation (EU) No. 1272/2008

Serious eye damage/eye irritation	Category 1	H318
Skin irritation	Category 2	H315
Hazardous to the aquatic environment - Chronic Hazard	Category 2	H411

2.2. Label elements**Labelling as per (EU) 1272/2008**

Statutory basis EU-CLP as per Regulation (EU) No. 1272/2008

hazard-defining component(s) (GHS)

- Peracetic acid
- hydrogen peroxide solution
- Acetic acid

Symbol(s)



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Signal word	Danger
Hazard statement	H318 - Causes serious eye damage. H315 - Causes skin irritation. H411 - Toxic to aquatic life with long lasting effects.
Precautionary statement: Prevention	P273 - Avoid release to the environment. P280 - Wear protective gloves/protective clothing/eye protection/face protection.
Precautionary statement: Reaction	P302 + P352 - IF ON SKIN: Wash with plenty of water/ soap. P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P308 + P311 - IF exposed or concerned: Call a POISON CENTER/doctor.

2.3. Other hazards

Risk of decomposition in contact with incompatible substances, impurities, metals, alkalis, reducing agents.

Danger of decomposition if exposed to heat

see also section 10.

Not a PBT, vPvB substance as per the criteria of the REACH Regulation.

3. Composition/information on ingredients

Chemical nature

Preparation of perethanoic acid, hydrogen peroxide, ethanoic acid and water in balance.

3.1. Substances

-

3.2. Mixtures

Information on ingredients / Hazardous components as per EU-CLP Regulation (EC) No. 1272/2008

• Peracetic acid		0.1% - 0.5%			
CAS-No.	79-21-0	EC-No.	201-186-8	REACH-No.	01-2119531330-56-0004
Flammable liquids				Category 3	H226
Organic peroxides				Type D	H242
Acute toxicity (inhalation)				Category 3	H331
Acute toxicity (dermal)				Category 4	H312
Acute toxicity (Oral)				Category 3	H301
Skin corrosion/irritation				Category 1A	H314
Serious eye damage/eye irritation				Category 1	H318
Specific Target Organ Toxicity - Single exposure				Category 3	H335
Hazardous to the aquatic environment - Acute Hazard				Category 1	H400
Remarks	From Annex VI, Directive (EC) No. 1272/2008 supplemental classification with:				
Hazardous to the aquatic environment - Chronic Hazard				Category 1	H410
M-factor (aquatic, acute)	1				
M-factor (aquatic, chronic)	10				
• hydrogen peroxide solution		6% - 7%			
CAS-No.	7722-84-1	EC-No.	231-765-0	REACH-No.	01-2119485845-22-0000 01-2119485845-22-0012 01-2119485845-22-0016
Oxidizing liquids				Category 1	H271
Acute toxicity (inhalation)				Category 4	H332
Acute toxicity (Oral)				Category 4	H302
Skin corrosion/irritation				Category 1A	H314
Remarks	From Annex VI, Directive (EC) No. 1272/2008 supplemental classification with:				
Hazardous to the aquatic environment - Chronic Hazard				Category 3	H412

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• Acetic acid		4% - 5%	
CAS-No.	64-19-7	EC-No.	200-580-7
Flammable liquids Skin corrosion/irritation		Category 3 Category 1A	
		REACH-No.	01-2119475328-30-0023

Texts of H phrases, see in Chapter 16

4. First Aid Measures

4.1 Description of first aid measures

Pay attention to self-protection.

Remove victims from hazardous area. Immediately remove soiled or soaked clothing and remove it to a safe distance. Keep victim warm, in a stabilized position and covered.

Do not leave victims unattended.

If the casualty is unconscious: Place the victim in the recovery position.

Inhalation

Potential for exposure by inhalation if aerosols or mists are generated.

Move victims into fresh air.

With labored breathing: Provide with oxygen. Consult a doctor.

If the casualty is not breathing: Perform mouth-to-mouth resuscitation, notify emergency physician immediately.

Skin contact

Wash off affected area immediately with plenty of water for at least 15 minutes. If symptoms persist, consult a physician for treatment.

Eye contact

With eye held open, thoroughly rinse immediately with plenty of water for at least 10 minutes.

Consult an ophthalmologist immediately if the symptoms persist.

When dealing with caustic substances, notify emergency physician immediately (key words: burns in eye).

Ingestion

Rinse mouth.

Immediately give large quantities of water to drink.

Obtain medical attention.

When dealing with caustic substances, notify emergency physician immediately.

4.2. Most important symptoms and effects, both acute

and delayed Symptoms

Irritation of skin and mucous membranes

Caus

es

burns.

daze,

headache, vertigo, somnolence (drowsiness), nausea.

Health injuries may be delayed.

Hazards

Strongly irritating to corrosive. Harmful in contact with skin and if swallowed.

Vapours may cause drowsiness and dizziness.

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

The initial focus is only on the local action, characterized by quickly progressing deep tissue damage. In the eye, caustic/irritating and harmful liquids cause, depending on the intensity of exposure, various levels of irritation, destruction, and ablation of the epithelium of the conjunctiva and cornea, corneal clouding, edema and ulcerations. Danger! Possible loss of eyesight!

Superficial irritations and damage up to ulcerations and scarring develop on the skin.

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After accidental absorption in the body, the pathology and clinical findings are dependent on the kinetics of the substance (quantity of absorbed substance, the absorption time, and the effectiveness of early elimination measures (first aid)/ excretion - metabolism).

A specific action of the substance is unknown.

In case of substances with high water solubility, irritations up to formation of necrosis in the upper respiratory tract may result after inhalation of caustic/ irritating aerosols and mists.

The initial focus is on the local action: signs of irritation of the respiratory tract such as coughing, burning

behind the sternum, tears, burning in the eyes

or nose. There is a risk of pulmonary edema!

5. Fire-fighting measures

5.1. Extinguishing media

Suitable extinguishing media: Water Foam
dry powder
Carbon dioxide (CO₂)

Unsuitable extinguishing media: organic compounds

5.2. Special hazards arising from the substance or mixture

Involved in fire, it may decompose yielding oxygen.

Risk of overpressure and burst due to decomposition in confined spaces and pipes.

5.3. Advice for firefighters

In case of fire, remove the endangered containers and bring to a safe place, if this can be done safely. In the case of fire, cool the containers that are at risk with water or dilute with water (flooding).

Water used to extinguish fire should not enter drainage systems, soil or stretches of water. Contaminated extinguishing water must be treated at a suitable disposal plant in accordance with waste management laws.

Fire residues should be disposed of in accordance with the regulations. Keep out unprotected persons.

In the event of fire, wear self-contained breathing apparatus. full protective suit

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Keep unauthorized persons away.

6.2. Environmental precautions

Do not permit to enter into surface water, stretches of water undiluted.

If the product contaminates rivers and lakes or drains inform respective authorities.

6.3. Methods and material for containment and cleaning up

Absorb with liquid-binding material (e.g. inert absorbent universal binder) pick up. Rinse away any residue with plenty of water.

Pack and label wastes like the pure substance. Do not detach label from the delivery containers prior to disposal.

Disposal according to local authority regulations.

Additional advice

Isolate defective containers immediately, if possible and safe to do. Shut off leak, if possible and safe to do. Place defective containers in waste receptacle (waste packaging receptacle) made of plastic (not metal). Do not seal defective containers or waste receptacles airtight (danger of bursting due to product decomposition).

Observe regulations on prevention of water pollution (check, dam up, cover up).

Product taken out should not be returned into container. Never return spilled product into its original container for re-use. (Risk of decomposition.)

6.4. Reference to other sections

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W ear personal protective equipment; see section 8.

7. Handling and storage

7.1. Precautions for safe handling

Handle in accordance with good industrial hygiene and safety practice. Avoid impurities and heat effect. Avoid residues of the product on the containers.

Never return spilled product into its original container for re -use. (Risk of decomposition.).Wear personal protective equipment.

Avoid contact with skin and eyes.

Do not inhale vapour, aerosols, mist. Ensure there is good room ventilation.

Immediately change moistened and saturated work clothes. Provide for installation of emergency shower and eye bath.

Set up safety and operation procedures.

7.2. Conditions for safe storage, including any incompatibilities Advice on protection against fire and explosion

Avoid sun rays, heat, heat effect.

Keep away from incompatible substances. see section 10.

Storage

Temperature requirement during storage max 40C.

Well ventilated, dry, clean, lockable.

Suitable materials stainless steel (1.4571)

Suitable materials Plastics

Suitable materials polyethylene

Suitable materials Polypropylene

Suitable materials polytetrafluoroethylene

Suitable materials poly vinylchloride,

Suitable materials glass

Suitable materials ceramics. Corrodes: metals.

Unsuitable materials Iron

Unsuitable materials Copper

Unsuitable materials brass

Unsuitable materials Bronze

Unsuitable materials Aluminium

Unsuitable materials Zinc

Use adequate venting devices on all packages, containers and tanks and check correct operation periodically.

Risk of overpressure and burst due to decomposition in confined spaces and pipes. Always close container tightly after removal of product.

Do not keep the container sealed.

Ensure tightness at all times. Avoid leakage. Transport and store container in upright position only. Do not empty container by means of pressure.

Further information

For detailed information on design specifications for the construction of tank - and dosing installations ask the producer for advice.

Protect from sunlight, warmth and heat.

In order to ensure due transportation, make certain that stacks are of the correct height, containers are securely fastened so as not to fall off, and labelled according to the regulations.

Advice on common storage

Do not store together with: metallic salts, alkalis, reducing agents.

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7.3. Specific end use(s)

For more details see annexes Exposure scenario.

8. Exposure controls/personal protection

8.1. Control parameters

• hydrogen peroxide solution			
CAS-No.	7722-84-1	EC-No.	231-765-0
Control parameters	1 ppm 1.4 mg/m ³		Time Weighted Average (TWA):(EH40 WEL)
Control parameters	2 ppm 2.8 mg/m ³		Short Term Exposure Limit (STEL):(EH40 WEL)
• Acetic acid			
CAS-No.	64-19-7	EC-No.	200-580-7
Control parameters	10 ppm 25 mg/m ³ Indicative		Time Weighted Average (TWA):(EU EL V)

DNEL/DMEL values

EndUse	Workers
Routes of exposure	Inhalation
Possible health damage	Long-term - systemic effects Long-term - local effects
Value	0.6 mg/m ³

EndUse	Workers
Routes of exposure	Inhalation
Possible health damage	Acute - systemic effects Acute - local effects
Value	0.6 mg/m ³

EndUse	Workers
Routes of exposure	dermal
Possible health damage	Acute - local effects
Value	12000 mg/kg

EndUse	general populace
Routes of exposure	Inhalation
Possible health damage	Long-term - systemic effects Long-term - local effects
Value	0.6 mg/m ³

EndUse	general populace
Routes of exposure	Inhalation
Possible health damage	Acute - systemic effects
Value	0.6 mg/m ³

EndUse	general populace
Routes of exposure	Inhalation
Possible health damage	Acute - local effects
Value	0.3 mg/m ³

EndUse	general populace
Routes of exposure	dermal
Possible health damage	Acute - local effects
Value	12000 mg/kg

PNEC values

Value	Fresh water 0.000224 mg/l
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Value	STP 0.051 mg/l
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Fresh water sediment

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Value 0.00018 mg/l

Value **Soil**
320 µg/kg dry weight

8.2. Exposure controls

Engineering measures

Ensure suitable suction/aeration at the work place and with operational machinery.
Provide for installation of emergency shower and eye bath.

Exposure controls

Suitable measuring processes are:

Hydrogen peroxide

OSHA method ID 006

OSHA method VI-6

Acetic acid

NIOSH method 1603

OSHA method ID 186

Personal protective equipment

Respiratory protection

Do not inhale vapour, aerosols, mist.

In case of larger quantities: If open handling is unavoidable:

If workplace exposure limit is exceeded apply Respiratory protective equipment.

wear a self contained respiratory apparatus

Respirator with A2B2E 2K1P2 combination filter (Draeger)

Respirator with OV/AG combination filter (3M)

Respirator with ABEK2P3 combination filter (3M)

If necessary: Local ventilation.

Note time limit for wearing respiratory protective equipment.

Hand protection

disposable gloves

Applies to handling for brief periods or of

small amounts Glove material Natural

Rubber/ Natural latex (NR) Material thickness

0.22 mm

Breakthrough time > 480 min Method DIN EN 374

Applies to handling for longer periods or of large amounts

Glove material Polychloroprene (PCP), for example: Camapren 720, Kächele-Cama

Latex GmbH (KCL), Germany

Material thickness 0.65 mm

Breakthrough time > 480 min Method DIN EN 374 **Eye protection**

Safety glasses with side-shields conforming to EN166

or

When handling larger quantities: basket-shaped glasses

Skin and body

protection Usual

lab protective

clothing or

When handling larger quantities: chemical protective suit, disposable protective suit

Hygiene measures

Avoid contact with skin and

eyes. Ensure there is good

room ventilation.

Do not eat, drink, smoke, or sniff while at work. Wash your hands and/or face before breaks and before termination of work.

Avoid contaminating clothes with product.

Immediately change moistened and saturated work clothes. Immediately rinse contaminated or saturated clothing with water. Any contaminated protective equipment is to be cleaned after use.

Apply adequate skin protection agents before handling the product. Assure skin cleaning and skin care after work. Preventive skin protection is recommended.

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Protective measures

Handle in accordance with good industrial hygiene and safety practice.

If there is the possibility of skin/eye contact, the indicated hand/eye/ body protection should be used. The work-place related airborne concentrations have to be kept below of the indicated exposure limits.

If workplace exposure limits are exceeded and/or larger amounts are released (leakage, spilling, dust) the indicated respiratory protection should be used.

The personal protective equipment used must meet the requirements of directive 89/686/EEC and amendments (CE certification).

It should be defined in the work place in the form of a risk analysis according to directive 89/686/EEC and amendments.

9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance

Form	liquid
Colour	colourless, clear
physical state	liquid
Odour	slightly of acetic acid
Odour threshold:	No data available
pH	ca. 1.4 (20 °C) Medium: Product

Melting point/range	ca. -15 °C
Boiling point/range	not applicable
Flash point	not applicable
Evaporation rate	No data available
Flammability (solid, gas)	Not combustible.
Lower explosion limit	no data available
Upper explosion limit	no data available
Vapour pressure	No data available
Density	ca. 1.03 g/cm ³ (20 °C)
Relative density	No data available
Water solubility	No data available
Miscibility in water	completely miscible
Partition coefficient: n-octanol/water	No data available

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Autoinflammability	The substance or mixture is not classified as self heating.
Thermal decomposition	No data available
Viscosity, dynamic	No data available
Explosiveness	No data available
Oxidizing properties	no data available

9.2. Other information

Ignition temperature	not applicable
Metal corrosion	< 6.25 mm/a Method: NACE standard TM 0169-95 AlZnMgCu 1.5; W. No. 3.4365
	< 6.25 mm/a Method: NACE standard TM 0169-95 Carbon steel St 37 -2, S235JR, Mat. No. 1.0037
speed of hydrolysis	half-life period: 48 h (25 °C) (pH 4) Method: 92/69/EEC, C.7
	half-life period: 48 h (25 °C) (pH 7) Method: 92/69/EEC, C.7
	half-life period: 3.6 h (25 °C) (pH 9) Method: 92/69/EEC, C.7
	tested substance: peracetic acid

10. Stability and reactivity

10.1. Reactivity

Risk of self-accelerating, exothermic decomposition with the development of oxygen, at, Effect of thermal energy / heat.

10.2. Chemical stability

Stable at room temperature. Product is supplied in stabilised form.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions

Risk of overpressure and burst due to decomposition in confined spaces and pipes.
Risk of decomposition in contact with incompatible substances, impurities, metals, alkalis, reducing agents.

10.4. Conditions to avoid

sun rays, heat, heat effect

10.5. Incompatible materials

impurities, decomposition catalysts, metals, nonferrous heavy metal, aluminium, zinc., metals, metallic salts, alkalis, reducing agents., (Risk of decomposition.).

10.6. Hazardous decomposition products

decomposition products Under conditions of thermal decomposition: Steam Oxygen Acetic acid

11. Toxicological information

11.1. Information on toxicological effects

Skin irritation	Skin irritation
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Risk of aspiration toxicity	Not relevant
Gentoxicity in vitro	Ames test Salmonella typhimurium negative Metabolic activation: with or without Method: OECD 471 Test substance: peracetic acid 5 % HGPRT-Test Chinese hamster (V 79 -cells) negative Metabolic activation: with or without Method: OECD 476 Test substance: peracetic acid 11 % chromosomal aberration Chinese hamster (V 79 -cells) negative Metabolic activation: with or without Method: OECD 473 Test substance: peracetic acid 11 % Unscheduled DNA synthesis -test (UDS) human diploid fibroblasts negative Metabolic activation: without Method: OECD TG 482 Test substance: peracetic acid 42 % literature
Gentoxicity in vivo	Micronucleus test Mouse Oral 30 hours negative Method: OECD TG 474 Test substance: peracetic acid 5 % chromosomal aberration Mouse Oral negative Method: Mutagenicity (micronucleus test) Test substance: peracetic acid 5 % Unscheduled DNA synthesis -test (UDS) Rat Oral negative Method: OECD TG 486 Test substance: peracetic acid 5 %
Carcinogenicity	No data available not mutagenic
Toxicity to reproduction	Prenatal development toxicity study Oral Rat / 14 days NOAEL (No Observed Adverse Effect Level) of parents: 12.5 mg/kg NOAEL F1: 30.4 mg/kg Method: OECD TG 414 Test substance: peracetic acid 100 %

12. Ecological information

12.1. Toxicity

Toxicity to fish	LC50 Oncorhynchus mykiss: 0.53 mg/l / 96 h Test substance: peracetic acid 100 % Method: OECD Test Guideline 203
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Toxicity in aquatic Invertebrates	
EC50 static test <i>Daphnia magna</i> : 0.18 mg/l / 24 h	
Test substance:	peracetic acid 100 %
Method:	ISO 6341 literature
Toxicity to algae 72 h	
EC50 static test <i>Pseudokirchneriella subcapitata</i> (aglae): 0.16 mg/l /	
Endpoint:	growth rate
Test substance:	peracetic acid 100 %
Method:	US-EPA-m ethod
NOEC static test <i>Pseudokirchneriella subcapitata</i> (aglae): 0.061 mg/l / 72 h	
Endpoint:	growth rate
Test substance:	peracetic acid 100 %
Method:	US-EPA-m ethod
Toxicity to bacteria	
EC50 static test Activat ed sludge: 38.6 mg/l / 3 h	
Test substance:	peracetic acid 100 %
Method:	OECD 209
EC50 static test Activat ed sludge: 5.1 mg/l / 3 h	
Test substance:	peracetic acid 100 %
Method:	OECD 209
chronictoxicity in fish / 33 d	
NOEC flow-through test <i>Danio rerio</i> : 0.00094 mg/l	
Test substance:	peracetic acid 100 %
Method:	OECD TG 210
chronic toxicity in daphnia	
NOEC semi-static test <i>Daphnia magna</i> : 0.05 mg/l / 21 d	
Test substance:	peracetic acid 100 %
Method:	OECD 211

12.2. Persistence and degradability

photo-decomposition Photochemical degradation (air) takes place.

tested substance:
Hydrogen peroxide

Biodegradability	
aerobic	
inoculum:	activated sludge
Exposure time:	28 d
Result:	98 % Readily biodegradable.
Test substance:	peracetic acid 40 %
Method:	OECD TG 301 E
At non-bacteriotoxic concentrations	
aerobic	
inoculum:	activated sludge
Exposure time:	3 min
Result:	100 % Totally biodegradable
Test substance:	peracetic acid 40 %
Method:	OECD TG 209

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AOX The product does not contain any organically bonded halogen.

FurtherInformation Under ambient conditions quick hydrolysis, Reduction or decomposition occurs.
The following substances are formed: oxygen and water.

The following substances are formed: oxygen, water, acetic acid. Acetic acid is easily biodegradable

12.3. Bioaccumulative potential

Bioaccumulation low
log Pow: see chapter 9

12.4. Mobility in soil

Mobility No data available

12.5. Results of PBT and vPvB assessment

Not a PBT, vPvB substance as per the criteria of the REACH Regulation.

12.6. Other adverse effects

FurtherInformation Does not contain any heavy metals and compounds from EC directive 76/464
e.g.
arsenic-,
lead
cadmium
Mercury
organic halogen
compounds organic
compounds

13. Disposal considerations

13.1. Waste treatment methods

Product

This product must be disposed of as an organic chemical in accordance with the regulations issued by the appropriate local authorities.

Offer surplus and non-recyclable solutions to a licensed disposal company.

If necessary:

With small amounts:

May be disposed of as sewage water in accordance with local legal regulations by previously diluting with plenty of water. (drainage systems, sewage treatment plant)

If necessary contact the relevant authorities.

Uncleaned packaging

Rinse empty containers with water prior to disposal.

Offer rinsed packaging material to local recycling facilities.

Do not reuse empty containers and dispose of in accordance with the regulations issued by the appropriate local authorities.

Waste Key Number

The waste key number must be determined as per the European Waste Types List (decision on EU Waste Types List 2000/532/EC) in cooperation with the disposal firm / producing firm / official authority.

14. Transport information**Transport on land (ADR/ RID/G GVSEB)**

14.1.	UN number:	UN 3082
14.2.	UN proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(contains Peracetic acid, stabilized)
4.3.	Transport hazard class(es):	9
4.4.	Packing group:	III
14.5.	Environmental hazards:	Yes
14.6.	Special precautions for user:	Yes
	ADR: Tunnel Restriction Code:	
	Protect from thermal radiation.	

Inland waterway transport (ADN/GGVS EB (Germany))

14.1.	UN number:	UN 3082
14.2.	UN proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(contains Peracetic acid, stabilized)
4.3.	Transport hazard class(es):	9
4.4.	Packing group:	III
14.5.	Environmental hazards:	Yes
14.6.	Special precautions for user:	Yes
	Protect from thermal	

Air transport ICAO-TI/IATA-DGR

14.1.	UN number:	UN 3082
14.2.	UN proper shipping name:	Environmentally hazardous substance, liquid, n.o.s.(contains Peracetic acid, stabilized)
4.3.	Transport hazard class(es):	9
4.4.	Packing group:	III
14.5.	Environmental hazards:	Yes
14.6.	Special precautions for user:	Yes
	IATA-C: ERG-Code	
	9L IATA-P: ERG-Code	

Protect from thermal radiation.

Sea transport IMDG-Code/GGVSee (Germany)

14.1.	UN number:	UN 3082
14.2.	UN proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(contains Peracetic acid, stabilized)
4.3.	Transport hazard class(es):	9
4.4.	Packing group:	III
14.5.	Environmental hazards:	Yes
14.6.	Special precautions for user:	Yes
	EmS:	F-A,S- F
	Protect from thermal radiation.	

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: for transport approval see regulatory information

15. Regulatory information

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

Water contaminating class (Germany)

GK 1 - slightly water endangering Classification according to VwVwS, supplement 4

Regulations on labour safety: It must be determined whether preventive substance-specific occupational medical examinations in accordance with national law in each case must be offered / carried out at regular intervals.

employment restriction Please note Directive 92/85/EEC (Pregnant Workers Directive) and amendments.
Please note Directive 94/33/EC (Protection of Young Workers at the Workplace Directive) and amendments.
Observe national regulations.

Other regulations Please observe Appendix XVII of the EU Regulation 1907/2006 (Restrictions on the manufacture, placing on the market, and use of certain dangerous substances, preparations and articles) as well as their amendments.

registration

Europe (EINECS/ELINCS)	listed/registered all ingredients listed
USA (TSCA)	listed/registered all ingredients listed
Canada (DSL)	listed/registered all ingredients listed
Philippines (PICCS)	listed/registered all ingredients listed
New Zealand	listed/registered all ingredients listed
Korea	listed/registered all ingredients listed
China	listed/registered all ingredients listed
Australia (AICS)	listed/registered all ingredients listed

15.2. Chemical safety assessment

Chemical safety assessment A substance safety assessment was carried out for this product.

16. Other information

Classification and applied procedure to derive the classification of mixtures according to EU Regulation (EC) No. 1272/2008 (CLP)

Classification	Classification procedure
Eye Dam./Eye Irrit., 1 , H318 Skin Irrit., 2 , H315 Aquatic Chronic, 2 , H411	

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H226	Flammable liquid and vapour.
H242	Heating may cause a fire.
H271	May cause fire or explosion; strong oxidiser.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

Further information

Further information	Assessment of hazardous properties and decision regarding classification as per VO EG 1272/ 2008 Chap. 2.
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Changes since the last version are highlighted in the margin. This version replaces all previous versions.

This information and all further technical advice is based on our present knowledge and experience. However, it implies no liability or other legal responsibility on our part, including with regard to existing third party intellectual property rights, especially patent rights. In particular, no warranty, whether express or implied, or guarantee of product properties in the legal sense is intended or implied. We reserve the right to make any changes according to technological progress or further developments. The customer is not released from the obligation to conduct careful inspection and testing of incoming goods. Performance of the product described herein should be verified by testing, which should be carried out only by qualified experts in the sole responsibility of a customer. Reference to trade names used by other companies is neither a recommendation, nor does it imply that similar products could not be used.

Legend

ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ASTM	American Society for Testing and Materials
ATP	Adaptation to Technical Progress
BCF	Bioconcentration factor
BetrSichV	German Ordinance on Industrial Safety and Health
c.c.	closed cup
CAS	Chemical Abstract Services
CESIO	European Committee of Organic Surfactants and their Intermediates
ChemG	German Chemicals Act
CMR	carcinogenic-mutagenic-toxic for reproduction
DIN	German Institute for Standardization
DMEL	Derived minimum effect level
DNEL	Derived no effect level
EINECS	European Inventory of Existing Commercial Chemical Substances
EC50	half maximal effective concentration
GefStoffV	German Ordinance on Hazardous Substances
GGVSEB	German ordinance for road, rail and inland waterway transportation of dangerous goods
GGVSee	German ordinance for sea transportation of dangerous goods
GLP	Good Laboratory Practice
GMO	Genetic Modified Organism
IATA	International Air Transport Association
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods
ISO	International Organization For Standardization
LOAEL	Lowest observed adverse effect level
LOEL	Lowest observed effect level

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NOAEL	No observed adverse effect level
NOEC	no observed effect concentration
NOEL	no observed effect level
o. c.	open cup
OECD	Organisation for Economic Cooperation and Development
OEL	Occupational Exposure Limit
PBT	Persistent, bioaccumulative, toxic
PEC	Predicted effect concentration
PNEC	Predicted no effect concentration
REACH	REACH registration
RID	Convention concerning International Carriage by Rail
STOT	Specific Target Organ Toxicity
SVHC	Substances of Very High Concern
TA	Technical Instructions
TPR	Third Party Representative (Art. 4)
TRGS	Technical Rules for Hazardous Substances
VCI	German chemical industry association
vPvB	very persistent, very bioaccumulative
VOC	volatile organic compounds
VwVwS	German Administrative Regulation on the Classification of Substances Hazardous to Waters into Water Hazard Classes
WGK	Water Hazard Class

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Annex: Exposure Scenarios - Table of content

ES1 - Use: Formulation of PAA (industrial worker)

Main User Group	: SU3 - Industrial uses: Uses of substances as such or in preparations at industrial sites
Environmental release category	: ERC2 - Formulation of preparations
Sector of use	: SU9 - Manufacture of finechemicals SU10 - Formulation [mixing] of preparations and/or re-packaging (excluding alloys)
Process category	: 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 PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

ES2 - Use: Formulation of PAA (professional worker)

Main User Group	: SU22 - Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
Environmental release category	: ERC2 - Formulation of preparations
Sector of use	: SU9 - Manufacture of finechemicals SU10 - Formulation [mixing] of preparations and/or re-packaging (excluding alloys)
Process category	: 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 PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

ES3 - Use: Use in chemical synthesis (Industrial use of reactive processing aids)

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Environmental release category	: ERC6b - Industrial use of reactive processing aids
Sector of use	: SU9 - Manufacture of finechemicals
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 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 PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

ES4 - Use: Use in chemical synthesis (Production of resins/rubbers)

Main User Group	: SU3 - Industrial uses: Uses of substances as such or in preparations at industrial sites
Environmental release category	: ERC6d - Industrial use of process regulators for polymerisation processes in production of resins, rubbers, polymers
Sector of use	: SU9 - Manufacture of finechemicals
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 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 PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

ES5 - Use: Bleaching of starch (Industrial use of reactive processing aids)

Main User Group	: SU3 - Industrial uses: Uses of substances as such or in preparations at industrial sites
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- Sector of use : **SU4**- Manufacture of food products
SU9- Manufacture of finechemicals
- 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
PROC15 - Use as laboratory reagent

ES6 - Use: Bleaching of starch (Industrial use of intermediates)

- Main User Group : **SU3** - Industrial uses: Uses of substances as such or in preparations at industrial sites
- Environmental release category : **ERC6a** - Industrial use resulting in manufacture of another substance (use of intermediates)
- Sector of use : **SU4**- Manufacture of food products
SU9- Manufacture of finechemicals
- 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
PROC15 - Use as laboratory reagent

ES7 - Use: Laundry bleach

- Main User Group : **SU22** - Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
- Environmental release category : **ERC8b** - Wide dispersive indoor use of reactive substances in open systems
- Process category : **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
PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

ES8 - Use: Disinfection of medical devices

- Main User Group : **SU22** - Professional uses: Public domain (administration,

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education, entertainment, services, craftsmen)

Sector of use : **SU20**- Health services

Version 3.0 EN	Version 3.0 EN
Revision date 1 June 2015	Revision date 1 June 2015
Print date 2 June 2015	Print date 2 June 2015

ES9 - Use: Room disinfection (Wide dispersive indoor use of processing aids in open systems)

Main User Group : **SU22** - Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

Environmental release category : **ERC8a** - Wide dispersive indoor use of processing aids in open systems

Sector of use : **SU20**- Health services

Process category : **PROC9** - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)
PROC11 - Non industrial spraying

ES10 - Use: Room disinfection (Wide dispersive indoor use of reactive substances in open systems)

Main User Group : **SU22** - Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

Environmental release category : **ERC8b** - Wide dispersive indoor use of reactive substances in open systems

Sector of use : **SU20**- Health services

Process category : **PROC9** - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)
PROC11 - Non industrial spraying

ES11 - Use: Disinfection of dialysis membranes

Main User Group : **SU22** - Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

Environmental release category : **ERC8b** - Wide dispersive indoor use of reactive substances in open systems

Sector of use : **SU20**- Health services

Process category : **PROC9** - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

ES12 - Use: Laboratory agent (industrial use)

Main User Group	: SU3 - Industrial uses: Uses of substances as such or in preparations at industrial sites
Environmental release category	: ERC6b - Industrial use of reactive processing aids
Sector of use	: SU9 - Manufacture of finechemicals
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 PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC15 - Use as laboratory reagent

ES13 - Use: Laboratory agent (professional use)

Main User Group	: SU22 - Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
Environmental release category	: ERC8b - Wide dispersive indoor use of reactive substances in open systems
Sector of use	: SU24 - Scientific research and development
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 PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC15 - Use as laboratory reagent

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1. Short title of exposure scenario - ES1: Formulation of PAA (industrial worker)

Main User Group	:	SU3 - Industrial uses: Uses of substances as such or in preparations at industrial sites
Environmental release category	:	ERC2 - Formulation of preparations
Sector of use	:	SU9 - Manufacture of fine chemicals SU10 - Formulation [mixing] of preparations and/or re-packaging (excluding alloys)
Process category	:	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 PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

2.1. Contributing scenario controlling environmental exposure for: **ERC2: Formulation of preparations**

Amount used

Daily amount per site	:	5 tons/day
Annual amount per site	:	50 tons/year
Value Type (Msafe) - Daily amount per site	:	71.4 tons/day

Remarks	:	freshwater, freshwater sediment
Value Type (Msafe) - Daily amount per site	:	17200.00 tons/day

Remarks	:	soil
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Frequency and duration of use

Single exposure	:	10 days/year
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Environmental factors not influenced by risk management

Flow rate	:	18000 m ³ /d
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Other given operational conditions affecting environmental exposure

Number of emission days per year	:	10
Emission or Release Factor: Air	:	2.5 %
Emission or Release Factor: Water	:	0 %
Emission or Release Factor: Soil	:	0.01 %
Remarks	:	Technical measures prevent any emission to wastewater.
Release rate applicable to air	:	125 kg/day

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Conditions and measures related to municipal sewage treatment plant

Type of Sewage Treatment Plant : Municipal STP

Flow rate of sewage treatment plant effluent : 2000 m³/d

Sludge Treatment : sludge to soil

2.2. Contributing scenario controlling worker exposure for: PROC3: Use in closed batch process (synthesis or formulation)

Product characteristics

Remarks : peracetic acid, 15 %

Physical Form (at time of use) : liquid

Frequency and duration of use

Frequency of use : 8 hours/day

Frequency of use : 5 days/week

Other given operational conditions affecting worker exposure

Outdoor / Indoor : indoor

Technical conditions and measures

Local exhaust

Effectiveness: 98 %

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

Wear suitable gloves (tested to EN374) and eye protection.

2.3. 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

Remarks : peracetic acid, 15 %

Physical Form (at time of use) : liquid

Frequency and duration of use

Frequency of use : 8 hours/day

Frequency of use : 5 days/week

Other given operational conditions affecting worker exposure

Outdoor / Indoor : indoor

Technical conditions and measures

Local exhaust

Effectiveness: 98 %

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Conditions and measure s related to personal protection, hygiene and health evaluation

Wear suitable gloves (tested to EN374) and eye protection.

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

Product characteristics

Remarks : peracetic acid, 15 %
Physical Form (at time of use) : liquid

Frequency and duration of use

Frequency of use : 8 hours/day
Frequency of use : 5 days/week

Other given operational conditions affecting worker exposure

Outdoor / Indoor : indoor

Technical conditions and measures

Local exhaust
Effectiveness: 98 %

Conditions and measure s related to personal protection, hygiene and health evaluation

Wear suitable gloves (tested to EN374) and eye protection.

2.5. Contributing scenario controlling worker exposure for:

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

Product characteristics

Remarks : peracetic acid, 15 %
Physical Form (at time of use) : liquid

Frequency and duration of use

Frequency of use : 8 hours/day
Frequency of use : 5 days/week

Other given operational conditions affecting worker exposure

Outdoor / Indoor : indoor

Technical conditions and measures

Local exhaust
Effectiveness: 98 %

Conditions and measure s related to personal protection, hygiene and health evaluation

Wear suitable gloves (tested to EN374) and eye protection.

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

Product characteristics

Remarks : peracetic acid, 15 %
Physical Form (at time of use) : liquid

Frequency and duration of use

Frequency of use : 8 hours/day
Frequency of use : 5 days/week

Other given operational conditions affecting worker exposure

Outdoor / Indoor : indoor

Technical conditions and measures

Local exhaust
Effectiveness: 98 %

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

Wear suitable gloves (tested to EN374) and eye protection.

3. Exposure estimation and reference to its source

Environment

Contributing Scenario	Exposure Assessment Method	Specific conditions	Compartment	Level of Exposure	RCR	Remarks
ERC2	EUSES v2.1		freshwater	0.016 µg/l	0.070009	
ERC2	EUSES v2.1		freshwater sediment	0.059 µg/kg dry weight	0.070018	
ERC2	EUSES v2.1		Soil	0.075 µg/kg dry weight	0.000235	
ERC2	EUSES v2.1		grassland	0.093 µg/kg dry weight	0.00029	

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Workers

Contributing Scenario	Exposure Assessment Method	Specific conditions	Value type	Level of Exposure	RCR	Remarks
PROC3	EASYTRA		Worker - inhalative, long-term - local	0.0951 mg/m ³	0.158438	
PROC5	EASYTRA		Worker - inhalative, long-term - local	0.4753 mg/m ³	0.792188	
PROC8a	EASYTRA		Worker - inhalative, long-term - local	0.4753 mg/m ³	0.792188	
PROC8b	EASYTRA		Worker - inhalative, long-term - local	0.2377 mg/m ³	0.396094	
PROC9	EASYTRA		Worker - inhalative, long-term - local	0.4753 mg/m ³	0.792188	

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

For scaling see:

If necessary, an increase in the use tonnage can be achieved by adapting the use conditions to local circumstances (scaling)., Confer with the producer.

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1. Short title of exposure scenario - ES2: Formulation of PAA (professional worker)

Main User Group	:	SU22 - Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
Environmental release category	:	ERC2 - Formulation of preparations
Sector of use	:	SU9 - Manufacture of fine chemicals SU10 - Formulation [mixing] of preparations and/or re-packaging (excluding alloys)
Process category	:	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 PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

2.1. Contributing scenario controlling environmental exposure for: **ERC2: Formulation of preparations**

Amount used

Daily amount per site	:	5 tons/day
Annual amount per site	:	50 tons/year
Value Type (Msafe) - Daily amount per site	:	71.4 tons/day

Remarks	:	freshwater, freshwater sediment
Value Type (Msafe) - Daily amount per site	:	17200.00 tons/day

Remarks	:	soil
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Frequency and duration of use

Single exposure	:	10 days/year
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Environmental factors not influenced by risk management

Flow rate	:	18000 m ³ /d
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Other given operational conditions affecting environmental exposure

Number of emission days per year	:	10
Emission or Release Factor: Air	:	2.5 %
Emission or Release Factor: Water	:	0 %
Emission or Release Factor: Soil	:	0.01 %
Remarks	:	Technical measures prevent any emission to waste water.
Release rate applicable to air	:	125 kg/day

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Conditions and measures related to municipal sewage treatment plant

Type of Sewage Treatment Plant : Municipal STP

Flow rate of sewage treatment plant effluent : 2000 m³/d

Sludge Treatment : sludge to soil

2.2. Contributing scenario controlling worker exposure for:

PROC3: Use in closed batch process (synthesis or formulation)

Product characteristics

Remarks : peracetic acid, 15 %

Physical Form (at time of use) : liquid

Frequency and duration of use

Frequency of use : 4 hours/day

Frequency of use : 5 days/week

Other given operational conditions affecting worker exposure

Outdoor / Indoor : indoor

Technical conditions and measures

Local exhaust

Effectiveness: 98 %

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

Wear suitable gloves (tested to EN374) and eye protection.

2.3. 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

Remarks : peracetic acid, 15 %

Physical Form (at time of use) : liquid

Frequency and duration of use

Frequency of use : 4 hours/day

Frequency of use : 5 days/week

Other given operational conditions affecting worker exposure

Outdoor / Indoor : indoor

Technical conditions and measures

Local exhaust

Effectiveness: 98 %

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Conditions and measure s related to personal protection, hygiene and health evaluation

Wear suitable gloves (tested to EN374) and eye protection.

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

Product characteristics

Remarks : peracetic acid, 15 %
Physical Form (at time of use) : liquid

Frequency and duration of use

Frequency of use : 4 hours/day
Frequency of use : 5 days/week

Other given operational conditions affecting worker exposure

Outdoor / Indoor : indoor

Technical conditions and measures

Local exhaust
Effectiveness: 98 %

Conditions and measure s related to personal protection, hygiene and health evaluation

Wear suitable gloves (tested to EN374) and eye protection.

2.5. Contributing scenario controlling worker exposure for:

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

Product characteristics

Remarks : peracetic acid, 15 %
Physical Form (at time of use) : liquid

Frequency and duration of use

Frequency of use : 4 hours/day
Frequency of use : 5 days/week

Other given operational conditions affecting worker exposure

Outdoor / Indoor : indoor

Technical conditions and measures

Local exhaust
Effectiveness: 98 %

Conditions and measure s related to personal protection, hygiene and health evaluation

Wear suitable gloves (tested to EN374) and eye protection.

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

Product characteristics

Remarks : peracetic acid, 15 %
Physical Form (at time of use) : liquid

Frequency and duration of use

Frequency of use : 4 hours/day
Frequency of use : 5 days/week

Other given operational conditions affecting worker exposure

Outdoor / Indoor : indoor

Technical conditions and measures

Local exhaust
Effectiveness: 98 %

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

Wear suitable gloves (tested to EN374) and eye protection.

3. Exposure estimation and reference to its source

Environment

Contributing Scenario	Exposure Assessment Method	Specific conditions	Compartment	Level of Exposure	RCR	Remarks
ERC2	EUSES v2.1		freshwater	0.016 µg/l	0.070009	
ERC2	EUSES v2.1		freshwater sediment	0.059 µg/kg dry weight	0.070018	
ERC2	EUSES v2.1		Soil	0.075 µg/kg dry weight	0.000235	
ERC2	EUSES v2.1		grassland	0.093 µg/kg dry weight	0.00029	

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Workers

Contributing Scenario	Exposure Assessment Method	Specific conditions	Value type	Level of Exposure	RCR	Remarks
PROC3	EASYTRA		Worker - inhalative, long-term - local	0.1426 mg/m ³	0.237656	
PROC5	EASYTRA		Worker - inhalative, long-term - local	0.5704 mg/m ³	0.950625	
PROC8a	EASYTRA		Worker - inhalative, long-term - local	0.5704 mg/m ³	0.950625	
PROC8b	EASYTRA		Worker - inhalative, long-term - local	0.2852 mg/m ³	0.475313	
PROC9	EASYTRA		Worker - inhalative, long-term - local	0.5704 mg/m ³	0.950625	

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

For scaling see:

If necessary, an increase in the use tonnage can be achieved by adapting the use conditions to local circumstances (scaling)., Confer with the producer.

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1. Short title of exposure scenario - ES3: Use in chemical synthesis (Industrial use of reactive processing aids)

Main User Group	:	SU3 - Industrial uses: Uses of substances as such or in preparations at industrial sites
Environmental release category	:	ERC6b - Industrial use of reactive processing aids
Sector of use	:	SU9 - Manufacture of fine chemicals
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 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 PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

2.1. Contributing scenario controlling environmental exposure for: **ERC6b: Industrial use of reactive processing aids**

Amount used

Daily amount per site	:	15 tons/day
Annual amount per site	:	300 tons/year
Value Type (Msafe) - Daily amount per site	:	48.7 tons/day

Remarks	:	freshwater, freshwater sediment
Value Type (Msafe) - Daily amount per site	:	1020 tons/day

Remarks	:	soil
Value Type (Msafe) - Daily amount per site	:	1440 tons/day

Remarks	:	sewage treatment plant
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Frequency and duration of use

Single exposure	:	20 days/year
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Environmental factors not influenced by risk management

Flow rate	:	18000 m ³ /d
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Other given operational conditions affecting environmental exposure

Number of emission days per year	:	20
Emission or Release Factor: Air	:	0.1 %
Emission or Release Factor: Water	:	5 %
Emission or Release Factor: Soil	:	0.025 %

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Release rate applicable to air : 15 kg/day
Release rate applicable to water : 750 kg/day
Concentration in untreated wastewaters : 0.0538 mg/l

Remarks : The substance degrades rapidly during the use and when passing the sewer system before entering the sewage treatment plant. The half-life of < 5 min at 20°C (Van Egdom, 2007) and a residence time of 1 hour was taken into account.

Conditions and measures related to municipal sewage treatment plant

Type of Sewage Treatment Plant : Municipal STP

Flow rate of sewage treatment plant effluent : 2000 m³/d

Sludge Treatment : sludge to soil

2.2. Contributing scenario controlling worker exposure for: PROC1: Use in closed process, no likelihood of exposure

Product characteristics

Remarks : peracetic acid, 40 %
Physical Form (at time of use) : liquid

Frequency and duration of use

Frequency of use : 4 hours/day
Frequency of use : 5 days/week

Other given operational conditions affecting worker exposure

Outdoor / Indoor : indoor

Technical conditions and measures

Local exhaust
Effectiveness: 98 %

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

Wear suitable gloves (tested to EN374) and eye protection.

2.3. Contributing scenario controlling worker exposure for: PROC2: Use in closed, continuous process with occasional controlled exposure

Product characteristics

Remarks : peracetic acid, 40 %
Physical Form (at time of use) : liquid

Frequency and duration of use

Frequency of use : 4 hours/day
Frequency of use : 5 days/week

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Other given operational conditions affecting worker exposure

Outdoor / Indoor : indoor

Technical conditions and measures

Local exhaust

Effectiveness: 98 %

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

Wear suitable gloves (tested to EN374) and eye protection.

2.4. Contributing scenario controlling worker exposure for: PROC3: Use in closed batch process (synthesis or formulation)

Product characteristics

Remarks : peracetic acid, 40 %

Physical Form (at time of use) : liquid

Frequency and duration of use

Frequency of use : 4 hours/day

Frequency of use : 5 days/week

Other given operational conditions affecting worker exposure

Outdoor / Indoor : indoor

Technical conditions and measures

Local exhaust

Effectiveness: 98 %

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

Wear suitable gloves (tested to EN374) and eye protection.

2.5. Contributing scenario controlling worker exposure for: PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises

Product characteristics

Remarks : peracetic acid, 40 %

Physical Form (at time of use) : liquid

Frequency and duration of use

Frequency of use : 4 hours/day

Frequency of use : 5 days/week

Other given operational conditions affecting worker exposure

Outdoor / Indoor : indoor

Technical conditions and measures

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Local exhaust
Effectiveness: 98 %

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

Wear suitable gloves (tested to EN374) and eye protection.

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

Product characteristics

Remarks : peracetic acid, 40 %
Physical Form (at time of use) : liquid

Frequency and duration of use

Frequency of use : 4 hours/day
Frequency of use : 5 days/week

Other given operational conditions affecting worker exposure

Outdoor / Indoor : indoor

Technical conditions and measures

Local exhaust
Effectiveness: 90 %

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

Wear suitable gloves (tested to EN374) and eye protection.

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

Remarks : peracetic acid, 40 %
Physical Form (at time of use) : liquid

Frequency and duration of use

Frequency of use : 4 hours/day
Frequency of use : 5 days/week

Other given operational conditions affecting worker exposure

Outdoor / Indoor : indoor

Technical conditions and measures

Local exhaust
Effectiveness: 98 %

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

Wear suitable gloves (tested to EN374) and eye protection.

2.8. Contributing scenario controlling worker exposure for:

PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Product characteristics

Remarks : peracetic acid, 40 %
Physical Form (at time of use) : liquid

Frequency and duration of use

Frequency of use : 4 hours/day
Frequency of use : 5 days/week

Other given operational conditions affecting worker exposure

Outdoor / Indoor : indoor

Technical conditions and measures

Local exhaust
Effectiveness: 90 %

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

Wear suitable gloves (tested to EN374) and eye protection.

3. Exposure estimation and reference to its source

Environment

Contributing Scenario	Exposure Assessment Method	Specific conditions	Compartment	Level of Exposure	RCR	Remarks
ERC6B	EUSES v2.1		freshwater	0.069 µg/l	0.30771	
ERC6B	EUSES v2.1		freshwater sediment	0.258 µg/kg dry weight	0.307748	
ERC6B	EUSES v2.1		Soil	0.0956 mg/kg dry weight	0.298764	
ERC6B	EUSES v2.1		grassland	0.0047 mg/kg dry weight	0.014741	
ERC6B	EUSES v2.1		sewage treatment plant (STP)	0.532 µg/l	0.01044	

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Workers

Contributing Scenario	Exposure Assessment Method	Specific conditions	Value type	Level of Exposure	RCR	Remarks
PROC1	EASYTRA		Worker - inhalative, long-term - local	0.152 µg/m ³	0.000253	
PROC2	EASYTRA		Worker - inhalative, long-term - local	0.0761 mg/m ³	0.12675	
PROC3	EASYTRA		Worker - inhalative, long-term - local	0.1521 mg/m ³	0.2535	
PROC4	EASYTRA		Worker - inhalative, long-term - local	0.3042 mg/m ³	0.507	
PROC8a	Used ART model.		Worker - inhalative, long-term - local	0.500 mg/m ³	0.833333	
PROC8b	EASYTRA		Worker - inhalative, long-term - local	0.3803 mg/m ³	0.63375	
PROC9	Used ART model.		Worker - inhalative, long-term - local	0.21 mg/m ³	0.350	

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

For scaling see:

If necessary, an increase in the use tonnage can be achieved by adapting the use conditions to local circumstances (scaling)., Confer with the producer.

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1. Short title of exposure scenario - ES4: Use in chemical synthesis (Production of resins/rubbers)

Main User Group	:	SU3 - Industrial uses: Uses of substances as such or in preparations at industrial sites
Environmental release category	:	ERC6d - Industrial use of process regulators for polymerisation processes in production of resins, rubbers, polymers
Sector of use	:	SU9 - Manufacture of fine chemicals
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 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 PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

2.1. Contributing scenario controlling environmental exposure for: **ERC6d: Industrial use of process regulators for polymerisation processes in production of resins, rubbers, polymers**

Amount used

Daily amount per site	:	15 tons/day
Annual amount per site	:	300 tons/year
Value Type (Msafe) - Daily amount per site	:	214 tons/day

Remarks	:	freshwater, freshwater sediment
Value Type (Msafe) - Daily amount per site	:	618 tons/day

Remarks	:	soil
Value Type (Msafe) - Daily amount per site	:	144000 tons/day

Remarks	:	sewage treatment plant
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Frequency and duration of use

Single exposure	:	20 days/year
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Environmental factors not influenced by risk management

Flow rate	:	18000 m ³ /d
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Other given operational conditions affecting environmental exposure

Number of emission days per year	:	20
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Emission or Release Factor: Air : 35 %
Emission or Release Factor: Water : 0.005 %
Emission or Release Factor: Soil : 0.025 %
Release rate applicable to air : 5250 kg/day
Release rate applicable to water : 0.75 kg/day
Concentration in untreated wastewaters : 0.000054 mg/l

Remarks : The substance degrades rapidly during the use and when passing the sewer system before entering the sewage treatment plant. The half-life of < 5 min at 20°C (Van Egdom, 2007) and a residence time of 1 hour was taken into account.

Conditions and measures related to municipal sewage treatment plant

Type of Sewage Treatment Plant : Municipal STP

Flow rate of sewage treatment plant effluent : 2000 m³/d

Sludge Treatment : sludge to soil

2.2. Contributing scenario controlling worker exposure for:

PROC1: Use in closed process, no likelihood of exposure

Product characteristics

Remarks : peracetic acid, 40 %

Physical Form (at time of use) : liquid

Frequency and duration of use

Frequency of use : 4 hours/day

Frequency of use : 5 days/week

Other given operational conditions affecting worker exposure

Outdoor / Indoor : indoor

Technical conditions and measures

Local exhaust

Effectiveness: 98 %

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

Wear suitable gloves (tested to EN374) and eye protection.

2.3. Contributing scenario controlling worker exposure for:

PROC2: Use in closed, continuous process with occasional controlled exposure

Product characteristics

Remarks : peracetic acid, 40 %

Physical Form (at time of use) : liquid

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Frequency and duration of use

Frequency of use : 4 hours/day
Frequency of use : 5 days/week

Other given operational conditions affecting worker exposure

Outdoor / Indoor : indoor

Technical conditions and measures

Local exhaust
Effectiveness: 98 %

Conditions and measure s related to personal protection, hygiene and health evaluation

Wear suitable gloves (tested to EN374) and eye protection.

2.4. Contributing scenario controlling worker exposure for: PROC3: Use in closed batch process (synthesis or formulation)

Product characteristics

Remarks : peracetic acid, 40 %
Physical Form (at time of use) : liquid

Frequency and duration of use

Frequency of use : 4 hours/day
Frequency of use : 5 days/week

Other given operational conditions affecting worker exposure

Outdoor / Indoor : indoor

Technical conditions and measures

Local exhaust
Effectiveness: 98 %

Conditions and measure s related to personal protection, hygiene and health evaluation

Wear suitable gloves (tested to EN374) and eye protection.

2.5. Contributing scenario controlling worker exposure for: PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises

Product characteristics

Remarks : peracetic acid, 40 %
Physical Form (at time of use) : liquid

Frequency and duration of use

Frequency of use : 4 hours/day
Frequency of use : 5 days/week

Other given operational conditions affecting worker exposure

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Outdoor / Indoor : indoor

Technical conditions and measures

Local exhaust

Effectiveness: 98 %

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

Wear suitable gloves (tested to EN374) and eye protection.

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

Product characteristics

Remarks : peracetic acid, 40 %

Physical Form (at time of use) : liquid

Frequency and duration of use

Frequency of use : 4 hours/day

Frequency of use : 5 days/week

Other given operational conditions affecting worker exposure

Outdoor / Indoor : indoor

Technical conditions and measures

Local exhaust

Effectiveness: 90 %

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

Wear suitable gloves (tested to EN374) and eye protection.

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

Remarks : peracetic acid, 40 %

Physical Form (at time of use) : liquid

Frequency and duration of use

Frequency of use : 4 hours/day

Frequency of use : 5 days/week

Other given operational conditions affecting worker exposure

Outdoor / Indoor : indoor

Technical conditions and measures

Local exhaust

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Effectiveness: 98 %

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

Wear suitable gloves (tested to EN374) and eye protection.

2.8. Contributing scenario controlling worker exposure for:

PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Product characteristics

Remarks : peracetic acid, 40 %
Physical Form (at time of use) : liquid

Frequency and duration of use

Frequency of use : 4 hours/day
Frequency of use : 5 days/week

Other given operational conditions affecting worker exposure

Outdoor / Indoor : indoor

Technical conditions and measures

Local exhaust
Effectiveness: 90 %

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

Wear suitable gloves (tested to EN374) and eye protection.

3. Exposure estimation and reference to its source

Environment

Contributing Scenario	Exposure Assessment Method	Specific conditions	Compartment	Level of Exposure	RCR	Remarks
ERC6D	EUSES v2.1		freshwater	0.0010 µg/l	0.070247	
ERC6D	EUSES v2.1		freshwater sediment	0.0355 µg/kg dry weight	0.070256	
ERC6D	EUSES v2.1		Soil	0.0064 mg/kg dry weight	0.01997	
ERC6D	EUSES v2.1		grassland	0.0078 mg/kg dry weight	0.024288	
ERC6D	EUSES v2.1		sewage treatment plant (STP)	0.0005 µg/l	0.00001	

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Workers

Contributing Scenario	Exposure Assessment Method	Specific conditions	Value type	Level of Exposure	RCR	Remarks
PROC1	EASYTRA		Worker - inhalative, long-term - local	0.152 µg/m ³	0.000253	
PROC2	EASYTRA		Worker - inhalative, long-term - local	0.0761 mg/m ³	0.12675	
PROC3	EASYTRA		Worker - inhalative, long-term - local	0.1521 mg/m ³	0.2535	
PROC4	EASYTRA		Worker - inhalative, long-term - local	0.3042 mg/m ³	0.507	
PROC8a	Used ART model.		Worker - inhalative, long-term - local	0.500 mg/m ³	0.833333	
PROC8b	EASYTRA		Worker - inhalative, long-term - local	0.3803 mg/m ³	0.63375	
PROC9	Used ART model.		Worker - inhalative, long-term - local	0.21 mg/m ³	0.350	

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

For scaling see:

If necessary, an increase in the use tonnage can be achieved by adapting the use conditions to local circumstances (scaling)., Confer with the producer

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1. Short title of exposure scenario - ES5: Bleaching of starch (Industrial use of reactive processing aids)

Main User Group	:	SU3 - Industrial uses: Uses of substances as such or in preparations at industrial sites
Environmental release category	:	ERC6b - Industrial use of reactive processing aids
Sector of use	:	SU4 - Manufacture of food products SU9 - Manufacture of fine chemicals
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 PROC15 - Use as laboratory reagent

2.1. Contributing scenario controlling environmental exposure for: **ERC6b: Industrial use of reactive processing aids**

Amount used

Daily amount per site	:	5 tons/day
Annual amount per site	:	100 tons/year
Value Type (Msafe) - Daily amount per site	:	33.5 tons/day

Remarks	:	freshwater, freshwater sediment
Value Type (Msafe) - Daily amount per site	:	1020 tons/day

Remarks	:	soil
Value Type (Msafe) - Daily amount per site	:	1440 tons/day

Remarks	:	sewage treatment plant
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Frequency and duration of use

Single exposure	:	20 days/year
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Environmental factors not influenced by risk management

Flow rate	:	18000 m ³ /d
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Other given operational conditions affecting environmental exposure

Number of emission days per year	:	20
Emission or Release Factor: Air	:	0.1 %
Emission or Release Factor: Water	:	5 %
Emission or Release Factor: Soil	:	0.025 %
Release rate applicable to air	:	5 kg/day
Release rate applicable to water	:	250 kg/day
Concentration in untreated wastewaters	:	0.0179 mg/l

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Remarks : The substance degrades rapidly during the use and when passing the sewer system before entering the sewage treatment plant. The half-life of < 5 min at 20°C (Van Egdom, 2007) and a residence time of 1 hour was taken into account.

Conditions and measures related to municipal sewage treatment plant

Type of Sewage Treatment Plant : Municipal STP

Flow rate of sewage treatment plant effluent : 2000 m³/d

Sludge Treatment : sludge to soil

2.2. Contributing scenario controlling worker exposure for: PROC1: Use in closed process, no likelihood of exposure

Product characteristics

Remarks : peracetic acid, 40 %
Physical Form (at time of use) : liquid

Frequency and duration of use

Frequency of use : 8 hours/day
Frequency of use : 5 days/week

Other given operational conditions affecting worker exposure

Outdoor / Indoor : indoor

Technical conditions and measures

Local exhaust
Effectiveness: 98 %

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

Wear suitable gloves (tested to EN374) and eye protection.

2.3. Contributing scenario controlling worker exposure for: PROC2: Use in closed, continuous process with occasional controlled exposure

Product characteristics

Remarks : peracetic acid, 40 %
Physical Form (at time of use) : liquid

Frequency and duration of use

Frequency of use : 8 hours/day
Frequency of use : 5 days/week

Other given operational conditions affecting worker exposure

Outdoor / Indoor : indoor

Technical conditions and measures

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Local exhaust
Effectiveness: 98 %

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

Wear suitable gloves (tested to EN374) and eye protection.

2.4. Contributing scenario controlling worker exposure for: PROC3: Use in closed batch process (synthesis or formulation)

Product characteristics

Remarks : peracetic acid, 40 %
Physical Form (at time of use) : liquid

Frequency and duration of use

Frequency of use : 8 hours/day
Frequency of use : 5 days/week

Other given operational conditions affecting worker exposure

Outdoor / Indoor : indoor

Technical conditions and measures

Local exhaust
Effectiveness: 98 %

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

Wear suitable gloves (tested to EN374) and eye protection.

2.5. Contributing scenario controlling worker exposure for: PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises

Product characteristics

Remarks : peracetic acid, 40 %
Physical Form (at time of use) : liquid

Frequency and duration of use

Frequency of use : 8 hours/day
Frequency of use : 5 days/week

Other given operational conditions affecting worker exposure

Outdoor / Indoor : indoor

Technical conditions and measures

Local exhaust
Effectiveness: 98 %

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

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Wear suitable gloves (tested to EN374) and eye protection.

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

Product characteristics

Remarks : peracetic acid, 40 %
Physical Form (at time of use) : liquid

Frequency and duration of use

Frequency of use : 8 hours/day
Frequency of use : 5 days/week

Other given operational conditions affecting worker exposure

Outdoor / Indoor : indoor

Technical conditions and measures

Local exhaust
Effectiveness: 98 %

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

Wear suitable gloves (tested to EN374) and eye protection.

3. Exposure estimation and reference to its source

Environment

Contributing Scenario	Exposure Assessment Method	Specific conditions	Compartment	Level of Exposure	RCR	Remarks
ERC6B	EUSES v2.1		freshwater	0.033 µg/l	0.149096	
ERC6B	EUSES v2.1		freshwater sediment	0.125 µg/kg dry weight	0.149114	
ERC6B	EUSES v2.1		Soil	0.0319 mg/kg dry weight	0.099589	
ERC6B	EUSES v2.1		grassland	0.0016 mg/kg dry weight	0.004915	
ERC6B	EUSES v2.1		sewage treatment plant (STP)	0.177 µg/l	0.003474	

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Workers

Contributing Scenario	Exposure Assessment Method	Specific conditions	Value type	Level of Exposure	RCR	Remarks
PROC1	EASYTRA		Worker - inhalative, long-term - local	0.254 µg/m ³	0.000422	
PROC2	EASYTRA		Worker - inhalative, long-term - local	0.1268 mg/m ³	0.21125	
PROC3	EASYTRA		Worker - inhalative, long-term - local	0.2535 mg/m ³	0.4225	
PROC4	EASYTRA		Worker - inhalative, long-term - local	0.507 mg/m ³	0.845	
PROC15	EASYTRA		Worker - inhalative, long-term - local	0.2535 mg/m ³	0.4225	

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

For scaling see:

If necessary, an increase in the use tonnage can be achieved by adapting the use conditions to local circumstances (scaling)., Confer with the producer.

1. Short title of exposure scenario - ES6: Bleaching of starch (Industrial use of intermediates)

- Main User Group : **SU3** - Industrial uses: Uses of substances as such or in preparations at industrial sites
- Environmental release category : **ERC6a** - Industrial use resulting in manufacture of another substance (use of intermediates)
- Sector of use : **SU4** - Manufacture of food products
SU9 - Manufacture of fine chemicals
- 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
PROC15 - Use as laboratory reagent

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2.1. Contributing scenario controlling environmental exposure for: ERC6a: Industrial use resulting in manufacture of another substance (use of intermediates)

Amount used

Daily amount per site : 5 tons/day
Annual amount per site : 100 tons/year
Value Type (Msafe) - Daily amount per site : 49.2 tons/day

Remarks : freshwater, freshwater sediment
Value Type (Msafe) - Daily amount per site : 1610 tons/day

Remarks : soil
Value Type (Msafe) - Daily amount per site : 3590 tons/day

Remarks : sewage treatment plant

Frequency and duration of use

Single exposure : 20 days/year

Environmental factors not influenced by risk management

Flow rate : 18000 m³/d

Other given operational conditions affecting environmental exposure

Number of emission days per year : 20
Emission or Release Factor: Air : 5 %
Emission or Release Factor: Water : 2 %
Emission or Release Factor: Soil : 0.1 %
Release rate applicable to air : 250 kg/day
Release rate applicable to water : 100 kg/day
Concentration in untreated wastewaters : 0.00717 mg/l

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Remarks : The substance degrades rapidly during the use and when passing the sewer system before entering the sewage

treatment plant. The half-life of < 5 min at 20°C (Van Egdom, 2007) and a residence time of 1 hour was taken into account.

Conditions and measures related to municipal sewage treatment plant

Type of Sewage Treatment Plant : Municipal STP

Flow rate of sewage treatment plant effluent : 2000 m³/d

Sludge Treatment : sludge to soil

2.2. Contributing scenario controlling worker exposure for: PROC1: Use in closed process, no likelihood of exposure

Product characteristics

Remarks : peracetic acid, 40 %

Physical Form (at time of use) : liquid

Frequency and duration of use

Frequency of use : 8 hours/day

Frequency of use : 5 days/week

Other given operational conditions affecting worker exposure

Outdoor / Indoor : indoor

Technical conditions and measures

Local exhaust

Effectiveness: 98 %

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

Wear suitable gloves (tested to EN374) and eye protection.

2.3. Contributing scenario controlling worker exposure for: PROC2: Use in closed, continuous process with occasional controlled exposure

Product characteristics

Remarks : peracetic acid, 40 %

Physical Form (at time of use) : liquid

Frequency and duration of use

Frequency of use : 8 hours/day

Frequency of use : 5 days/week

Other given operational conditions affecting worker exposure

Outdoor / Indoor : indoor

Technical conditions and measures

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Local exhaust
Effectiveness: 98 %

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

Wear suitable gloves (tested to EN374) and eye protection.

2.4. Contributing scenario controlling worker exposure for: PROC3: Use in closed batch process (synthesis or formulation)

Product characteristics

Remarks : peracetic acid, 40 %
Physical Form (at time of use) : liquid

Frequency and duration of use

Frequency of use : 8 hours/day
Frequency of use : 5 days/week

Other given operational conditions affecting worker exposure

Outdoor / Indoor : indoor

Technical conditions and measures

Local exhaust
Effectiveness: 98 %

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

Wear suitable gloves (tested to EN374) and eye protection.

2.5. Contributing scenario controlling worker exposure for: PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises

Product characteristics

Remarks : peracetic acid, 40 %
Physical Form (at time of use) : liquid

Frequency and duration of use

Frequency of use : 8 hours/day
Frequency of use : 5 days/week

Other given operational conditions affecting worker exposure

Outdoor / Indoor : indoor

Technical conditions and measures

Local exhaust
Effectiveness: 98 %

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

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Wear suitable gloves (tested to EN374) and eye protection.

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

Product characteristics

Remarks : peracetic acid, 40 %
Physical Form (at time of use) : liquid

Frequency and duration of use

Frequency of use : 8 hours/day
Frequency of use : 5 days/week

Other given operational conditions affecting worker exposure

Outdoor / Indoor : indoor

Technical conditions and measures

Local exhaust
Effectiveness: 98 %

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

Wear suitable gloves (tested to EN374) and eye protection.

3. Exposure estimation and reference to its source

Environment

Contributing Scenario	Exposure Assessment Method	Specific conditions	Compartment	Level of Exposure	RCR	Remarks
ERC6A	EUSES v2.1		freshwater	0.023 µg/l	0.101688	
ERC6A	EUSES v2.1		freshwater sediment	0.085 µg/kg dry weight	0.101701	
ERC6A	EUSES v2.1		Soil	0.013 mg/kg dry weight	0.040765	
ERC6A	EUSES v2.1		grassland	0.001 mg/kg dry weight	0.003113	
ERC6A	EUSES v2.1		sewage treatment plant (STP)	0.071 µg/l	0.001391	

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Workers

Contributing Scenario	Exposure Assessment Method	Specific conditions	Value type	Level of Exposure	RCR	Remarks
PROC1	EASYTRA		Worker - inhalative, long-term - local	0.254 µg/m ³	0.000422	
PROC2	EASYTRA		Worker - inhalative, long-term - local	0.1268 mg/m ³	0.21125	
PROC3	EASYTRA		Worker - inhalative, long-term - local	0.2535 mg/m ³	0.4225	
PROC4	EASYTRA		Worker - inhalative, long-term - local	0.507 mg/m ³	0.845	
PROC15	EASYTRA		Worker - inhalative, long-term - local	0.2535 mg/m ³	0.4225	

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

For scaling see:

If necessary, an increase in the use tonnage can be achieved by adapting the use conditions to local circumstances (scaling)., Confer with the producer.

1. Short title of exposure scenario - ES7: Laundry bleach

- Main User Group : **SU22** - Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
- Environmental release category : **ERC8b** - Wide dispersive indoor use of reactive substances in open systems
- Process category : **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
PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

2.1. Contributing scenario controlling environmental exposure for:

ERC8b: Wide dispersive indoor use of reactive substances in open systems

Amount used

Daily amount per site : 0.109589 kg/d

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Annual amount per site : 200 tons/year
Value Type (Msafe) - Daily amount per site : 1.565 tons/day

Remarks : freshwater, freshwater sediment
Value Type (Msafe) - Daily amount per site : 86.6 tons/day

Remarks : soil
Value Type (Msafe) - Daily amount per site : 3600 tons/day

Remarks : sewage treatment plant

Frequency and duration of use

Single exposure : 365 days/year

Environmental factors not influenced by risk management

Flow rate : 18000 m³/d

Other given operational conditions affecting environmental exposure

Number of emission days per year : 365
Emission or Release Factor: Air : 0.1 %
Emission or Release Factor: Water : 2 %
Release rate applicable to air : 0.00011 kg/day
Release rate applicable to water : 0.0022 kg/day
Concentration in untreated wastewaters : < 0.000001 mg/

Remarks : The substance degrades rapidly during the use and when passing the sewer system before entering the sewage treatment plant. The half-life of < 5 min at 20°C (Van Egdom, 2007) and a residence time of 1 hour was taken into account.

Conditions and measures related to municipal sewage treatment plant

Type of Sewage Treatment Plant : Municipal STP

Flow rate of sewage treatment plant effluent : 2000 m³/d

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Sludge Treatment : sludge to soil

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

Product characteristics

Remarks : peracetic acid, 10 %
Physical Form (at time of use) : liquid

Frequency and duration of use

Frequency of use : 4 hours/day
Frequency of use : 5 days/week

Other given operational conditions affecting worker exposure

Outdoor / Indoor : indoor

Technical conditions and measures

Local exhaust
Effectiveness: 90 %

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

Wear suitable gloves (tested to EN374) and eye protection.

2.3. Contributing scenario controlling worker exposure for:

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

Product characteristics

Remarks : peracetic acid, 10 %
Physical Form (at time of use) : liquid

Frequency and duration of use

Frequency of use : 4 hours/day
Frequency of use : 5 days/week

Other given operational conditions affecting worker exposure

Outdoor / Indoor : indoor

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

Wear suitable gloves (tested to EN374) and eye protection.

2.4. Contributing scenario controlling worker exposure for:

PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Product characteristics

Remarks : peracetic acid, 10 %
Physical Form (at time of use) : liquid

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Frequency and duration of use

Frequency of use : 4 hours/day

Frequency of use : 5 days/week

Other given operational conditions affecting worker exposure

Outdoor / Indoor : indoor

Technical conditions and measures

Local exhaust

Effectiveness: 90 %

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

Wear suitable gloves (tested to EN374) and eye protection.

3. Exposure estimation and reference to its source

Environment

Contributing Scenario	Exposure Assessment Method	Specific conditions	Compartment	Level of Exposure	RCR	Remarks
ERC8B	EUSES v2.1		freshwater	0.016 µg/l	0.07001	
ERC8B	EUSES v2.1		freshwater sediment	0.059 µg/kg dry weight	0.070019	
ERC8B	EUSES v2.1		Soil	0.0007 µg/kg dry weight	0.000002	
ERC8B	EUSES v2.1		grassland	0.0004 mg/kg dry weight	0.000001	
ERC8B	EUSES v2.1		sewage treatment plant (STP)	0.0016 ng/l	0.000001	

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Workers

Contributing Scenario	Exposure Assessment Method	Specific conditions	Value type	Level of Exposure	RCR	Remarks
PROC8a	Used ART model.		Worker - inhalative, long-term - local	0.58 mg/m ³	0.966667	
PROC8b	Used ART model.		Worker - inhalative, long-term - local	0.17 mg/m ³	0.283333	
PROC9	Used ART model.		Worker - inhalative, long-term - local	0.053 mg/m ³	0.088333	

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

For scaling see:

If necessary, an increase in the use tonnage can be achieved by adapting the use conditions to local circumstances (scaling)., Confer with the producer.

1. Short title of exposure scenario - ES8: Disinfection of medical devices

- Main User Group : **SU22** - Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
- Environmental release category : **ERC8b** - Wide dispersive indoor use of reactive substances in open systems
- Sector of use : **SU20** - Health services
- Process category : **PROC9** - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)
PROC13 - Treatment of articles by dipping and pouring

2.1. Contributing scenario controlling environmental exposure for: ERC8b: Wide dispersive indoor use of reactive substances in open systems

Amount used

- Daily amount per site : 0.000548 kg/d
- Annual amount per site : 1 tons/year
- Value Type (Msafe) - Daily amount per site : 0.00723 kg/day

- Remarks : freshwater, freshwater sediment
- Value Type (Msafe) - Daily amount per site : 0.449 tons/day

- Remarks : soil
- Value Type (Msafe) - Daily amount per site

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Remarks : sewage treatment plant

Frequency and duration of use

Single exposure : 365 days/year

Environmental factors not influenced by risk management

Flow rate : 18000 m³/d

Other given operational conditions affecting environmental exposure

Number of emission days per year : 365

Emission or Release Factor: Air : 0.1 %

Emission or Release Factor: Water : 2 %

Release rate applicable to water : 0.00001 kg/day

Release rate applicable to air : 0.000001 kg/day

Concentration in untreated wastewaters : < 0.000001 mg/l

Remarks : The substance degrades rapidly during the use and when passing the sewer system before entering the sewage treatment plant. The half-life of < 5 min at 20°C (Van Egdorn, 2007) and a residence time of 1 hour was taken into account.

Conditions and measures related to municipal sewage treatment plant

Type of Sewage Treatment Plant : Municipal STP

Flow rate of sewage treatment plant effluent : 2000 m³/d

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Sludge Treatment : sludge to soil

2.2. Contributing scenario controlling worker exposure for:

PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Product characteristics

Remarks : peracetic acid, 15 %
Physical Form (at time of use) : liquid

Frequency and duration of use

Frequency of use : 15 minutes/day
Frequency of use : 5 days/week

Other given operational conditions affecting worker exposure

Outdoor / Indoor : indoor

Technical conditions and measures

Local exhaust
Effectiveness: 90 %

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

Wear suitable gloves (tested to EN374) and eye protection.

2.3. Contributing scenario controlling worker exposure for:

PROC13: Treatment of articles by dipping and pouring

Product characteristics

Remarks : peracetic acid, 1 %
Physical Form (at time of use) : liquid

Frequency and duration of use

Frequency of use : 4 hours/day
Frequency of use : 5 days/week

Other given operational conditions affecting worker exposure

Outdoor / Indoor : indoor

Technical conditions and measures

Local exhaust
Effectiveness: 70 %

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

Wear suitable gloves (tested to EN374) and eye protection.

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3. Exposure estimation and reference to its source

Environment

Contributing Scenario	Exposure Assessment Method	Specific conditions	Compartment	Level of Exposure	RCR	Remarks
ERC8B	EUSES v2.1		freshwater	0.0157 µg/l	0.070009	
ERC8B	EUSES v2.1		freshwater sediment	0.059 µg/kg dry weight	0.070018	
ERC8B	EUSES v2.1		Soil	0.0004 µg/kg dry weight	0.000001	
ERC8B	EUSES v2.1		grassland	0.0004 µg/kg dry weight	0.000001	
ERC8B	EUSES v2.1		sewage treatment plant (STP)	0.0001 pg/l	0.000001	

Workers

Contributing Scenario	Exposure Assessment Method	Specific conditions	Value type	Level of Exposure	RCR	Remarks
PROC9	Used ART model.		Worker - inhalative, long-term - local	0.016 mg/m ³	0.026667	
PROC13	EASYTRA		Worker - inhalative, long-term - local	0.5704 mg/m ³	0.950625	

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

For scaling see:

If necessary, an increase in the use tonnage can be achieved by adapting the use conditions to local circumstances (scaling)., Confer with the producer.

1. Short title of exposure scenario - ES9: Room disinfection (Wide dispersive indoor use of processing aids in open systems)

- Main User Group : **SU22** - Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
- Environmental release category : **ERC8a** - Wide dispersive indoor use of processing aids in open systems
- Sector of use : **SU20** - Health services
- Process category : **PROC9** - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)
PROC11 - Non industrial spraying

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2.1. Contributing scenario controlling environmental exposure for: ERC8a: Wide dispersive indoor use of processing aids in open systems

Amount used

Daily amount per site : 0.000548 kg/d
Annual amount per site : 1 tons/year
Value Type (Msafe) - Daily amount per site : 0.00783 kg/day

Remarks : freshwater, freshwater sedim ent
Value Type (Msafe) - Daily amount per site : 0.449 tons/day

Remarks : soil
Value Type (Msafe) - Daily amount per site : 71.8 tons/day

Remarks : sewage treatment pl ant

Frequency and duration of use

Single exposure : 365 days/year

Environmental factors not influenced by risk management

Flow rate : 18000 m³/d

Other given operational conditions affecting environmental exposure

Num ber of emission days per year : 365
Emission or Release Factor: Air : 100 %
Emission or Rel ease Factor: Water : 100 %
Release rate applicable to air : 0.00055 kg/day
Release rate applicable to water : 0.000055 kg/day
Concentration in untreated wastewaters : < 0.000001 mg/l

Remarks : The substance degrades rapidly during the use and when passing the sewer system before entering the sewage treatment plant. The half-live of < 5 min at 20°C (Van Egdom, 2007) and a residence time of 1 hour was taken into account.

Conditions and measures related to municipal sewage treatment plant

Type of Sewage Treatment Plant : Municipal STP

Flow rate of sewage treatment plant effl uent : 2000 m³/d

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Sludge Treatment : sludge to soil

2.2. Contributing scenario controlling worker exposure for:

PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Product characteristics

Remarks : peracetic acid, 0,25 %
Physical Form (at time of use) : liquid

Frequency and duration of use

Frequency of use : 15 minutes/day
Frequency of use : 5 days/week

Other given operational conditions affecting worker exposure

Outdoor / Indoor : indoor

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

Wear suitable gloves (tested to EN374) and eye protection.

2.3. Contributing scenario controlling worker exposure for:

PROC11: Non industrial spraying

Product characteristics

Physical Form (at time of use) : liquid

Frequency and duration of use

Frequency of use : 15 minutes/day
Frequency of use : 5 days/week

Other given operational conditions affecting worker exposure

Outdoor / Indoor : indoor

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

Wear respiratory protection.

Effectiveness: 94 %

Wear suitable gloves (tested to EN374) and eye protection.

3. Exposure estimation and reference to its source

Environment

Contributing Scenario	Exposure Assessment Method	Specific conditions	Compartment	Level of Exposure	RCR	Remarks
ERC8A	EASYTRA		freshwater	0.016 µg/l	0.070009	

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ERC8A	EASYTRA		freshwater sediment	0.059 µg/kg dry weight	0.070018	
ERC8A	EASYTRA		Soil	0.0005 µg/kg dry weight	0.000001	
ERC8A	EASYTRA		grassland	0.0004 µg/kg dry weight	0.000001	
ERC8A	EASYTRA		sewage treatment plant (STP)	0.389 pg/l	0.000001	

Workers

Contributing Scenario	Exposure Assessment Method	Specific conditions	Value type	Level of Exposure	RCR	Remarks
PROC9	EASYTRA		Worker - inhalative, long-term - local	0.0792 mg/m ³	0.132031	
PROC11	EASYTRA		Worker - inhalative, long-term - local	0.0002 µg/m ³	< 0.000001	

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

For scaling see:

If necessary, an increase in the use tonnage can be achieved by adapting the use conditions to local circumstances (scaling)., Confer with the producer.

1. Short title of exposure scenario - ES10: Room disinfection (Wide dispersive indoor use of reactive substances in open systems)

- Main User Group : **SU22** - Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
- Environmental release category : **ERC8b** - Wide dispersive indoor use of reactive substances in open systems
- Sector of use : **SU20** - Health services
- Process category : **PROC9** - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)
PROC11 - Non industrial spraying

2.1. Contributing scenario controlling environmental exposure for:

ERC8b: Wide dispersive indoor use of reactive substances in open systems

Amount used

- Daily amount per site : 0.000548 kg/d
- Annual amount per site : 1 tons/year
- Value Type (Msafe) - Daily amount per site

InSpec OX SAFETY DATA SHEET (EC 1907/2006)

Version 4.0 EN : 0.00723 kg/day
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Remarks : freshwater, freshwater sediment
Value Type (Msafe) - Daily : 0.449 tons/day
amount per site

Remarks : soil
Value Type (Msafe) - Daily : 3590 tons/day
amount per site

Remarks : sewage treatment plant

Frequency and duration of use

Single exposure : 365 days/year

Environmental factors not influenced by risk management

Flow rate : 18000 m³/d

Other given operational conditions affecting environmental exposure

Number of emission days per year : 365
Emission or Release Factor: Air : 0.1 %
Emission or Release Factor: Water : 2 %
Release rate applicable to water : 0.00001 kg/day
Release rate applicable to air : 0.000001 kg/day
Concentration in untreated wastewaters : < 0.000001 mg/l

Remarks : The substance degrades rapidly during the use and when passing the sewer system before entering the sewage treatment plant. The half-life of < 5 min at 20°C (Van Egdorn, 2007) and a residence time of 1 hour was taken into account.

Conditions and measures related to municipal sewage treatment plant

Type of Sewage Treatment Plant : Municipal STP

Flow rate of sewage treatment plant effluent : 2000 m³/d

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Sludge Treatment : sludge to soil

2.2. Contributing scenario controlling worker exposure for:

PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Product characteristics

Remarks : peracetic acid, 0,25 %
Physical Form (at time of use) : liquid

Frequency and duration of use

Frequency of use : 15 minutes/day
Frequency of use : 5 days/week

Other given operational conditions affecting worker exposure

Outdoor / Indoor : indoor

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

Wear suitable gloves (tested to EN374) and eye protection.

2.3. Contributing scenario controlling worker exposure for:

PROC11: Non industrial spraying

Product characteristics

Physical Form (at time of use) : liquid

Frequency and duration of use

Frequency of use : 15 minutes/day
Frequency of use : 5 days/week

Other given operational conditions affecting worker exposure

Outdoor / Indoor : indoor

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

Wear respiratory protection.

Effectiveness: 94 %

Wear suitable gloves (tested to EN374) and eye protection.

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Exposure estimation and reference to its source

Environment

Contributing Scenario	Exposure Assessment Method	Specific conditions	Compartment	Level of Exposure	RCR	Remarks
ERC8B	EASYTRA		freshwater	0.0157 µg/l	0.070009	
ERC8B	EASYTRA		freshwater sediment	0.059 µg/kg dry weight	0.070018	
ERC8B	EASYTRA		Soil	0.0004 µg/kg dry weight	0.000001	
ERC8B	EASYTRA		grassland	0.0004 mg/kg dry weight	0.000001	
ERC8B	EASYTRA		sewage treatment plant (STP)	0.0001 pg/l	0.000001	

Workers

Contributing Scenario	Exposure Assessment Method	Specific conditions	Value type	Level of Exposure	RCR	Remarks
PROC9	EASYTRA		Worker - inhalative, long-term - local	0.0792 mg/m ³	0.132031	
PROC11	EASYTRA		Worker - inhalative, long-term - local	0.0002 µg/m ³	< 0.000001	

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

For scaling see:

If necessary, an increase in the use tonnage can be achieved by adapting the use conditions to local circumstances (scaling)., Confer with the producer.

1. Short title of exposure scenario - ES11: Disinfection of dialysis membranes

- Main User Group : **SU22** - Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
- Environmental release category : **ERC8b** - Wide dispersive indoor use of reactive substances in open systems
- Sector of use : **SU20** - Health services
- Process category : **PROC9** - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

2.1. Contributing scenario controlling environmental exposure for: **ERC8b: Wide dispersive indoor use of reactive substances in open systems**

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Amount used

Daily amount for wide disperse uses : 0.001096 kg/d

Annual amount for wide disperse uses : 2 tons/year

Value Type (Msafe) - Daily amount per site : 0.0157 kg/day

Remarks : freshwater, freshwater sedim ent

Value Type (Msafe) - Daily amount per site : 0.897 tons/day

Remarks : soil

Value Type (Msafe) - Daily amount per site : 3600 tons/day

Remarks : sewage treatment pl ant

Frequency and duration of use

Single exposure : 365 days/year

Environmental factors not influenced by risk management

Flow rate : 18000 m³/d

Other given operational conditions affecting environmental exposure

Num ber of emission days per year : 365

Emission or Release Factor: Air : 0.1 %

Emission or Rel ease Factor: Water : 2 %

Release rate applicable to water : 0.00001 kg/day

Release rate applicable to air : 0.000001 kg/day

Concentration in untreated wastewaters

Remarks : The substance degrades rapidly during the use and when passing the sewer system before entering the sewage treatment plant. The half-live of < 5 min at 20°C (Van Egdome, 2007) and a residence time of 1 hour was taken into account.

Conditions and measures related to municipal sewage treatment plant

Type of Sewage Treatment Plant : Municipal STP

Flow rate of sewage treatment plant effl uent : 2000 m³/d

Sludge Treatment : < 0.000001 mg/l

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to soil

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

Product characteristics

Remarks : peracetic acid, 15 %
Physical Form (at time of use) : liquid

Frequency and duration of use

Frequency of use : 15 minutes/day
Frequency of use : 5 days/week

Other given operational conditions affecting worker exposure

Outdoor / Indoor : indoor

Technical conditions and measures

Local exhaust
Effectiveness: 90 %

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

Wear suitable gloves (tested to EN374) and eye protection.

3. Exposure estimation and reference to its source

Environment

Contributing Scenario	Exposure Assessment Method	Specific conditions	Compartment	Level of Exposure	RCR	Remarks
ERC8B	EASYTRA		freshwater	0.016 µg/l	0.070009	
ERC8B	EASYTRA		freshwater sediment	0.059 µg/kg dry weight	0.070018	
ERC8B	EASYTRA		Soil	0.0004 µg/kg dry weight	0.000001	
ERC8B	EASYTRA		grassland	0.0004 µg/kg dry weight	0.000001	
ERC8B	EASYTRA		sewage treatment plant (STP)	0.0001 pg/l	0.000001	

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Workers

Contributing Scenario	Exposure Assessment Method	Specific conditions	Value type	Level of Exposure	RCR	Remarks
PROC9	Used ART model.		Worker - inhalative, long-term - local	0.016 mg/m ³	0.026667	

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

For scaling see:

If necessary, an increase in the use tonnage can be achieved by adapting the use conditions to local

circumstances (scaling). Confer with the producer.

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1. Short title of exposure scenario - ES12: Laboratory agent (industrial use)

Main User Group	:	SU3 - Industrial uses: Uses of substances as such or in preparations at industrial sites
Environmental release category	:	ERC6b - Industrial use of reactive processing aids
Sector of use	:	SU9 - Manufacture of fine chemicals
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 PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC15 - Use as laboratory reagent

2.1. Contributing scenario controlling environmental exposure for: **ERC6b: Industrial use of reactive processing aids**

Amount used

Daily amount per site	:	0.5 tons/day
Annual amount per site	:	10 tons/year
Value Type (Msafe) - Daily amount per site	:	6417.012 kg/day

Remarks	:	freshwater
Value Type (Msafe) - Daily amount per site	:	6416.216 kg/day

Remarks	:	freshwater sediment
Value Type (Msafe) - Daily amount per site	:	1020 tons/day

Remarks	:	soil
Value Type (Msafe) - Daily amount per site	:	1440 tons/day

Remarks	:	sewage treatment plant
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Frequency and duration of use

Single exposure	:	20 days/year
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Environmental factors not influenced by risk management

Flow rate	:	18000 m ³ /d
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Other given operational conditions affecting environmental exposure

Number of emission days per year	:	20
Emission or Release Factor: Air	:	0.1 %
Emission or Release Factor: Water	:	5 %
Emission or Release Factor: Soil	:	0.025 %
Release rate applicable to water	:	25 kg/day
Release rate applicable to air	:	0.5 kg/day

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Concentration in untreated : 0.00179 mg/l

wastewaters

Remarks : The substance degrades rapidly during the use and when passing the sewer system before entering the sewage treatment plant. The half-life of < 5 min at 20°C (Van Egdome, 2007) and a residence time of 1 hour was taken into account.

Conditions and measures related to municipal sewage treatment plant

Type of Sewage Treatment Plant : Municipal STP

Flow rate of sewage treatment plant effluent : 2000 m³/d

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Sludge Treatment : sludge to soil

2.2. Contributing scenario controlling worker exposure for: PROC1: Use in closed process, no likelihood of exposure

Product characteristics

Remarks : peracetic acid, 40
% Physical Form (at time of use) : liquid

Frequency and duration of use

Frequency of use : 8 hours/day
Frequency of use : 5 days/week

Other given operational conditions affecting worker exposure

Outdoor / Indoor : indoor

Technical conditions and measures

Local exhaust
Effectiveness: 98 %

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

Wear suitable gloves (tested to EN374) and eye protection.

2.3. Contributing scenario controlling worker exposure for: PROC2: Use in closed, continuous process with occasional controlled exposure

Product characteristics

Remarks : peracetic acid, 40
% Physical Form (at time of use) : liquid

Frequency and duration of use

Frequency of use : 8 hours/day
Frequency of use : 5 days/week

Other given operational conditions affecting worker exposure

Outdoor / Indoor : indoor

Technical conditions and measures

Local exhaust
Effectiveness: 98 %

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

Wear suitable gloves (tested to EN374) and eye protection.

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2.4. Contributing scenario controlling worker exposure for: PROC3: Use in closed batch process (synthesis or formulation)

Product characteristics

Remarks : peracetic acid, 40
% Physical Form (at time of use) : liquid

Frequency and duration of use

Frequency of use : 8 hours/day
Frequency of use : 5 days/week

Other given operational conditions affecting worker exposure

Outdoor / Indoor : indoor

Technical conditions and measures

Local exhaust
Effectiveness: 98 %

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

Wear suitable gloves (tested to EN374) and eye protection.

2.5. Contributing scenario controlling worker exposure for: PROC4: Use in batch and other process (synthesis) where opportunity for exposure

arise

s

Product characteristics

Remarks : peracetic acid, 40
% Physical Form (at time of use) : liquid

Frequency and duration of use

Frequency of use : 8 hours/day
Frequency of use : 5 days/week

Other given operational conditions affecting worker exposure

Outdoor / Indoor : indoor

Technical conditions and measures

Local exhaust
Effectiveness: 98 %

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

Wear suitable gloves (tested to EN374) and eye protection.

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

Product characteristics

Remarks : peracetic acid, 40
% Physical Form (at time of use) : liquid

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Print date 10 November 2017

Frequency and duration of use

Frequency of use : 8 hours/day
Frequency of use : 5 days/week

Other given operational conditions affecting worker exposure

Outdoor / Indoor : indoor

Technical conditions and measures

Local exhaust
Effectiveness: 90 %

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

Wear suitable gloves (tested to EN374) and eye protection.

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

Product characteristics

Remarks : peracetic acid, 40
% Physical Form (at time of use) : liquid

Frequency and duration of use

Frequency of use : 8 hours/day
Frequency of use : 5 days/week

Other given operational conditions affecting worker exposure

Outdoor / Indoor : indoor

Technical conditions and measures

Local exhaust
Effectiveness: 98 %

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

Wear suitable gloves (tested to EN374) and eye protection.

3. Exposure estimation and reference to its source

Environment

Contributing Scenario	Exposure Assessment Method	Specific conditions	Compartment	Level of Exposure	RCR	Remarks
ERC6B	EASYTRA		freshwater	0.017 µg/l	0.077918	
ERC6B	EASYTRA		freshwater sediment	0.065 µg/kg dry weight	0.077928	
ERC6B	EASYTRA		Soil	0.0032 mg/kg dry weight	0.00996	
ERC6B	EASYTRA		grassland	0.158 µg/kg dry weight	0.000493	

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ERC6B	EASYTRA		sewage treatment plant (STP)	0.018 µg/l	0.000347	
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Workers

Contributing Scenario	Exposure Assessment Method	Specific conditions	Value type	Level of Exposure	RCR	Remarks
PROC1	EASYTRA		Worker - inhalative, long-term - local	0.254 µg/m ³	0.000422	
PROC2	EASYTRA		Worker - inhalative, long-term - local	0.1268 mg/m ³	0.21125	
PROC3	EASYTRA		Worker - inhalative, long-term - local	0.2535 mg/m ³	0.4225	
PROC4	EASYTRA		Worker - inhalative, long-term - local	0.507 mg/m ³	0.845	
PROC9	Used ART model.		Worker - inhalative, long-term - local	0.140 mg/m ³	0.233333	
PROC15	EASYTRA		Worker - inhalative, long-term - local	0.2535 mg/m ³	0.4225	

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

For scaling see:

If necessary, an increase in the use tonnage can be achieved by adapting the use conditions to local circumstances (scaling). Confer with the producer.

1. Short title of exposure scenario - ES13: Laboratory agent (professional use)

- Main User Group : **SU22** - Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
- Environmental release category : **ERC8b** - Wide dispersive indoor use of reactive substances in open systems
- Sector of use : **SU24** - Scientific research and development
- 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

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opportunity for exposure arises

PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

PROC15 - Use as laboratory reagent

2.1. Contributing scenario controlling environmental exposure for: ERC8b: Wide dispersive indoor use of reactive substances in open systems

Amount used

Daily amount for wide disperse uses : 0.005479 tons/day

Annual amount for wide disperse uses : 10 tons/year

Value Type (Msafe) - Daily amount per site : 0.078268 kg/day

Remarks : freshwater

Value Type (Msafe) - Daily amount per site : 0.078258 kg/day

Remarks : freshwater sediment

Value Type (Msafe) - Daily amount per site : 4478.573 tons/day

Remarks : soil

Value Type (Msafe) - Daily amount per site : 3590 tons/day

Remarks : sewage treatment plant

Frequency and duration of use

Single exposure : 365 days/year

Environmental factors not influenced by risk management

Flow rate : 18000 m³/d

Other given operational conditions affecting environmental exposure

Number of emission days per year : 365

Emission or Release Factor: Air : 0.1 %

Emission or Release Factor: Water : 2 %

Release rate applicable to water : 0.00011 kg/day

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Release rate applicable to air : 0.000006 kg/day
Concentration in untreated wastewaters : < 0.000001 mg/l

Remarks : The substance degrades rapidly during the use and when passing the sewer system before entering the sewage treatment plant. The half-life of < 5 min at 20°C (Van Egdom, 2007) and a residence time of 1 hour was taken into account.

Conditions and measures related to municipal sewage treatment plant

Type of Sewage Treatment Plant : Municipal STP

Flow rate of sewage treatment plant effluent : 2000 m³/d

Sludge Treatment : sludge to soil

2.2. Contributing scenario controlling worker exposure for: PROC1: Use in closed process, no likelihood of exposure

Product characteristics

Remarks : peracetic acid, 40 %
Physical Form (at time of use) : liquid

Frequency and duration of use

Frequency of use : 4 hours/day
Frequency of use : 5 days/week

Other given operational conditions affecting worker exposure

Outdoor / Indoor : indoor

Technical conditions and measures

Local exhaust
Effectiveness: 98 %

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

Wear suitable gloves (tested to EN374) and eye protection.

2.3. Contributing scenario controlling worker exposure for: PROC2: Use in closed, continuous process with occasional controlled exposure

Product characteristics

Remarks : peracetic acid, 40 %
Physical Form (at time of use) : liquid

Frequency and duration of use

Frequency of use : 4 hours/day
Frequency of use : 5 days/week

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Other given operational conditions affecting worker exposure

Outdoor / Indoor : indoor

Technical conditions and measures

Local exhaust

Effectiveness: 98 %

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

Wear suitable gloves (tested to EN374) and eye protection.

2.4. Contributing scenario controlling worker exposure for:

PROC3: Use in closed batch process (synthesis or formulation)

Product characteristics

Remarks : peracetic acid, 40 %

Physical Form (at time of use) : liquid

Frequency and duration of use

Frequency of use : 4 hours/day

Frequency of use : 5 days/week

Other given operational conditions affecting worker exposure

Outdoor / Indoor : indoor

Technical conditions and measures

Local exhaust

Effectiveness: 90 %

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

Wear suitable gloves (tested to EN374) and eye protection.

2.5. Contributing scenario controlling worker exposure for:

PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises

Product characteristics

Remarks : peracetic acid, 40 %

Physical Form (at time of use) : liquid

Frequency and duration of use

Frequency of use : 4 hours/day

Frequency of use : 5 days/week

Other given operational conditions affecting worker exposure

Outdoor / Indoor : indoor

Technical conditions and measures

Local exhaust

Effectiveness: 90 %

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

Wear suitable gloves (tested to EN374) and eye protection.

2.6. Contributing scenario controlling worker exposure for:

PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Product characteristics

Remarks : peracetic acid, 40 %
Physical Form (at time of use) : liquid

Frequency and duration of use

Frequency of use : 4 hours/day
Frequency of use : 5 days/week

Other given operational conditions affecting worker exposure

Outdoor / Indoor : indoor

Technical conditions and measures

Local exhaust
Effectiveness: 90 %

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

Wear suitable gloves (tested to EN374) and eye protection.

2.7. Contributing scenario controlling worker exposure for:

PROC15: Use as laboratory reagent

Product characteristics

Remarks : peracetic acid, 40 %
Physical Form (at time of use) : liquid

Frequency and duration of use

Frequency of use : 4 hours/day
Frequency of use : 5 days/week

Other given operational conditions affecting worker exposure

Outdoor / Indoor : indoor

Technical conditions and measures

Local exhaust
Effectiveness: 98 %

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

Wear suitable gloves (tested to EN374) and eye protection.

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3. Exposure estimation and reference to its source

Environment

Contributing Scenario	Exposure Assessment Method	Specific conditions	Compartment	Level of Exposure	RCR	Remarks
ERC8B	EASYTRA		freshwater	0.016 µg/l	0.070009	
ERC8B	EASYTRA		freshwater sediment	0.059 µg/kg dry weight	0.070018	
ERC8B	EASYTRA		Soil	0.0004 µg/kg dry weight	0.000001	
ERC8B	EASYTRA		grassland	0.0004 µg/kg dry weight	0.000001	
ERC8B	EASYTRA		sewage treatment plant (STP)	0.0001 ng/kg dry weight	0.000001	

Workers

Contributing Scenario	Exposure Assessment Method	Specific conditions	Value type	Level of Exposure	RCR	Remarks
PROC1	EASYTRA		Worker - inhalative, long-term - local	0.1521 µg/m ³	0.000253	
PROC2	EASYTRA		Worker - inhalative, long-term - local	0.3042 mg/m ³	0.507	
PROC3	Used ART model.		Worker - inhalative, long-term - local	0.015 mg/m ³	0.025	
PROC4	Used ART model.		Worker - inhalative, long-term - local	0.23 mg/m ³	0.383333	
PROC9	Used ART model.		Worker - inhalative, long-term - local	0.23 mg/m ³	0.383333	
PROC15	EASYTRA		Worker - inhalative, long-term - local	0.1521 mg/m ³	0.2535	

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

For scaling see:

If necessary, an increase in the use tonnage can be achieved by adapting the use conditions to local circumstances (scaling), Confer with the producer.