Safety data sheet
according to 1907/2006/EC, Article 31

revised on: 06.11.2023 Version number 8 (replaces version 7) Creation Date: 21.06.2016

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

· **1.1 Product identifier**

· **Trade name: Silver nitrate**

· **Article number:** 878
· **CAS Number:**
7761-88-8
· **EC number:**
231-853-9
· **Index number:**
047-001-00-2
· **Registration number** 01-2119513705-43-XXXX
· **1.2 Relevant identified uses of the substance or mixture and uses advised against**
The product is not intended for use by consumers
For professional users only
· **Sector of Use**
SU3 Industrial uses: Uses of substances as such or in preparations at industrial sites
SU9 Manufacture of fine chemicals
SU10 Formulation [mixing] of preparations and/or re-packaging (excluding alloys)
SU24 Scientific research and development
· **Product category**
PC19 Intermediate
PC20 Processing aids such as pH-regulators, flocculants, precipitants, neutralization agents
PC21 Laboratory chemicals
PC29 Pharmaceuticals
PC39 Cosmetics, personal care products
PC40 Extraction agents
· **Process category**
PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions.
PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions
PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition
PROC4 Chemical production where opportunity for exposure arises
PROC5 Mixing or blending in batch processes
PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing)
PROC15 Use as laboratory reagent
· **Environmental release category**
ERC1 Manufacture of the substance
ERC2 Formulation into mixture
ERC4 Use of non-reactive processing aid at industrial site (no inclusion into or onto article)
ERC6a Use of intermediate
· **Application of the substance / the mixture**
Industrial use
Laboratory chemical
Chemical analytics

· **1.3 Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**
Th. Geyer GmbH & Co. KG
Dornierstr. 4 – 6
D-71272 Renningen

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Tel.: +49(0)7159-1637-0, Fax:+49 (0)7159/18417
www.thgeyer.de
sicherheitsdatenblaetter@thgeyer.de

· **Further information obtainable from:** Product management department

· **1.4 Emergency telephone number:**
National Poisons Information Service
City Hospital
Dudley Road
Birmingham B18 7QH
Tel.:Emergency: (00 44) 87 06 00 62 66
Members of the public seeking specific information on poisons should contact:
In England and Wales: NHS 111 - dial 111
In Scotland: NHS 24 - dial 111

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SECTION 2: Hazards identification

· **2.1 Classification of the substance or mixture**
· **Classification according to Regulation (EC) No 1272/2008**


GHS03 flame over circle

Ox. Sol. 2 H272 May intensify fire; oxidiser.


GHS05 corrosion

Skin Corr. 1B H314 Causes severe skin burns and eye damage.


GHS09 environment

Aquatic Acute 1 H400 Very toxic to aquatic life.
Aquatic Chronic 1 H410 Very toxic to aquatic life with long lasting effects.

· **2.2 Label elements**
· **Labelling according to Regulation (EC) No 1272/2008**
The substance is classified and labelled according to the GB CLP regulation.
· **Hazard pictograms**


GHS03 GHS05 GHS09

· **Signal word** Danger
· **Hazard statements**
H272 May intensify fire; oxidiser.
H314 Causes severe skin burns and eye damage.
H410 Very toxic to aquatic life with long lasting effects.
· **Precautionary statements**
P273 Avoid release to the environment.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.

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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.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **2.3 Other hazards**
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.

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SECTION 3: Composition/information on ingredients

· **3.1 Substances**
· **CAS No. Description**
CAS: 7761-88-8 silver nitrate
· **Identification number(s)**
· **EC number:** 231-853-9
· **Index number:** 047-001-00-2

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SECTION 4: First aid measures

· **4.1 Description of first aid measures**
· **General information:**
Take affected persons out into the fresh air.
First aider needs to protect himself.
Immediately remove any clothing soiled by the product.
· **After inhalation:**
Remove person from danger zone.
Supply fresh air.
Administer glucocorticoid dose aerosol in case of lung irritation.
Seek medical treatment in case of complaints.
· **After skin contact:**
Wash with plenty of soap and water, take off soiled clothes and shoes.
Call a doctor immediately.
· **After eye contact:**
Protect unharmed eye.
Rinse opened eye for several minutes under running water. Then consult a doctor.
Remove any contact lenses if possible.
Continue rinsing.
· **After swallowing:**
Rinse out mouth and then drink plenty of water.
Avoid vomiting (risk of perforation).
Call a doctor immediately.
· **Information for doctor:** Please observe safety data sheet/label.
· **4.2 Most important symptoms and effects, both acute and delayed**
Headache
Cramp
Vertigo
Gastric or intestinal disorders
Nausea
· **Hazards**
Danger of pneumonia.
Danger of disturbed cardiac rhythm.
Danger of impaired breathing.
· **4.3 Indication of any immediate medical attention and special treatment needed**
If swallowed or in case of vomiting, danger of entering the lungs.

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In case of lung irritation, administer glucocorticoid dose aerosol.
If swallowed, gastric irrigation.

SECTION 5: Firefighting measures

· **5.1 Extinguishing media**
· **Suitable extinguishing agents:** Use fire extinguishing methods suitable to surrounding conditions.
· **For safety reasons unsuitable extinguishing agents:** Water with full jet.
· **5.2 Special hazards arising from the substance or mixture**
Formation of toxic gases is possible during heating or in case of fire.
Nitrogen oxides (NOx)
Under certain fire conditions, traces of other toxic gases cannot be excluded.
The product is oxidising.
· **5.3 Advice for firefighters**
· **Protective equipment:**
Wear self-contained respiratory protective device.
Do not inhale explosion gases or combustion gases.
· **Additional information**
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.
Safely prevent extinguishing water from entering groundwater or surface water.

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SECTION 6: Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures**
Ensure adequate ventilation.
Keep away from ignition sources.
Do not breathe dust.
Avoid contact with eyes and skin.
Avoid formation of dust.
Wear protective equipment. Keep unprotected persons away.
· **6.2 Environmental precautions:**
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/surface or ground water.
· **6.3 Methods and material for containment and cleaning up:**
Cover the sewerage system.
Pick up dry.
Use neutralising agent.
Dispose contaminated material as waste according to section 13.
Ensure adequate ventilation.
Dispose of the material collected according to regulations.
· **6.4 Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

· **7.1 Precautions for safe handling**
Keep away from heat and direct sunlight.
Provide suction extractors if dust is formed.
Apply the general protective and hygienic measures when handling chemicals.
Store in cool, dry place in tightly closed receptacles.
Thorough dedusting.
· **Information about fire - and explosion protection:**
Potentially explosive when mixed with organic substances.

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Substance/product is oxidising when dry.

· **7.2 Conditions for safe storage, including any incompatibilities**
· **Storage:**
· **Requirements to be met by storerooms and receptacles:** Store only in the original receptacle.
· **Information about storage in one common storage facility:**
Store away from reducing agents.
Store away from foodstuffs.
Store away from flammable substances.
· **Further information about storage conditions:**
Store receptacle in a well ventilated area.
Protect from humidity and water.
Keep container tightly sealed.
· **Storage class:** 5.1B
· **7.3 Specific end use(s)** No further relevant information available.

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SECTION 8: Exposure controls/personal protection

· **8.1 Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:**	
CAS: 7761-88-8 silver nitrate	
WEL	Long-term value: 0.01 mg/m³ as Ag

· **PNECs**
- values relevant to the environment
PNEC 0.04 µg/l freshwater short-term (once)
PNEC 0.86 µg/l seawater short term (once)
PNEC 0.025 mg/l Wastewater treatment plant (STP) short term (one time)
PNEC 438.1 mg/kg freshwater sediment short-term (once)
PNEC 438,1 mg/kg marine sediment short-term (single)
PNEC 1,41 mg/kg soil short-term (once)
· **Additional information:** The lists valid during the making were used as basis.

· **8.2 Exposure controls**
· **Appropriate engineering controls** No further data; see section 7.
· **Individual protection measures, such as personal protective equipment**
· **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.
· **Respiratory protection:** Not required.
· **Hand protection**

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
· **Material of gloves**
Information on suitable glove materials is not available at present.
However, experience has shown that the glove materials polychloroprene, nitrile rubber, butyl rubber, fluororubber and polyvinyl chloride are suitable for protection against undissolved solids.
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

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NBR: Acrylonitrile butadiene rubber
Material thickness > 0.11 mm

· **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
Level 6 for applications > 480 min

· **Eye/face protection**

Tightly sealed goggles

· **Body protection:**
Boots
Apron

Protective work clothing (e. g. safety shoes EN ISO 20345, long-sleeved protective working garments).

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SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**	
· **General Information**	
· **Physical state**	Solid
· **Colour:**	Colourless
· **Odour:**	Characteristic
· **Melting point/freezing point:**	212 °C
· **Boiling point or initial boiling point and boiling range**	444 °C
· **Flammability**	Contact with combustible material may cause fire.
· **Lower and upper explosion limit**	
· **Lower:**	Not determined.
· **Upper:**	Not determined.
· **Flash point:**	Not applicable.
· **Decomposition temperature:**	Not determined.
· **pH**	5.4–6.4
· **Viscosity:**	
· **Kinematic viscosity**	Not applicable.
· **Dynamic:**	Not applicable.
· **Solubility**	
· **water at 20 °C:**	2160 g/l
· **Partition coefficient n-octanol/water (log value)**	Not determined.
· **Vapour pressure:**	Not applicable.
· **Density and/or relative density**	
· **Density at 20 °C:**	4.35 g/cm³
	Not determined.
· **Relative density**	Not determined.
· **Vapour density**	Not applicable.
· **Particle characteristics**	
See section 3.	

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· **9.2 Other information**	
· **Appearance:**	
· **Form:**	Crystalline
· **Important information on protection of health and environment, and on safety.**	
· **Ignition temperature:**	Not determined.
· **Explosive properties:**	Product does not present an explosion hazard.
· **Molecular weight**	169.87 g/mol
· **Change in condition**	
· **Evaporation rate**	Not applicable.

· **Information with regard to physical hazard classes**	
· **Explosives**	Void
· **Flammable gases**	Void
· **Aerosols**	Void
· **Oxidising gases**	Void
· **Gases under pressure**	Void
· **Flammable liquids**	Void
· **Flammable solids**	Void
· **Self-reactive substances and mixtures**	Void
· **Pyrophoric liquids**	Void
· **Pyrophoric solids**	Void
· **Self-heating substances and mixtures**	Void
· **Substances and mixtures, which emit flammable gases in contact with water**	Void
· **Oxidising liquids**	Void
· **Oxidising solids**	May intensify fire; oxidiser.
· **Organic peroxides**	Void
· **Corrosive to metals**	Void
· **Desensitised explosives**	Void

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SECTION 10: Stability and reactivity

· **10.1 Reactivity** No further relevant information available.
· **10.2 Chemical stability** Stable when stored and handled properly.
· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
· **10.3 Possibility of hazardous reactions**
Acts as an oxidising agent on organic materials such as wood, paper and fats.
· **10.4 Conditions to avoid**
Heat, flames and sparks.
Protect from moisture.
· **10.5 Incompatible materials:** Avoid contact with other chemicals.
· **10.6 Hazardous decomposition products:** In case of fire: see section 5.

*
SECTION 11: Toxicological information

· **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**
· **Acute toxicity** Based on available data, the classification criteria are not met.

· **LD/LC50 values relevant for classification:**

Oral	LD50	1,170 mg/kg (rat)
Dermal	LD50	2,000 mg/kg (rat)

· **Skin corrosion/irritation** Causes severe skin burns and eye damage.

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· **Serious eye damage/irritation** Based on available data, the classification criteria are not met.
· **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
· **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
· **Carcinogenicity** Based on available data, the classification criteria are not met.
· **Reproductive toxicity** Based on available data, the classification criteria are not met.
· **STOT-single exposure** Based on available data, the classification criteria are not met.
· **STOT-repeated exposure** Based on available data, the classification criteria are not met.
· **Aspiration hazard** Based on available data, the classification criteria are not met.
· **11.2 Information on other hazards**
· **Endocrine disrupting properties** Substance is not listed.

*
SECTION 12: Ecological information

· **12.1 Toxicity**
· **Aquatic toxicity:**
(Acute) aquatic toxicity
Very toxic to aquatic organisms
LC50 1.2 µg/l fish ECHA 96 h

(Chronic) aquatic toxicity
May cause long-term adverse effects in the aquatic environment.

EC50 0.8 µg/l aquatic invertebrates ECHA 7 d
NOEC 0,31 µg/l aquatic invertebrates ECHA 20 d
Growth rate (ErCx) 10% 0.59 µg/l fish ECHA 33 d
· **12.2 Persistence and degradability**
Anorganic product, is not eliminable from water by means of biological cleaning processes.
· **12.3 Bioaccumulative potential** BCF 70 (ECHA
· **12.4 Mobility in soil** No further relevant information available.
· **12.5 Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.
· **12.6 Endocrine disrupting properties**
The product does not contain substances with endocrine disrupting properties.
· **12.7 Other adverse effects**
· **Remark:** Very toxic for fish
· **Additional ecological information:**
· **General notes:**
Must not reach sewage water or drainage ditch undiluted or unneutralised.
Also poisonous for fish and plankton in water bodies.
Very toxic for aquatic organisms
Water hazard class 3 (German Regulation) (Assessment by list): extremely hazardous for water
Do not allow product to reach ground water, water course or sewage system, even in small quantities.
Danger to drinking water if even extremely small quantities leak into the ground.

*
SECTION 13: Disposal considerations

· **13.1 Waste treatment methods**
This product and its container must be disposed of as hazardous waste. Dispose of the contents/container in accordance with local/regional/national/international regulations.
Observe local (country-specific) regulations and laws.
This product and its container must be disposed of as hazardous waste. Dispose of contents/container in accordance with local/regional/national/international regulations.
· **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.

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Chemicals must be disposed of in accordance with the respective national regulations.

· **European waste catalogue**	
06 00 00	WASTES FROM INORGANIC CHEMICAL PROCESSES
06 13 00	wastes from inorganic chemical processes not otherwise specified
06 13 99	wastes not otherwise specified
HP2	Oxidising
HP8	Corrosive
HP14	Ecotoxic

· **Uncleaned packaging:**
· **Recommendation:** Disposal must be made according to official regulations.
· **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

*

SECTION 14: Transport information

· **14.1 UN number or ID number**
· **ADR, IMDG, IATA** UN1493

· **14.2 UN proper shipping name**
· **ADR** 1493 SILVER NITRATE, ENVIRONMENTALLY HAZARDOUS
· **IMDG, IATA** SILVER NITRATE

· **14.3 Transport hazard class(es)**

· **ADR**

· **Class** 5.1 (O2) Oxidising substances.
· **Label** 5.1

· **IMDG, IATA**

· **Class** 5.1 Oxidising substances.
· **Label** 5.1

· **14.4 Packing group**
· **ADR, IMDG, IATA** II

· **14.5 Environmental hazards:** Environmentally hazardous substance, solid
· **Special marking (ADR):** Symbol (fish and tree)

· **14.6 Special precautions for user** Warning: Oxidising substances.
· **Hazard identification number (Kemler code):** 50
· **EMS Number:** F-A,S-Q
· **Segregation groups** (SGG7) Heavy metals and their salts (including their organometallic compounds)
· **Stowage Category** A

· **14.7 Maritime transport in bulk according to IMO instruments** Not applicable.

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· **Transport/Additional information:**	
· **ADR**	
· **Limited quantities (LQ)**	1 kg
· **Excepted quantities (EQ)**	Code: E2 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 500 g
· **Transport category**	2
· **Tunnel restriction code**	E
· **IMDG**	
· **Limited quantities (LQ)**	1 kg
· **Excepted quantities (EQ)**	Code: E2 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 500 g
· **UN "Model Regulation":**	UN 1493 SILVER NITRATE, 5.1, II, ENVIRONMENTALLY HAZARDOUS

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SECTION 15: Regulatory information

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

· **Inventory of Hazardous Chemicals**	
CAS: 7761-88-8	silver nitrate

· **Poisons Act**
· **Regulated explosives precursors** Substance is not listed.
· **Regulated poisons** Substance is not listed.
· **Reportable explosives precursors** Substance is not listed.
· **Reportable poisons** Substance is not listed.
· **Labelling according to Regulation (EC) No 1272/2008**
The substance is classified and labelled according to the GB CLP regulation.
· **Hazard pictograms**

GHS03 GHS05 GHS09

· **Signal word** Danger
· **Hazard statements**
H272 May intensify fire; oxidiser.
H314 Causes severe skin burns and eye damage.
H410 Very toxic to aquatic life with long lasting effects.
· **Precautionary statements**

P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
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.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Directive 2012/18/EU**
· **Named dangerous substances - ANNEX I** Substance is not listed.

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· **Seveso category**
P8 OXIDISING LIQUIDS AND SOLIDS
E1 Hazardous to the Aquatic Environment
· **Qualifying quantity (tonnes) for the application of lower-tier requirements** 50 t
· **Qualifying quantity (tonnes) for the application of upper-tier requirements** 200 t
· **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 75
· **DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II**
Substance is not listed.
· **REGULATION (EU) 2019/1148**
· **Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))**
Substance is not listed.
· **Annex II - REPORTABLE EXPLOSIVES PRECURSORS** Substance is not listed.
· **Regulation (EC) No 273/2004 on drug precursors** Substance is not listed.
· **Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors**
Substance is not listed.

· **National regulations:**

· **Information about limitation of use:**
Employment restrictions concerning juveniles must be observed.
Employment restrictions concerning pregnant and lactating women must be observed.
· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.
The application, use and processing of our products are beyond our control and are therefore exclusively your responsibility.

· **Department issuing SDS:** Product management
· **Contact:** Product management
· **Version number of previous version:** 7
· **Abbreviations and acronyms:**
ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
PNEC: Predicted No-Effect Concentration (UK REACH)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Ox. Sol. 2: Oxidizing solids – Category 2
Skin Corr. 1B: Skin corrosion/irritation – Category 1B
Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1
· *** Data compared to the previous version altered.**

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Annex: Exposure scenario

· **Short title of the exposure scenario** Chemicals for laboratory and industry
· **Sector of Use**
SU3 Industrial uses: Uses of substances as such or in preparations at industrial sites
SU9 Manufacture of fine chemicals
SU10 Formulation [mixing] of preparations and/or re-packaging (excluding alloys)
SU24 Scientific research and development
· **Product category**
PC19 Intermediate
PC20 Processing aids such as pH-regulators, flocculants, precipitants, neutralization agents
PC21 Laboratory chemicals
PC29 Pharmaceuticals
PC39 Cosmetics, personal care products
PC40 Extraction agents
· **Process category**
PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions.
PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions
PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition
PROC4 Chemical production where opportunity for exposure arises
PROC5 Mixing or blending in batch processes
PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing)
PROC15 Use as laboratory reagent
· **Environmental release category**
ERC1 Manufacture of the substance
ERC2 Formulation into mixture
ERC4 Use of non-reactive processing aid at industrial site (no inclusion into or onto article)
ERC6a Use of intermediate
· **Description of the activities / processes covered in the Exposure Scenario**
See section 1 of the annex to the Safety Data Sheet.
· **Conditions of use**
· **Duration and frequency** 5 workdays/week.
· **Physical parameters**
· **Physical state** Solid
· **Concentration of the substance in the mixture** Raw material.
· **Other operational conditions**
· **Other operational conditions affecting environmental exposure**
Observe section 6 of the Safety Data Sheet (Accidental release measures).
Use only on hard ground.
· **Other operational conditions affecting worker exposure**
Avoid contact with eyes.
Avoid contact with the skin.
Keep away from combustible material.
· **Other operational conditions affecting consumer exposure** Keep out of the reach of children.
· **Other operational conditions affecting consumer exposure during the use of the product**
Not applicable.
· **Risk management measures**
· **Worker protection** Observe section 7.1 and 8.1-8.2 of the safety data sheet.
· **Organisational protective measures**
Consider section 4 of the Safety Data Sheet (First aid measures).
Employment restrictions concerning juveniles must be observed.
Employment restrictions concerning pregnant and lactating women must be observed.
· **Technical protective measures**
Use product only in enclosed systems.

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Ensure that suitable extractors are available on processing machines
· **Personal protective measures**
Do not inhale dust / smoke / mist.
Avoid contact with the skin.
Avoid contact with the eyes.
Tightly sealed goggles
Protective gloves
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
· **Measures for consumer protection**
Ensure adequate labelling.
Keep locked up and out of the reach of children.
· **Environmental protection measures**
· **Water**
Do not allow to reach ground water, water bodies or sewage system.
Generally, prior to the introduction of wastewater into wastewater treatment plants a neutralisation is required.
Do not allow to reach sewage system.
· **Soil** Prevent contamination of soil.
· **Notes** In case of unintended release of the product: See section 6 of the Safety Data Sheet.
· **Disposal measures** Ensure that waste is collected and contained.
· **Disposal procedures**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
· **Waste type** Partially emptied and uncleaned packaging
· **Exposure estimation**
· **Worker (oral)** Detailed information on the exposure estimation can be found at http://www.ecetoc.org/tra.
· **Worker (dermal)** Detailed information on the exposure estimation can be found at http://www.ecetoc.org/tra.
· **Worker (inhalation)**
Detailed information on the exposure estimation can be found at http://www.ecetoc.org/tra.
· **Environment**
Detailed information on the estimation of the environmental exposure can be found at http://ecb.jrc.ec.europa.eu/euses/.
· **Consumer** Not relevant for this Exposure Scenario.
· **Guidance for downstream users** No further relevant information available.