

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

revised on: 02.11.2023

Version number 11 (replaces version 10)

Creation Date: 05.11.2013

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

- **1.1 Product identifier**
- **Trade name:** N,N-Dimethylformamide
- **Article number:** 2320, 2350, 2359, 2363, 2364, 2376, 2385
- **CAS Number:**
68-12-2
- **EC number:**
200-679-5
- **Index number:**
616-001-00-X
- **Registration number** 01-2119475605-32-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
- **Life cycle stages**
F Formulation or re-packing
IS Use at industrial Sites
- **Sector of Use**
SU9 Manufacture of fine chemicals
SU24 Scientific research and development
- **Product category**
PC0 Other
PC20 Processing aids such as pH-regulators, flocculants, precipitants, neutralization agents
PC21 Laboratory chemicals
PC29 Pharmaceuticals
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
PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities
PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities
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

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- **1.3 Details of the supplier of the safety data sheet**

- **Manufacturer/Supplier:**

Th. Geyer GmbH & Co. KG
Dornierstr. 4 – 6
D-71272 Renningen

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

SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**

- **Classification according to Regulation (EC) No 1272/2008**



GHS02 flame

Flam. Liq. 3 H226 Flammable liquid and vapour.



GHS08 health hazard

Repr. 1B H360D May damage the unborn child.



GHS07

Acute Tox. 4 H312 Harmful in contact with skin.

Acute Tox. 4 H332 Harmful if inhaled.

Eye Irrit. 2 H319 Causes serious eye irritation.

- **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**



GHS02



GHS07



GHS08

- **Signal word** Danger

- **Hazard statements**

H226 Flammable liquid and vapour.

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H312+H332 Harmful in contact with skin or if inhaled.

H319 Causes serious eye irritation.

H360D May damage the unborn child.

Precautionary statements

P201 Obtain special instructions before use.

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P308+P313 IF exposed or concerned: Get medical advice/attention.

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

Additional information:

Restricted to professional users.

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

vPvB: Not applicable.

SECTION 3: Composition/information on ingredients

3.1 Substances
CAS No. Description

CAS: 68-12-2 N,N-Dimethylformamide

Identification number(s)
EC number: 200-679-5

Index number: 616-001-00-X

SVHC

CAS: 68-12-2 | N,N-Dimethylformamide

SECTION 4: First aid measures

4.1 Description of first aid measures
General information:

First aider needs to protect himself.

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

After inhalation:

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

In case of unconsciousness place patient stably in side position for transportation.

After skin contact:

Immediately wash with water and soap and rinse thoroughly.

If skin irritation continues, consult a doctor.

After eye contact:

Protect unharmed eye.

Rinse opened eye for several minutes under running water. Then consult a doctor.

After swallowing:

Rinse out mouth and then drink plenty of water.

Do not induce vomiting; call for medical help immediately.

Place a vomiting person lying on their back in the recovery position.

Information for doctor: Please observe safety data sheet/label.

4.2 Most important symptoms and effects, both acute and delayed

Cramp

Breathing difficulty

Nausea

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Vertigo
 Unconsciousness
 Gastric or intestinal disorders
 · **Hazards** Danger of impaired breathing.
 · **4.3 Indication of any immediate medical attention and special treatment needed** Symptomatic treatment.

SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:**
 Water spray, powder, carbon dioxide or foam. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet.
- **5.2 Special hazards arising from the substance or mixture**
 Combustible.
 In case of fire, the following can be released:
 Carbon oxides (CO, CO₂)
 Nitrogen oxides (NO_x)
 Under certain fire conditions, traces of other toxic gases cannot be excluded.
 Explosive mixtures with air are possible with strong heating.
- **5.3 Advice for firefighters**
- **Protective equipment:**
 Mouth respiratory protective device.
 Wear self-contained respiratory protective device.
 Do not inhale explosion gases or combustion gases.
- **Additional information**
 Cool endangered receptacles with water spray.
 Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.
 Safely prevent extinguishing water from entering groundwater or surface water.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
 Wear protective equipment. Keep unprotected persons away.
 Use respiratory protective device against the effects of fumes/dust/aerosol.
- **6.2 Environmental precautions:**
 Prevent from spreading (e.g. by damming-in or oil barriers).
 Do not allow to enter sewers/surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**
 Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
 Ensure adequate ventilation.
 Dispose contaminated material as waste according to section 13.
 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**
 Prevent formation of aerosols.
 Ensure good ventilation/exhaustion at the workplace.
 Wear suitable respiratory protective device when decanting larger quantities without extractor facilities.
 Keep away from sources of ignition - do not smoke

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- **Information about fire - and explosion protection:**
Protect against electrostatic charges.
Fumes can combine with air to form an explosive mixture.
Keep respiratory protective device available.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**
Tightly sealed.
Prevent any seepage into the ground.
Ventilate storage rooms well.
Dry.
Store only in the original receptacle.
- **Information about storage in one common storage facility:**
Store away from oxidising agents.
Store away from reducing agents.
- **Further information about storage conditions:**
Protect from heat and direct sunlight.
Store in cool, dry conditions in well sealed receptacles.
- **Storage class:** 3
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

· 8.1 Control parameters

· **Ingredients with limit values that require monitoring at the workplace:**

CAS: 68-12-2 N,N-Dimethylformamide

WEL	Short-term value: 30 mg/m ³ , 10 ppm Long-term value: 15 mg/m ³ , 5 ppm Sk
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- **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:**
Store protective clothing separately.
Avoid contact with the eyes and skin.
Keep away from foodstuffs, beverages and feed.
Be sure to clean skin thoroughly after work and before breaks.
Pregnant women should strictly avoid inhalation or skin contact.
The usual precautionary measures are to be adhered to when handling chemicals.
- **Respiratory protection:**
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device. If air-purifying respiratory protection is required according to the risk assessment, wear a respirator with full-face mask with combination filter (US) or with filter type ABEK (EN 14387) filter cartridge. If the respirator is the only protective measure, an ambient air self-contained breathing apparatus with a full face mask must be worn. Respirators and components must be approved to appropriate government standards (for example, NIOSH (US) or CEN (EU)). Translated with www.DeepL.com/Translator (free version)
- **Hand protection**



Protective gloves

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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**

Butyl rubber, BR

Recommended thickness of the material: ≥ 0.7 mm

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.

- **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.

- **Eye/face protection**



Tightly sealed goggles

- **Body protection:**



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

SECTION 9: Physical and chemical properties

- **9.1 Information on basic physical and chemical properties**

- **General Information**

- **Physical state**

Fluid

- **Colour:**

Colourless

- **Odour:**

Amine-like

- **Melting point/freezing point:**

-61 °C

- **Boiling point or initial boiling point and boiling range**

153 °C

- **Flammability**

Not applicable.

- **Lower and upper explosion limit**

- **Lower:**

2.2 Vol %

- **Upper:**

16 Vol %

- **Flash point:**

58 °C

- **Auto-ignition temperature:**

440 °C

- **Decomposition temperature:**

Not determined.

- **pH**

7

- **Viscosity:**

- **Kinematic viscosity**

Not determined.

- **Dynamic at 20 °C:**

0.855 mPas

- **Solubility**

- **water:**

Fully miscible.

- **Partition coefficient n-octanol/water (log value)**

Not determined.

- **Vapour pressure at 20 °C:**

3.5 hPa

- **Density and/or relative density**

- **Density at 20 °C:**

0.95 g/cm³

Not determined.

- **Relative density**

Not determined.

- **Vapour density**

Not determined.

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- **9.2 Other information**
- **Appearance:**
- **Form:** Fluid
- **Important information on protection of health and environment, and on safety.**
- **Ignition temperature:** Not determined.
- **Explosive properties:** Not determined.
- **Molecular weight** 73.1 g/mol
- **Change in condition**
- **Evaporation rate** Not determined.

- **Information with regard to physical hazard classes**
- **Explosives** Void
- **Flammable gases** Void
- **Aerosols** Void
- **Oxidising gases** Void
- **Gases under pressure** Void
- **Flammable liquids** Flammable liquid and vapour.
- **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** Void
- **Organic peroxides** Void
- **Corrosive to metals** Void
- **Desensitised explosives** Void

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**
Reacts with oxidising agents.
Forms explosive gas mixture with air.
- **10.4 Conditions to avoid**
Heat, flames and sparks.
Vapours form explosive mixtures with air.
- **10.5 Incompatible materials:** Oxidising agent
- **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** Harmful in contact with skin or if inhaled.

LD/LC50 values relevant for classification:

Oral	LD50	2,800 mg/kg (rat)
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Dermal	LD50	4,720 mg/kg (rabbit)
Inhalative	LC50	9,400 mg/l (mouse)

- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation** Causes serious eye irritation.
- **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** May damage the unborn child.
- **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.
- **Subacute to chronic toxicity:** -
- **11.2 Information on other hazards**
- **Endocrine disrupting properties** Substance is not listed.

SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** biodegradable
- **12.3 Bioaccumulative potential** Non significant accumulation in organisms
- **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:**
Toxic for fish
Toxic for water fleas
Toxic for algae
- **Additional ecological information:**
- **General notes:**
Water hazard class 2 (German Regulation) (Assessment by list): hazardous for water
Do not allow product to reach ground water, water course or sewage system.
Danger to drinking water if even small quantities leak into the ground.

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
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.
Chemicals must be disposed of in accordance with the respective national regulations.

· European waste catalogue

HP3	Flammable
HP4	Irritant - skin irritation and eye damage
HP6	Acute Toxicity
HP10	Toxic for reproduction

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- **Uncleaned packaging:**
- **Recommendation:**
Packagings that may not be cleansed are to be disposed of in the same manner as the product.
- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

SECTION 14: Transport information

<ul style="list-style-type: none"> · 14.1 UN number or ID number · ADR, IMDG, IATA 	UN2265	
<ul style="list-style-type: none"> · 14.2 UN proper shipping name · ADR · IMDG, IATA 	2265 N,N-DIMETHYLFORMAMIDE N,N-DIMETHYLFORMAMIDE	
<ul style="list-style-type: none"> · 14.3 Transport hazard class(es) · ADR 	<div style="text-align: center;">  </div> <ul style="list-style-type: none"> · Class · Label 	3 (F1) Flammable liquids. 3
<ul style="list-style-type: none"> · IMDG, IATA 	<div style="text-align: center;">  </div> <ul style="list-style-type: none"> · Class · Label 	3 Flammable liquids. 3
<ul style="list-style-type: none"> · 14.4 Packing group · ADR, IATA · IMDG 	III not regulated	
<ul style="list-style-type: none"> · 14.5 Environmental hazards: 	Not applicable.	
<ul style="list-style-type: none"> · 14.6 Special precautions for user · Hazard identification number (Kemler code): · EMS Number: · Stowage Category 	Warning: Flammable liquids. 30 F-E,S-D A	
<ul style="list-style-type: none"> · 14.7 Maritime transport in bulk according to IMO instruments 	Not applicable.	
<ul style="list-style-type: none"> · Transport/Additional information: 	<ul style="list-style-type: none"> · ADR · Limited quantities (LQ) · Excepted quantities (EQ) 	5L Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
<ul style="list-style-type: none"> · UN "Model Regulation": 	UN 2265 N,N-DIMETHYLFORMAMIDE, 3, III	

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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: 68-12-2 | N,N-Dimethylformamide

- **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**



GHS02 GHS07 GHS08

- **Signal word** Danger
- **Hazard statements**
 - H226 Flammable liquid and vapour.
 - H312+H332 Harmful in contact with skin or if inhaled.
 - H319 Causes serious eye irritation.
 - H360D May damage the unborn child.
- **Precautionary statements**
 - P201 Obtain special instructions before use.
 - P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
 - P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
 - P280 Wear protective gloves/protective clothing/eye protection/face protection.
 - P308+P313 IF exposed or concerned: Get medical advice/attention.
 - 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.
- **Seveso category** P5c FLAMMABLE LIQUIDS
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 5,000 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 50,000 t
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3, 30, 40, 72, 75, 76
- **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.

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· Substances of very high concern (SVHC) according to UK REACH

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- **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:** 10
- **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)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Flam. Liq. 3: Flammable liquids – Category 3

Acute Tox. 4: Acute toxicity – Category 4

Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

Repr. 1B: Reproductive toxicity – Category 1B

- *** 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**
 - SU9 Manufacture of fine chemicals
 - SU24 Scientific research and development
- **Product category**
 - PC0 Other
 - PC20 Processing aids such as pH-regulators, flocculants, precipitants, neutralization agents
 - PC21 Laboratory chemicals
 - PC29 Pharmaceuticals
 - 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
 - PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities
 - PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities
 - 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** Fluid
- **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).
- **Other operational conditions affecting worker exposure**
 - Avoid contact with eyes.
 - Avoid contact with the skin.
 - Do not breathe gas/vapour/aerosol.
- **Other operational conditions affecting consumer exposure** No special measures required.
- **Other operational conditions affecting consumer exposure during the use of the product**
 - Not applicable.
- **Risk management measures**
- **Worker protection**
- **Organisational protective measures**
 - Employment restrictions concerning juveniles must be observed.
 - Employment restrictions concerning pregnant and lactating women must be observed.
- **Technical protective measures** Ensure that suitable extractors are available on processing machines
- **Personal protective measures**
 - Do not inhale gases / fumes / aerosols.
 - Avoid contact with the skin.
 - Avoid contact with the eyes.

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Pregnant women should strictly avoid inhalation or skin contact.

Tightly sealed goggles

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device. If air-purifying respiratory protection is required according to the risk assessment, wear a respirator with full-face mask with combination filter (US) or with filter type ABEK (EN 14387) filter cartridge. If the respirator is the only protective measure, an ambient air self-contained breathing apparatus with a full face mask must be worn. Respirators and components must be approved to appropriate government standards (for example, NIOSH (US) or CEN (EU)). Translated with www.DeepL.com/Translator (free version)

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.
- **Environmental protection measures**
Avoid release to the environment. Obtain special instructions / refer to Safety Data Sheet.
- **Water** Do not allow to reach ground water, water bodies or sewage system, not even in small quantities.
- **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**
- **Consumer** Not relevant for this Exposure Scenario.
- **Guidance for downstream users** No further relevant information available.

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