

according to Commission Regulation (EU) 2020/878 as amended

# **HARTOL Brake Cleaner 500 ml**

Creation date 23rd September 2024

Revision date Version 1

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

**1.1. Product identifier** HARTOL Brake Cleaner 500 ml

Substance / mixture mixture

JFI N4MW-70SF-R00D-7CTA

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

#### Mixture's intended use

Universal cleaner for brakes and clutches. Degreases brake discs, clutches, brake drums, fuel pumps, gears and metal engine parts.

#### Main intended use

PC-CLN-17.5 Brake cleaners

## Mixture uses advised against

The product should not be used in ways other than those referred in Section 1.

## 1.3. Details of the supplier of the safety data sheet

#### Distributor

Name or trade name HARTOL

Address Verkhnii Val St, 30, Kijow, 04071

Ukraine

Phone +38 044 33 44 556 E-mail info@hartol.us

Competent person responsible for the safety data sheet

Name HARTOL E-mail info@hartol.us

## 1.4. Emergency telephone number

112

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

## 2.1. Classification of the substance or mixture

## Classification of the mixture in accordance with Regulation (EC) No 1272/2008

The mixture is classified as dangerous.

Aerosol 1, H222, H229 Skin Irrit. 2, H315 STOT SE 3, H336 Repr. 2, H361

STOT RE 2, H373 (nervous system) (inhalation)

Aquatic Chronic 2, H411

## Most serious adverse physico-chemical effects

Pressurised container: May burst if heated. Extremely flammable aerosol.

## Most serious adverse effects on human health and the environment

Causes skin irritation. May cause drowsiness or dizziness. Suspected of damaging fertility or the unborn child. May cause damage to the nervous system through prolonged or repeated exposure if inhaled. Toxic to aquatic life with long lasting effects.

### 2.2. Label elements

## **Hazard pictogram**



Signal word

Danger



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#### **Hazardous substances**

Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, >5% n-hexane

butane propane

#### **Hazard statements**

H222 Extremely flammable aerosol.

H229 Pressurised container: May burst if heated.

H315 Causes skin irritation.

H336 May cause drowsiness or dizziness.

H361 Suspected of damaging fertility or the unborn child.

H373 May cause damage to the nervous system through prolonged or repeated exposure if

inhaled.

H411 Toxic to aquatic life with long lasting effects.

**Precautionary statements** 

P102 Keep out of reach of children.

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

smoking.

P211 Do not spray on an open flame or other ignition source.

P251 Do not pierce or burn, even after use.

P261 Avoid breathing mist.

P271 Use only outdoors or in a well-ventilated area.
P302+P352 IF ON SKIN: Wash with plenty of water and soap.
P314 Get medical advice/attention if you feel unwell.

P405 Store locked up.

P410+P412 Protect from sunlight. Do no expose to temperatures exceeding 50 °C.

P420 Store separately.

P501 Dispose of contents/container to by handing over to the person authorized to dispose of

waste or by returning to the supplier.

## Requirements for child-resistant fastenings and tactile warning of danger

Container must carry a tactile warning of danger.

## 2.3. Other hazards

The mixture does not contain substances with endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605. Mixture does not contain any substance meet the criteria for PBT or vPvB in accordance with Annex XIII of Regulation (EC) No. 1907/2006 (REACH) as amended.

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

#### 3.2. Mixtures

# Mixture contains these hazardous substances and substances with the highest permissible concentration in the working environment

Identification numbers	Substance name	Content in % weight	Classification according to Regulation (EC) No 1272/2008	Note
EC: 924-168-8 Registration number: 01-2119475133-43-0011	Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, >5% n-hexane	74.1-79.1	Flam. Liq. 2, H225 Asp. Tox. 1, H304 Skin Irrit. 2, H315 STOT SE 3, H336 Repr. 2, H361 STOT RE 2, H373 (nervous system) (inhalation) Aquatic Chronic 2, H411	
Index: 601-004-00-0 CAS: 106-97-8 EC: 203-448-7	butane	3.8-<4.9	Flam. Gas 1, H220 Press. Gas (liquefied gas), H280	1, 2, 3



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Identification numbers	Substance name	Content in % weight	Classification according to Regulation (EC) No 1272/2008	Note
CAS: 124-38-9 EC: 204-696-9	Carbon dioxide		Press. Gas (refrigerated liquefied gas), H281	3
Index: 601-003-00-5 CAS: 74-98-6 EC: 200-827-9	propane		Flam. Gas 1, H220 Press. Gas (liquefied gas), H280	2, 3

#### **Notes**

- Note C: Some organic substances may be marketed either in a specific isomeric form or as a mixture of several isomers. In this case the supplier must state on the label whether the substance is a specific isomer or a mixture of
- 2 Note U (Table 3): When put on the market gases have to be classified as "Gases under pressure", in one of the groups compressed gas, liquefied gas, refrigerated liquefied gas or dissolved gas. The group depends on the physical state in which the gas is packaged and therefore has to be assigned case by case. The following codes are assigned:

Press. Gas (Comp.) Press. Gas (Liq.) Press. Gas (Ref. Lig.) Press. Gas (Diss.)

Aerosols shall not be classified as gases under pressure (See Annex I, Part 2, Section 2.3.2.1, Note 2).

A substance for which exposure limits are set.

Full text of all classifications and hazard statements is given in the section 16.

#### **SECTION 4: First aid measures**

#### 4.1. **Description of first aid measures**

After use, wash hands thoroughly with soap and water.

Under normal circumstances there is no threat. Move exposed person to fresh air. If breathing is difficult, give oxygen if possible, or assisted ventilation. Obtain medical assistance if breathing remains difficult.

Wipe the product (eg. with a paper towel) and wash with plenty of soap and water. Remove contaminated clothes. In case of skin irritation - seek medical advice. Wash contaminated clothing before reuse. When using high pressure equipment, penetration into the skin is possible. In this case, immediately provide medical care to the victim.

Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.

### If swallowed

Rinse mouth and give plenty of water to drink. Call a doctor immediately.

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

## If inhaled

May cause drowsiness or dizziness.

## If on skin

Prolonged contact may cause redness and irritation of the skin.

## If in eyes

May cause redness and transient pain.

### If swallowed

Irritation, nausea.

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

Do not induce vomiting. Do not give anything by mouth to an unconscious person. The physician should refer to the safety data sheet. Treat symptomatically

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## **SECTION 5: Firefighting measures**

### 5.1. Extinguishing media

### Suitable extinguishing media

Dry chemical powder, alcohol-resistant foam, carbon dioxide, water spray.

### Unsuitable extinguishing media

Jet water. Water may be used to cool and protect exposed tanks.

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

Flammable. Decomposition products may contain the following materials: carbon oxides, sulphur dioxides, toxic and irritant fumes. Containers exposed to high temperatures may explode.

## 5.3. Advice for firefighters

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. Use water spray to knock down fire fumes if possible. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full facepiece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

#### **SECTION 6: Accidental release measures**

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

Minimize number of personnel in risk area. Use personal protective equipment. Do not breathe mist/vapors/spray. Avoid contact with eyes and skin. Keep public away from danger area until cleaning. Keep sparks, flames, and other sources of ignition away. Refer to protective measures listed in Sections 8. Note: The released product may cause a slip or fall.

#### 6.2. Environmental precautions

Stop leak if without risk. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

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

Small spill: Absorb spill with inert material (e.g., dry sand or earth) and place in a chemical waste container.

Large spill: Stop leak if without risk. Do not release runoff from fire to drains or watercourses. For large spills, use a pump. Do not use sparking tools. Absorb the residue with inert material (e.g. dry sand or earth) and place in a chemical waste container. Dispose of via a licensed waste disposal contractor.

### 6.4. Reference to other sections

See Section 8 for information on appropriate personal protective equipment.

See Section 13 for additional waste treatment information.

## **SECTION 7: Handling and storage**

### 7.1. Precautions for safe handling

Do not allow to create oil mist in the workplace. Ensure adequate ventilation. Do not get in eyes, on skin, or on clothing. Avoid ingestion and inhalation. Do not smoke, remove other sources of ignition. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Do not use contaminated clothing. Wash contaminated clothing before reuse. To transport the product in drums use proper equipment and footwear to protect the feet from being crushed in the event of a fall drum. Avoid release to the environment. See also Section 8 for additional information on hygiene measures.

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

Store in well-ventilated area, at room temperature. Keep away from sources of ignition. Keep container tightly closed and properly labeled. The product can be stored in containers made of steel or high density polyethylene. Do not use containers made of polyvinyl chloride. Keep away from strong oxidizers.

Storage temperature

min 10 °C, max 40 °C

## 7.3. Specific end use(s)

Refer to the technical specifications of the product.

## **SECTION 8: Exposure controls/personal protection**

## 8.1. Control parameters

The mixture contains substances for which occupational exposure limits are set.



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## **European Union**

### **Commission Directive 2006/15/EC**

Substance name (component)	Туре	Value
Carbon disside (CAC: 124, 20, 0)	OEL 8 hours	9000 mg/m <sup>3</sup>
Carbon dioxide (CAS: 124–38–9)	OEL 8 hours	5000 ppm

**TRGS 900** Germany

Substance name (component)	Туре	Value
	8h	2400 mg/m <sup>3</sup>
hutana (CAC) 106 07 0)	8h	1000 ppm
butane (CAS: 106–97–8)	Short	9600 mg/m <sup>3</sup>
	Short	4000 ppm
	8h	9100 mg/m <sup>3</sup>
Carbon diavida (CAS, 134, 39, 0)	8h	5000 ppm
Carbon dioxide (CAS: 124–38–9)	Short	18200 mg/m <sup>3</sup>
	Short	10000 ppm
	8h	1800 mg/m <sup>3</sup>
nvenene (CAC: 74, 00, 6)	8h	1000 ppm
propane (CAS: 74–98–6)	Short	7200 mg/m <sup>3</sup>
	Short	4000 ppm

## **DNEL**

Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, >5% n-hexane				
Workers / consumers	Route of exposure	Value	Effect	
Workers	Inhalation	145 mg/m³	Chronic effects systemic	
Workers	Dermal	21 mg/kg/24h	Chronic effects systemic	
Consumers	Inhalation	27 mg/m <sup>3</sup>	Chronic effects systemic	
Consumers	Oral	8 mg/kg/24h	Chronic effects systemic	
Consumers	Dermal	9 mg/kg/24h	Chronic effects systemic	

#### 8.2. **Exposure controls**

Non-volatile product, do not require special ventilation. General ventilation should be sufficient to control worker exposure. Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory. Wash contaminated clothing before reusing.

## Eye/face protection

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes or mists (EN 166).

## **Skin protection**

Oil-resistant gloves recommended to prevent skin made of NBR, PVC or neoprene rubber (EN 374). Breakthrough time: min. 480 min.

Recommended protective clothing / coat and oil resistant anti slip boots.

## **Respiratory protection**

Under normal conditions protection is not required. In case of handling hot product and with inadequate ventilation use mask with universal filter (EN 143).

## Thermal hazard

not available

## **Environmental exposure controls**

Avoid release to the environment.



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### **SECTION 9: Physical and chemical properties**

## Information on basic physical and chemical properties

Physical state liquid Colour colourless light color intensity Odour

characteristic Melting point/freezing point data not available

Carbon dioxide (CAS: 124-38-9) -78.5 °C

Boiling point or initial boiling point and boiling range data not available

Carbon dioxide (CAS: 124-38-9) -56.6 °C

Flammability highly flammable Carbon dioxide (CAS: 124-38-9) non-inflammable Lower and upper explosion limit data not available Flash point data not available

Auto-ignition temperature data not available data not available Decomposition temperature pН non-soluble (in water)

Kinematic viscosity >20.5 mm<sup>2</sup>/s at 40 °C Solubility in water insoluble

Carbon dioxide (CAS: 124-38-9) 2000 mg/l

soluble in most organic solvents Solubility

Partition coefficient n-octanol/water (log value) data not available

Carbon dioxide (CAS: 124-38-9) 0.83 6.0-7.5 Vapour pressure Carbon dioxide (CAS: 124-38-9) 57.3 at 20 °C

Density and/or relative density

0.7 g/cm3 at 15 °C Density

Carbon dioxide (CAS: 124-38-9) 1.52 g/cm<sup>3</sup> Relative vapour density data not available data not available Particle characteristics

Carbon dioxide (CAS: 124-38-9) Nie dotyczy gazów i mieszanin gazowych

Form aerosol dispenser: spray aerosol

9.2. Other information

> Molar weight data not available

Carbon dioxide (CAS: 124-38-9) 44 g/mol

## **SECTION 10: Stability and reactivity**

#### 10.1. Reactivity

The product is not reactive under normal conditions of use and storage.

#### 10.2. **Chemical stability**

The product is stable under normal conditions.

#### 10.3. Possibility of hazardous reactions

Under normal conditions of storage and use, hazardous reactions do not occur.

#### 10.4. **Conditions to avoid**

High temperatures, open flames and other ignition sources.

## 10.5. Incompatible materials

Strong oxidizers.

## 10.6. Hazardous decomposition products

Under normal conditions of storage and use, the product does not undergo hazardous decomposition.

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## **SECTION 11: Toxicological information**

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

Inhalation of solvent vapors above values exceeding exposure limits for working environment may result in acute inhalation poisoning, depending on the level of concentration and exposure time. No toxicological data is available for the mixture.

### **Acute toxicity**

Data for the mixture are not available. Based on the available data, the criteria for classification of the mixture are not met.

Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, >5% n-hexane					
Route of exposure	Parameter	Value	Exposure time	Species	Sex
Oral	LD50	>5840 mg/kg		Rat (Rattus norvegicus)	
Inhalation	LC50	>25200 mg/kg	48 hours	Rat (Rattus norvegicus)	
Skin	LD50	>2920 mg/kg		Rat (Rattus norvegicus)	

#### Skin corrosion/irritation

Causes skin irritation. Data for the components of the mixture are not available.

## Serious eye damage/irritation

No data are available for either the mixture or the components. Based on the available data, the criteria for classification of the mixture are not met.

## Respiratory or skin sensitisation

No data are available for either the mixture or the components. Based on the available data, the criteria for classification of the mixture are not met.

#### **Germ cell mutagenicity**

No data are available for either the mixture or the components. Based on the available data, the criteria for classification of the mixture are not met.

### Carcinogenicity

No data are available for either the mixture or the components. Based on the available data, the criteria for classification of the mixture are not met.

## Reproductive toxicity

Suspected of damaging fertility or the unborn child.

Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, >5% n-hexane					
Effect	Parameter	Value	Result	Species	Sex
	NOAEC	10560 mg/kg		Mouse	
	NOAEC	31680 mg/kg		Rat (Rattus norvegicus)	

## Toxicity for specific target organ - single exposure

May cause drowsiness or dizziness. Data for the components of the mixture are not available.

## Toxicity for specific target organ - repeated exposure

May cause damage to the nervous system through prolonged or repeated exposure if inhaled. Data for the components of the mixture are not available.

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## **Aspiration hazard**

No data are available for either the mixture or the components. Based on the available data, the criteria for classification of the mixture are not met.

#### 11.2. Information on other hazards

The mixture does not contain substances with endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.

## **SECTION 12: Ecological information**

## 12.1. Toxicity

Toxic to aquatic life with long lasting effects.

## **Acute toxicity**

Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, >5% n-hexane				
Parameter	Value	Exposure time	Species	Environment
EL50	3-22 mg/l	48 hours	Daphnia (Daphnia magna)	Fresh water
EL50	35.29 mg/l	48 hours	Algae (Tetrahymena pyriformis)	Fresh water
LL50	11.4 mg/l	96 hours	Fish (Oncorhynchus mykiss)	Fresh water

#### **Chronic toxicity**

Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, >5% n-hexane				
Parameter	Value	Exposure time	Species	Environment
NOEC	0.17 mg/l	21 days	Daphnia (Daphnia magna)	
NOEL	2.028 mg/l	28 hours	Fish (Oncorhynchus mykiss)	

### Persistence and degradability

Data for the mixture are not available.

#### **Bioaccumulative potential** 12.3.

No data are available for either the mixture or the components.

#### 12.4. Mobility in soil

No data are available for either the mixture or the components.

#### 12.5. Results of PBT and vPvB assessment

Product does not contain any substance meeting the criteria for PBT or vPvB in accordance with the Annex XIII of Regulation (EC) No 1907/2006 (REACH) as amended.

## **Endocrine disrupting properties**

The mixture does not contain substances with endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.

## Other adverse effects

Not available.

## **SECTION 13: Disposal considerations**

## 13.1. Waste treatment methods

Do not dispose the product with household waste, do not empty into drains. Do not allow contamination of groundwater band surface water.

Contaminated packaging (after a thorough emptying) should be treated as household waste

Packaging: The generation of waste should be avoided or minimized wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.



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## **Waste management legislation**

Decision 2000/532/EC establishing a list of wastes, as amended.

Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste, as amended.

Law on the placing on the market, return and high-quality recycling of packaging (Packaging Act - VerpackG) of June 9th, 2021, valid from January 1st, 2022.

Ordinance on the European List of Waste (German Waste Catalogue Ordinance -Verordnung über das Europäische Abfallverzeichnis - AVV).

## Waste type code

16 03 06 organic wastes other than those mentioned in 16 03 05

## Packaging waste type code

15 01 04 metallic packaging

## **SECTION 14: Transport information**

14.1. UN number or ID number

UN 1950

14.2. UN proper shipping name

**AEROSOLS** 

14.3. Transport hazard class(es)

2 Gases

14.4. Packing group

not relevant

14.5. Environmental hazards

not relevant

14.6. Special precautions for user

not available

14.7. Maritime transport in bulk according to IMO instruments

not relevant

## **Additional information**

Hazard identification No.

UN number Classification code

Safety signs

1950

5F

2.1+hazardous for the environment



## Road transport - ADR

Limited quantities

Sign

(D)

Tunnel restriction code



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## **SECTION 15: Regulatory information**

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

- Regulation (EC) No. 1907/2006 of the European Parliament and of the Council of 18 December 2006 on the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH)
- Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification. labeling and packaging of substances and mixtures (CLP)
- Commission Regulation (EU) 2015/830 of 28 May 2015 amending Regulation (EC) No. 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH)
- Regulation of the Minister of Entrepreneurship and Technology of 10 May 2019 repealing the regulation on the essential requirements for personal protective equipment (Journal of Laws of 2016, item 966)
- Regulation of the Minister of Family, Labor and Social Policy of June 12, 2018 on the maximum permissible concentrations and intensities of factors harmful to health in the work environment (Journal of Laws of 2018, item 1286)
- Regulation of the Minister of Climate of January 2, 2020 on the catalog of waste (Journal of Laws 2020, item 10)
- Regulation of the Minister of Health of 2 February 2011 on testing and measurement of factors harmful to health in the working environment (Journal of Laws 2011.33.166)
- Regulation of the Minister of Health of 30 December 2004 on occupational health and safety related to the presence of chemical agents in the workplace (Journal of Laws 2005 No. 11 item 86)
- Act of 14 December 2012 on waste (Journal of Laws 2013 item 21)
- Act of 13 June 2013 on the management of packaging and packaging waste (Journal of Laws of 2013, item 888)
- Act of 25 February 2011 on chemical substances and their mixtures (Journal of Laws 2011 No. 63 item 322) as amended.
- COMMISSION REGULATION (EU) 2020/878 of 18 June 2020 amending Annex II to Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH)
- Commission Regulation (EU) 2017/2100 of September 4, 2017. laying down scientific criteria for the determination of endocrine-disrupting properties pursuant to Regulation (EU) No 528/2012 of the European Parliament and of the Council
- Commission Regulation (EU) 2018/605 of April 19, 2018. amending Annex II to Regulation (EC) No 1107/2009 by establishing scientific criteria for the determination of endocrine-disrupting properties.

#### 15.2. **Chemical safety assessment**

A chemical safety assessment is not required.

## **SECTION 16: Other information**

A list of standard	l risk phrases used	d in the safety data sheet
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H220	Extremely flammable gas.
H222	Extremely flammable aerosol.
H225	Highly flammable liquid and vapour.
H229	Pressurised container: May burst if heated.
H280	Contains gas under pressure; may explode if heated.
H281	Contains refrigerated gas; may cause cryogenic burns or injury.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H336	May cause drowsiness or dizziness.
H361	Suspected of damaging fertility or the unborn child.
H373	May cause damage to the nervous system through prolonged or repeated exposure if inhaled.
H411	Toxic to aquatic life with long lasting effects.
Guidelines for safe h	andling used in the safety data sheet
P102	Keep out of reach of children.
D210	Keen away from heat, hot surfaces sparks open flames and other ignition sources. No

. 102	neep out of reach of children
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P211	Do not spray on an open flame or other ignition source.
P251	Do not pierce or burn, even after use.
P261	Avoid breathing mist.
P271	Use only outdoors or in a well-ventilated area.

IF ON SKIN: Wash with plenty of water and soap. P302+P352 P314 Get medical advice/attention if you feel unwell.

P405 Store locked up.



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P410+P412 Protect from sunlight. Do no expose to temperatures exceeding 50 °C.

P420 Store separately.

P501 Dispose of contents/container to by handing over to the person authorized to dispose of

waste or by returning to the supplier.

### Other important information about human health protection

not available

## Key to abbreviations and acronyms used in the safety data sheet

ADR European agreement concerning the international carriage of dangerous goods by road

Aerosol Aerosol

AGW Occupational Exposure Limits

Aquatic Chronic Hazardous to the aquatic environment (chronic)

Asp. Tox. Aspiration hazard
BCF Bioconcentration Factor
CAS Chemical Abstracts Service

CLP Regulation (EC) No 1272/2008 on classification, labelling and packaging of substance and

mixtures

EC Identification code for each substance listed in EINECS

EINECS European Inventory of Existing Commercial Chemical Substances

EL50 Effective Loading for 50 % of the tested organisms

EmS Emergency plan EU European Union

EuPCS European Product Categorisation System

Flam. Gas Flammable gas Flam. Lig. Flammable liquid

IATA International Air Transport Association

IBC International Code For The Construction And Equipment of Ships Carrying Dangerous

Chemicals

ICAO International Civil Aviation Organization
IMDG International Maritime Dangerous Goods
IMO International Maritime Organization

INCI International Nomenclature of Cosmetic Ingredients
ISO International Organization for Standardization
IUPAC International Union of Pure and Applied Chemistry

LC50 Lethal concentration of a substance in which it can be expected death of 50% of the

population

LD50 Lethal dose of a substance in which it can be expected death of 50% of the population

LL50 Lethal Loading for 50 % of tested organisms

log KowOctanol-water partition coefficientMAKMaximum workplace concentrationNOAECNo observed adverse effect concentration

NOEC No observed effect concentration

NOEL No observed effect level
OEL Occupational Exposure Limits
PBT Persistent, bioaccumulative and toxic

ppm Parts per million
Press. Gas Gases under pressure

Press. Gas (Comp.)

Gas under pressure: compressed gas

Press. Gas (Diss.)

Gas under pressure: dissolved gas

Press. Gas (Liq.)

Gas under pressure: liquefied gas

Press. Gas (Ref. Liq.) Gas under pressure: refrigerated liquefied gas

REACH Registration, Evaluation, Authorisation and Restriction of Chemicals

Repr. Reproductive toxicity

RID Agreement on the transport of dangerous goods by rail



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Skin Irrit. Skin irritation

STOT RE Specific target organ toxicity - repeated exposure STOT SE Specific target organ toxicity - single exposure

UN Four-figure identification number of the substance or article taken from the UN Model

Regulations

UVCB Substances of unknown or variable composition, complex reaction products or biological

materials

VOC Volatile organic compounds

vPvB Very persistent and very bioaccumulative

#### **Training guidelines**

Inform the personnel about the recommended ways of use, mandatory protective equipment, first aid and prohibited ways of handling the product.

#### **Recommended restrictions of use**

not available

## Information about data sources used to compile the Safety Data Sheet

REGULATION (EC) No. 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL (REACH) as amended. REGULATION (EC) No. 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL as amended. Data from the manufacturer of the substance / mixture, if available - information from registration dossiers.

#### **More information**

Classification procedure - calculation method.

#### **Statement**

The safety data sheet provides information aimed at ensuring safety and health protection at work and environmental protection. The provided information corresponds to the current status of knowledge and experience and complies with valid legal regulations. The information should not be understood as guaranteeing the suitability and usability of the product for a particular application.