



SECTION 1: Identification

1.1 Product identifier

Trade name Wheel Cleaner

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

Relevant identified uses Vehicle wheel cleaner

1.3 Details of the supplier of the safety data sheet

Safe R. World MSD LLC
5940 S Rainbow Blvd
Las Vegas NV 89118

info@Saferworlds.com

1.4 Emergency telephone number

Emergency information service USA 1.800.535.5053, INTL 1.352.323.3500
24 hour emergency number

SECTION 2: Hazard(s) identification

2.1 Classification of the substance or mixture

Classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

Table with 5 columns: Section, Hazard class, Category, Hazard class and category, Hazard statement. Rows include A.3 (serious eye damage/eye irritation) and A.4S (skin sensitization).

For full text of abbreviations: see SECTION 16.

2.2 Label elements

Labelling acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

- Signal word warning

- Pictograms

GHS07



- Hazard statements

H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.

- Precautionary statements

P261 Avoid breathing dust/fume/gas/mist/vapors/spray.
P272 Contaminated work clothing must not be allowed out of the workplace.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352 If on skin: Wash with plenty of 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.
P321 Specific treatment (see on this label).
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
P337+P313 If eye irritation persists: Get medical advice/attention.
P363 Wash contaminated clothing before reuse.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

- Hazardous ingredients for labelling (2-hydroxyethyl)ammonium mercaptoacetate

### 2.3 Other hazards

Hazards not otherwise classified

May be harmful if swallowed (GHS category 5: acutely toxic - oral).

Harmful to aquatic life (GHS category 3: aquatic toxicity - acute).

Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

Not relevant (mixture)

### 3.2 Mixtures

Description of the mixture

Name of substance	Identifier	Wt%	Classification acc. to GHS
(2-hydroxyethyl)ammonium mercaptoacetate	CAS No 126-97-6	12 - < 20	Acute Tox. 4 / H302 Skin Sens. 1B / H317
2-(2-butoxyethoxy)ethanol	CAS No 112-34-5	3 - < 12	Eye Irrit. 2 / H319
ethoxylated C11-15 secondary alcohols	CAS No 68131-40-8	1 - < 3	Acute Tox. 4 / H302 Skin Irrit. 2 / H315 Eye Dam. 1 / H318

Hazardous ingredients, Consideration of other advice

*This table, if present, includes all GHS classified ingredients present above their cut-off limits, even if the finished product is not classified as hazardous by GHS.*

Exact percentage of ingredients is withheld as a trade secret.

For full text of abbreviations: see SECTION 16.

## SECTION 4: First-aid measures

### 4.1 Description of first-aid measures

General notes

Do not leave affected person unattended. Remove victim out of the danger area. Keep affected person warm, still and covered. Take off immediately all contaminated clothing. In all cases of doubt, or when symptoms persist, seek medical advice. In case of unconsciousness place person in the recovery position. Never give anything by mouth.

Following inhalation

If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions. Provide fresh air.

Following skin contact

Wash with plenty of soap and water.

Following eye contact

Remove contact lenses, if present and easy to do. Continue rinsing. Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart.

Following ingestion

Rinse mouth with water (only if the person is conscious). Do NOT induce vomiting.

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

Symptoms and effects are not known to date.



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

none

## SECTION 5: Fire-fighting measures

### 5.1 Extinguishing media

Suitable extinguishing media

Water spray, Alcohol resistant foam, BC-powder, Carbon dioxide (CO<sub>2</sub>)

Unsuitable extinguishing media

Water jet

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

Hazardous combustion products

Nitrogen oxides (NO<sub>x</sub>), Carbon monoxide (CO), Carbon dioxide (CO<sub>2</sub>)

### 5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Coordinate firefighting measures to the fire surroundings. Do not allow firefighting water to enter drains or water courses. Collect contaminated firefighting water separately. Fight fire with normal precautions from a reasonable distance.

## SECTION 6: Accidental release measures

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

For non-emergency personnel

Remove persons to safety.

For emergency responders

Wear breathing apparatus if exposed to vapors/dust/aerosols/gases.

### 6.2 Environmental precautions

Keep away from drains, surface and ground water. Retain contaminated washing water and dispose of it.

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

Advice on how to contain a spill

Covering of drains

Advice on how to clean up a spill

Wipe up with absorbent material (e.g. cloth, fleece). Collect spillage: sawdust, kieselgur (diatomite), sand, universal binder

Appropriate containment techniques

Use of adsorbent materials.

Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

### 6.4 Reference to other sections

Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.



## Wheel Cleaner

## SECTION 7: Handling and storage

## 7.1 Precautions for safe handling

## Recommendations

- Measures to prevent fire as well as aerosol and dust generation
- Use local and general ventilation. Use only in well-ventilated areas.

## Advice on general occupational hygiene

Wash hands after use. Do not eat, drink and smoke in work areas. Remove contaminated clothing and protective equipment before entering eating areas. Never keep food or drink in the vicinity of chemicals. Never place chemicals in containers that are normally used for food or drink. Keep away from food, drink and animal feedings.

## 7.2 Conditions for safe storage, including any incompatibilities

## Control of the effects

Protect against external exposure, such as

Frost

## 7.3 Specific end use(s)

See section 16 for a general overview.

## SECTION 8: Exposure controls/personal protection

## 8.1 Control parameters

Occupational exposure limit values (Workplace Exposure Limits)											
Country	Name of agent	CAS No	Identifier	TWA [ppm]	TWA [mg/m <sup>3</sup> ]	STEL [ppm]	STEL [mg/m <sup>3</sup> ]	Ceiling-C [ppm]	Ceiling-C [mg/m <sup>3</sup> ]	Notation	Source
US	diethylene glycol monobutyl ether	112-34-5	TLV®	10						iv	AC-GIH® 2019

## Notation

Ceiling-C ceiling value is a limit value above which exposure should not occur

iv inhalable fraction and vapor

STEL short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period (unless otherwise specified)

TWA time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average (unless otherwise specified)

Relevant DNELs of components of the mixture						
Name of substance	CAS No	Endpoint	Threshold level	Protection goal, route of exposure	Used in	Exposure time
(2-hydroxyethyl)ammonium mercaptoacetate	126-97-6	DNEL	1.41 mg/m <sup>3</sup>	human, inhalatory	worker (industry)	chronic - systemic effects
(2-hydroxyethyl)ammonium mercaptoacetate	126-97-6	DNEL	2.06 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
2-(2-butoxyethoxy)ethanol	112-34-5	DNEL	67.5 mg/m <sup>3</sup>	human, inhalatory	worker (industry)	chronic - systemic effects
2-(2-butoxyethoxy)ethanol	112-34-5	DNEL	67.5 mg/m <sup>3</sup>	human, inhalatory	worker (industry)	chronic - local effects
2-(2-butoxyethoxy)ethanol	112-34-5	DNEL	101.2 mg/m <sup>3</sup>	human, inhalatory	worker (industry)	acute - local effects



Relevant DNELs of components of the mixture						
Name of substance	CAS No	End-point	Threshold level	Protection goal, route of exposure	Used in	Exposure time
2-(2-butoxyethoxy)ethanol	112-34-5	DNEL	83 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
ethoxylated C11-15 secondary alcohols	68131-40-8	DNEL	42.32 mg/m <sup>3</sup>	human, inhalatory	worker (industry)	chronic - systemic effects
ethoxylated C11-15 secondary alcohols	68131-40-8	DNEL	6 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects

Relevant PNECs of components of the mixture						
Name of substance	CAS No	End-point	Threshold level	Organism	Environmental compartment	Exposure time
(2-hydroxyethyl)ammonium mercaptoacetate	126-97-6	PNEC	38 µg/l	aquatic organisms	freshwater	short-term (single instance)
(2-hydroxyethyl)ammonium mercaptoacetate	126-97-6	PNEC	3.8 µg/l	aquatic organisms	marine water	short-term (single instance)
(2-hydroxyethyl)ammonium mercaptoacetate	126-97-6	PNEC	3.2 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
2-(2-butoxyethoxy)ethanol	112-34-5	PNEC	200 mg/l	microorganisms	sewage treatment plant (STP)	short-term (single instance)
2-(2-butoxyethoxy)ethanol	112-34-5	PNEC	4 mg/kg	benthic organisms	sediment	short-term (single instance)
2-(2-butoxyethoxy)ethanol	112-34-5	PNEC	56 mg/kg	(top) predators	water	short-term (single instance)
2-(2-butoxyethoxy)ethanol	112-34-5	PNEC	3.9 mg/l	aquatic organisms	water	intermittent release
2-(2-butoxyethoxy)ethanol	112-34-5	PNEC	0.4 mg/kg	pelagic organisms	sediment	short-term (single instance)
2-(2-butoxyethoxy)ethanol	112-34-5	PNEC	1.1 mg/l	aquatic organisms	freshwater	short-term (single instance)
2-(2-butoxyethoxy)ethanol	112-34-5	PNEC	0.11 mg/l	aquatic organisms	marine water	short-term (single instance)
2-(2-butoxyethoxy)ethanol	112-34-5	PNEC	200 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
2-(2-butoxyethoxy)ethanol	112-34-5	PNEC	4.4 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
2-(2-butoxyethoxy)ethanol	112-34-5	PNEC	0.44 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
2-(2-butoxyethoxy)ethanol	112-34-5	PNEC	0.32 mg/kg	terrestrial organisms	soil	short-term (single instance)
ethoxylated C11-15 secondary alcohols	68131-40-8	PNEC	20 µg/l	aquatic organisms	freshwater	short-term (single instance)
ethoxylated C11-15 secondary alcohols	68131-40-8	PNEC	2 µg/l	aquatic organisms	marine water	short-term (single instance)
ethoxylated C11-15 secondary alcohols	68131-40-8	PNEC	8.24 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)



Relevant PNECs of components of the mixture						
Name of substance	CAS No	End-point	Threshold level	Organism	Environmental compartment	Exposure time
ethoxylated C11-15 secondary alcohols	68131-40-8	PNEC	28.1 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
ethoxylated C11-15 secondary alcohols	68131-40-8	PNEC	2.81 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
ethoxylated C11-15 secondary alcohols	68131-40-8	PNEC	5.6 mg/kg	terrestrial organisms	soil	short-term (single instance)

## 8.2 Exposure controls

### Appropriate engineering controls

General ventilation.

### Individual protection measures (personal protective equipment)

#### Eye/face protection

Wear eye/face protection.

#### Skin protection

##### - Hand protection

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. Check leak-tightness/impermeability prior to use. In the case of wanting to use the gloves again, clean them before taking off and air them well. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

##### - Other protection measures

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended. Wash hands thoroughly after handling.

#### Respiratory protection

In case of inadequate ventilation wear respiratory protection.

#### Environmental exposure controls

Use appropriate container to avoid environmental contamination. Keep away from drains, surface and ground water.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

#### Appearance

Physical state	liquid
Color	light red
Odor	fruity - slightly sulfurous

#### Other safety parameters

pH (value)	6 – 8
Melting point/freezing point	not determined
Initial boiling point and boiling range	100 °C
Flash point	114 °C at 101.3 kPa closed cup



Evaporation rate	not determined
Flammability (solid, gas)	not relevant, (fluid)
Explosive limits	not determined
Vapor pressure	31.69 hPa at 25 °C
Density	1.029 g/ml
Vapor density	this information is not available
Solubility(ies)	
- Water solubility	miscible in any proportion
Partition coefficient	
- n-octanol/water (log KOW)	this information is not available
Auto-ignition temperature	210 °C (auto-ignition temperature (liquids and gases))
Viscosity	not determined
Explosive properties	none
Oxidizing properties	none
Temperature class (USA, acc. to NEC 500)	T3 (maximum permissible surface temperature on the equipment: 200 °C)

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

Concerning incompatibility: see below "Conditions to avoid" and "Incompatible materials".

### 10.2 Chemical stability

See below "Conditions to avoid".

### 10.3 Possibility of hazardous reactions

No known hazardous reactions.

### 10.4 Conditions to avoid

There are no specific conditions known which have to be avoided.

### 10.5 Incompatible materials

Oxidizers

### 10.6 Hazardous decomposition products

Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known. Hazardous combustion products: see section 5.



## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

Test data are not available for the complete mixture.

#### Classification procedure

The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

#### Classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

#### Acute toxicity

Shall not be classified as acutely toxic.

GHS of the United Nations, annex 4: May be harmful if swallowed.

Acute toxicity estimate (ATE) of components of the mixture			
Name of substance	CAS No	Exposure route	ATE
(2-hydroxyethyl)ammonium mercaptoacetate	126-97-6	oral	318 mg/kg
ethoxylated C11-15 secondary alcohols	68131-40-8	oral	≥2,000 mg/kg

#### Skin corrosion/irritation

Shall not be classified as corrosive/irritant to skin.

#### Serious eye damage/eye irritation

Causes serious eye irritation.

#### Respiratory or skin sensitization

May cause an allergic skin reaction.

#### Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.

#### Carcinogenicity

Shall not be classified as carcinogenic.

#### Reproductive toxicity

Shall not be classified as a reproductive toxicant.

#### Specific target organ toxicity - single exposure

Shall not be classified as a specific target organ toxicant (single exposure).

#### Specific target organ toxicity - repeated exposure

Shall not be classified as a specific target organ toxicant (repeated exposure).

#### Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

## SECTION 12: Ecological information

### 12.1 Toxicity

Harmful to aquatic life.





Aquatic toxicity (acute) of components of the mixture					
Name of substance	CAS No	Endpoint	Value	Species	Exposure time
(2-hydroxyethyl)ammonium mercaptoacetate	126-97-6	LC50	>100 mg/l	fish	96 h
(2-hydroxyethyl)ammonium mercaptoacetate	126-97-6	EC50	>100 mg/l	aquatic invertebrates	48 h
(2-hydroxyethyl)ammonium mercaptoacetate	126-97-6	ErC50	65 mg/l	algae	72 h
2-(2-butoxyethoxy)ethanol	112-34-5	LC50	1,300 mg/l	fish	96 h
2-(2-butoxyethoxy)ethanol	112-34-5	EC50	>100 mg/l	aquatic invertebrates	48 h
2-(2-butoxyethoxy)ethanol	112-34-5	ErC50	>100 mg/l	algae	96 h
ethoxylated C11-15 secondary alcohols	68131-40-8	LL50	1.53 mg/l	fish	96 h
ethoxylated C11-15 secondary alcohols	68131-40-8	EL50	5.66 mg/l	aquatic invertebrates	48 h

## 12.2 Persistence and degradability

Data are not available.

## 12.3 Bioaccumulative potential

Data are not available.

## 12.4 Mobility in soil

Data are not available.

## 12.5 Results of PBT and vPvB assessment

Data are not available.

## 12.6 Other adverse effects

Endocrine disrupting potential

None of the ingredients are listed.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

Sewage disposal-relevant information

Do not empty into drains. Avoid release to the environment. Refer to special instructions/safety data sheets.

Waste treatment of containers/packages

Completely emptied packages can be recycled. Handle contaminated packages in the same way as the substance itself.

#### Remarks

Please consider the relevant national or regional provisions. Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities.



## SECTION 14: Transport information

<b>14.1 UN number</b>	not subject to transport regulations
<b>14.2 UN proper shipping name</b>	not assigned
<b>14.3 Transport hazard class(es)</b>	not assigned
<b>14.4 Packing group</b>	not assigned
<b>14.5 Environmental hazards</b>	non-environmentally hazardous acc. to the dangerous goods regulations
<b>14.6 Special precautions for user</b>	There is no additional information.
<b>14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code</b>	The cargo is not intended to be carried in bulk.

### Information for each of the UN Model Regulations

#### **Transport of dangerous goods by road or rail (49 CFR US DOT)**

Not subject to transport regulations.

#### **International Maritime Dangerous Goods Code (IMDG)**

Not subject to IMDG.

#### **International Civil Aviation Organization (ICAO-IATA/DGR)**

Not subject to ICAO-IATA.

## SECTION 15: Regulatory information

- 15.1 Safety, health and environmental regulations specific for the product in question**
- National regulations (United States)**
- Toxic Substance Control Act (TSCA)** all ingredients are listed
- Superfund Amendment and Reauthorization Act (SARA TITLE III)**
- The List of Extremely Hazardous Substances and Their Threshold Planning Quantities (EPCRA Section 302, 304)  
none of the ingredients are listed
  - Specific Toxic Chemical Listings (EPCRA Section 313)  
none of the ingredients are listed
- Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)**
- List of Hazardous Substances and Reportable Quantities (CERCLA section 102a) (40 CFR 302.4)  
none of the ingredients are listed
- Clean Air Act**
- none of the ingredients are listed
- Right to Know Hazardous Substance List**
- Cleaning Product Right to Know Act Substance List (CA-RTK)



Name of substance	CAS No	Functionality	Authoritative Lists
water	7732-18-5	solvent	
(2-hydroxyethyl)ammonium mercaptoacetate	126-97-6	metal cleaner	
2-(2-butoxyethoxy)ethanol		co-solvent	CA TACs
cocoalkylmethyl polyoxyethylene ammonium chloride	61791-10-4	surfactant	
ethoxylated C11-15 secondary alcohols	68131-40-8	surfactant	
sodium gluconate	527-07-1	chelate / sequestrant	
xanthan gum	11138-66-2	viscosity modifier	
propylene glycol	57-55-6	humectant	

**- Toxic or Hazardous Substance List (MA-TURA)**

Name of substance	CAS No	DEP CODE	PBT / HHS / LHS	PBT / HHS Threshold	De Minimis Concentration Threshold
2-(2-butoxyethoxy)ethanol		1022			1.0 %

**- Hazardous Substance List (NJ-RTK)**

Name of substance	CAS No	Remarks	Classifications
2-(2-butoxyethoxy)ethanol			

**- Hazardous Substance List (Chapter 323) (PA-RTK)**

Name acc. to inventory	CAS No	Classification
GLYCOL ETHERS		E

**Legend**

E Environmental hazard

**California Environmental Protection Agency (Cal/EPA): Proposition 65 - Safe Drinking Water and Toxic Enforcement Act of 1987**

none of the ingredients are listed

**VOC content**

Regulated Volatile Organic Compounds (VOC-EPA): 0.1239 %  
Regulated Volatile Organic Compounds (VOC-Cal ARB): 0.1239 %

**Industry or sector specific available guidance(s)**

**NPCA-HMIS® III**

Hazardous Materials Identification System. American Coatings Association.

Category	Rating	Description
Chronic	/	none
Health	2	temporary or minor injury may occur
Flammability	1	material that must be preheated before ignition can occur
Physical hazard	0	material that is normally stable, even under fire conditions, and will not react with water, polymerize, decompose, condense, or self-react. Non-explosive



Category	Rating	Description
Personal protection	-	

**NFPA® 704**

National Fire Protection Association: Standard System for the Identification of the Hazards of Materials for Emergency Response (United States).

Category	Degree of hazard	Description
Flammability	1	material that must be preheated before ignition can occur
Health	2	material that, under emergency conditions, can cause temporary incapacitation or residual injury
Instability	0	material that is normally stable, even under fire conditions
Special hazard		

**National inventories**

Country	Inventory	Status
CA	DSL	all ingredients are listed
EU	REACH Reg.	not all ingredients are listed
US	TSCA	all ingredients are listed

Legend

DSL Domestic Substances List (DSL)  
REACH Reg. REACH registered substances  
TSCA Toxic Substance Control Act

**15.2 Chemical Safety Assessment**

Chemical safety assessments for substances in this mixture were not carried out.

**SECTION 16: Other information, including date of preparation or last revision****Abbreviations and acronyms**

Abbr.	Descriptions of used abbreviations
49 CFR US DOT	49 CFR U.S. Department of Transportation
ACGIH® 2019	From ACGIH®, 2019 TLVs® and BEIs® Book. Copyright 2019. Reprinted with permission. Information on the proper use of the TLVs® and BEIs®: <a href="http://www.acgih.org/tlv-bei-guidelines/policies-procedures-presentations/tlv-bei-position-statement">http://www.acgih.org/tlv-bei-guidelines/policies-procedures-presentations/tlv-bei-position-statement</a>
Acute Tox.	Acute toxicity
ATE	Acute Toxicity Estimate
Cal ARB	California Air Resources Board
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
Ceiling-C	Ceiling value
DEP CODE	Department of Environmental Protection Code
DGR	Dangerous Goods Regulations (see IATA/DGR)
DNEL	Derived No-Effect Level
EC50	Effective Concentration 50 %. The EC50 corresponds to the concentration of a tested substance causing 50 % changes in response (e.g. on growth) during a specified time interval



Abbr.	Descriptions of used abbreviations
EL50	Effective Loading 50 %: the EL50 corresponds to the loading rate required to produce a response in 50% of the test organisms
EPA	Environmental Protection Agency. An agency of the federal government of the United States charged with protecting human health and the environment
ErC50	≡ EC50: in this method, that concentration of test substance which results in a 50 % reduction in either growth (EbC50) or growth rate (ErC50) relative to the control
Eye Dam.	Seriously damaging to the eye
Eye Irrit.	Irritant to the eye
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
HHS	Higher hazard substance
IATA	International Air Transport Association
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods Code
LC50	Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval
LHS	Lower hazard substance
LL50	Lethal Loading 50 %: the LL50 corresponds to the loading rate causing 50 % lethality
MARPOL	International Convention for the Prevention of Pollution from Ships (abbr. of "Marine Pollutant")
NPCA-HMIS® III	National Paint and Coatings Association: Hazardous Materials Identification System - HMIS® III, Third Edition
OSHA	Occupational Safety and Health Administration (United States)
PBT	Persistent, Bioaccumulative and Toxic
PNEC	Predicted No-Effect Concentration
ppm	Parts per million
RTECS	Registry of Toxic Effects of Chemical Substances (database of NIOSH with toxicological information)
Skin Corr.	Corrosive to skin
Skin Irrit.	Irritant to skin
Skin Sens.	Skin sensitization
STEL	Short-term exposure limit
TLV®	Threshold Limit Values
TWA	Time-weighted average
VOC	Volatile Organic Compounds
vPvB	Very Persistent and very Bioaccumulative

### Key literature references and sources for data

OSHA Hazard Communication Standard (HCS), 29 CFR 1910.1200.

Transport of dangerous goods by road or rail (49 CFR US DOT). International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

### Classification procedure

Physical and chemical properties: The classification is based on tested mixture.

Health hazards, Environmental hazards: The method for classification of the mixture is based on ingredients of the mixture (additivity formula).



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**List of relevant phrases (code and full text as stated in chapter 2 and 3)**

Code	Text
H302	Harmful if swallowed.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.

**Disclaimer**

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.