

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

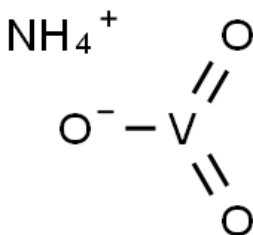
SDS Reference Number: 01250

Issue date: 4/9/2014 Revision date: 9/27/2024 Supersedes version of: 4/25/2016 Version: 1.0

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

1.1. Product identifier

| | |
|--------------------|------------------------------------|
| Product form | : Substance |
| Trade name | : AMMONIUM METAVANADATE EXTRA PURE |
| EC-No. | : 232-261-3 |
| CAS-No. | : 7803-55-6 |
| Product code | : 01250 |
| Type of product | : Inorganic compound |
| Formula | : NH ₄ VO ₃ |
| Chemical structure | : |



Synonyms : Ammonium trioxovanadate (V), Ammonium vanadate

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

Relevant identified uses

Use of the substance/mixture : Laboratory chemicals, Manufacture of substances

1.3. Details of the supplier of the safety data sheet

LOBA CHEMIE PVT.LTD.
107 Wode House Road, Jehangir Villa, Colaba
400005 Mumbai
INDIA
T +91 22 6663 6663, F +91 22 6663 6699
info@lobachemie.com, www.lobachemie.com

1.4. Emergency telephone number

Emergency number : + 91 22 6663 6663 (9:00am - 6:00 pm)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

| | |
|---|------|
| Acute toxicity (oral), Category 3 | H301 |
| Acute toxicity (inhal.), Category 1 | H330 |
| Skin corrosion/irritation, Category 2 | H315 |
| Serious eye damage/eye irritation, Category 2 | H319 |
| Specific target organ toxicity – Single exposure, Category 3, | H335 |
| Respiratory tract irritation | |

Full text of H- and EUH-statements: see section 16

Adverse physicochemical, human health and environmental effects

Fatal if inhaled. Toxic if swallowed. May cause respiratory irritation. Causes skin irritation. Causes serious eye irritation.

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2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP)

:



GHS06

Signal word (CLP)

: Danger

Hazard statements (CLP)

: H301 - Toxic if swallowed.
H315 - Causes skin irritation.
H319 - Causes serious eye irritation.
H330 - Fatal if inhaled.
H335 - May cause respiratory irritation.
Precautionary statements (CLP) : P260 - Do not breathe vapours, dust, fume, gas.
P284 - Wear respiratory protection.
P301+P310 - IF SWALLOWED: Immediately call a doctor.
P302+P352 - IF ON SKIN: Wash with plenty of water.
P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

2.3. Other hazards

Contains no PBT and/or vPvB substances $\geq 0.1\%$ assessed in accordance with REACH Annex XIII

SECTION 3: Composition/information on ingredients

3.1. Substances

Substance type

: Mono-constituent

| Name | Product identifier | % |
|-----------------------|---|-----|
| AMMONIUM METAVANADATE | CAS-No.: 7803-55-6 EC-No.: 232-261-3 | 100 |

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general

: Call a physician immediately.

First-aid measures after inhalation

: Remove person to fresh air and keep comfortable for breathing. Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell. Call a physician immediately.

First-aid measures after skin contact

: Wash with plenty of water/... Get medical advice/attention. Wash skin with plenty of water. Take off contaminated clothing. If skin irritation occurs: Get medical advice/attention.

First-aid measures after eye contact

: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice/attention. If eye irritation persists: Get medical advice/attention.

First-aid measures after ingestion

: Rinse mouth. Get medical advice/attention. Call a physician immediately.

First-aid measures for first aider

: First aid workers will be equipped with suitable personal protective equipment.

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

Symptoms/effects after inhalation

: May cause respiratory irritation.

Symptoms/effects after skin contact

: Causes skin irritation. Irritation.

Symptoms/effects after eye contact

: Causes serious eye irritation. Eye irritation.

Symptoms/effects after ingestion

: Toxic if swallowed.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Carbon dioxide. Dry powder. Foam. Water spray.
Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Fire hazard : No fire hazard.
Explosion hazard : No direct explosion hazard.
Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Advice for firefighters

Firefighting instructions : Fight fire from safe distance and protected location. Do not enter fire area without proper protective equipment, including respiratory protection.
Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection. Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Notify authorities if product enters sewers or public waters. Absorb spillage to prevent material damage.

For non-emergency personnel

Protective equipment : Wear recommended personal protective equipment.
Emergency procedures : Evacuate unnecessary personnel. Do not breathe dust/fume/gas/mist/vapours/spray. Only qualified personnel equipped with suitable protective equipment may intervene.

For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. Use personal protective equipment as required. For further information refer to section 8: "Exposure controls/personal protection".
Emergency procedures : Ventilate area. Evacuate unnecessary personnel.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment : Using a clean shovel, put the material in a dry container and cover without compressing it.
Methods for cleaning up : Mechanically recover the product. Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. On land, sweep or shovel into suitable containers.
Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed : Not expected to present a significant hazard under anticipated conditions of normal use.

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| | |
|-------------------------------|--|
| Precautions for safe handling | : Avoid contact with skin and eyes. Use only outdoors or in a well-ventilated area. Do not breathe vapours. Do not breathe dust/fume/gas/mist/vapours/spray. Wear personal protective equipment. |
| Hygiene measures | : Do not eat, drink or smoke when using this product. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Wash contaminated clothing before reuse. Always wash hands after handling the product. |

7.2. Conditions for safe storage, including any incompatibilities

| | |
|---------------------|--|
| Technical measures | : Keep in a cool, well-ventilated place away from heat. |
| Storage conditions | : Store in a well-ventilated place. Keep container tightly closed. Store locked up. Store in a well-ventilated place. Keep container tightly closed. |
| Packaging materials | : Store always product in container of same material as original container. |

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Exposure controls

Appropriate engineering controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

Personal protection equipment

Personal protective equipment:

Wear recommended personal protective equipment.

Personal protective equipment symbol(s):



Eye and face protection

Eye protection:

Chemical goggles or safety glasses

Skin protection

Skin and body protection:

Wear a mask

Hand protection:

Protective gloves

Respiratory protection

Respiratory protection:

Wear appropriate mask

Environmental exposure controls

Environmental exposure controls:

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| | |
|----------------|---------|
| Physical state | : Solid |
|----------------|---------|

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| | |
|---|--|
| Colour | : White or yellowish-white. |
| Appearance | : Powder. |
| Molecular mass | : 116.98 g/mol |
| Odour | : Odourless. |
| Odour threshold | : Not available |
| Melting point | : 200 °C (decomposes) |
| Freezing point | : Not applicable |
| Boiling point | : > 350 °C |
| Flammability | : Not available |
| Lower explosion limit | : Not applicable |
| Upper explosion limit | : Not applicable |
| Flash point | : Not applicable |
| Auto-ignition temperature | : Not applicable |
| Decomposition temperature | : 200 °C |
| pH | : < 7 at 20 °C |
| pH solution concentration | : 5 % |
| Viscosity, kinematic | : Not applicable |
| Solubility | : Water: 4.8 g/100ml at 20 °C - Slightly soluble Ethanol: Insoluble |
| Partition coefficient n-octanol/water (Log Kow) | : Not available |
| Vapour pressure | : Negligible |
| Vapour pressure at 50°C | : Not available |
| Density | : 2.326 g/cm ³ at 25 °C |
| Relative density | : Not available |
| Relative vapour density at 20°C | : Not applicable |
| Particle size | : Not available |

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Direct sunlight. Air contact. Moisture.

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

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

| | |
|-----------------------------|-----------------------|
| Acute toxicity (oral) | : Toxic if swallowed. |
| Acute toxicity (dermal) | : Not classified |
| Acute toxicity (inhalation) | : Fatal if inhaled. |

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| | |
|-----------------------------------|--|
| Skin corrosion/irritation | : Causes skin irritation. pH: < 7 at 20 °C |
| Serious eye damage/irritation | : Causes serious eye irritation. pH: < 7 at 20 °C |
| Respiratory or skin sensitisation | : Not classified |
| Germ cell mutagenicity | : Not classified |
| Carcinogenicity | : Not classified |
| Reproductive toxicity | : Not classified |
| STOT-single exposure | : May cause respiratory irritation. |
| STOT-repeated exposure | : Not classified |
| Aspiration hazard | : Not classified |

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| | |
|----------------------|----------------|
| Viscosity, kinematic | Not applicable |
|----------------------|----------------|

11.2. Information on other hazards

Other information

| | |
|---|-----------------------|
| Potential adverse human health effects and symptoms | : Toxic if swallowed. |
|---|-----------------------|

SECTION 12: Ecological information

12.1. Toxicity

| | |
|---|---|
| Ecology - general | : The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment. |
| Hazardous to the aquatic environment, short-term (acute) | : Not classified |
| Hazardous to the aquatic environment, long-term (chronic) | : Not classified |

12.2. Persistence and degradability

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| | |
|-------------------------------|--------------------|
| Persistence and degradability | Rapidly degradable |
|-------------------------------|--------------------|

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Endocrine disrupting properties

No additional information available

12.7. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

| | |
|---------------------------|--|
| Regional waste regulation | : Disposal must be done according to official regulations. |
|---------------------------|--|

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| | |
|--|--|
| Waste treatment methods | : Dispose of contents/container in accordance with licensed collector's sorting instructions. |
| Sewage disposal recommendations | : Disposal must be done according to official regulations. |
| Product/Packaging disposal recommendations | : Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation. Disposal must be done according to official regulations. |
| Additional information | : Do not re-use empty containers. |
| Ecological information | : Hazardous waste due to toxicity. |

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

14.1. UN number or ID number

| | |
|---------------|-----------|
| UN-No. (ADR) | : UN 2859 |
| UN-No. (IMDG) | : UN 2859 |
| UN-No. (IATA) | : UN 2859 |
| UN-No. (ADN) | : UN 2859 |
| UN-No. (RID) | : UN 2859 |

14.2. UN proper shipping name

| | |
|---------------------------------------|---|
| Proper Shipping Name (ADR) | : AMMONIUM METAVANADATE |
| Proper Shipping Name (IMDG) | : AMMONIUM METAVANADATE |
| Proper Shipping Name (IATA) | : Ammonium metavanadate |
| Proper Shipping Name (ADN) | : AMMONIUM METAVANADATE |
| Proper Shipping Name (RID) | : AMMONIUM METAVANADATE |
| Transport document description (ADR) | : UN 2859 AMMONIUM METAVANADATE, 6.1, II, (D/E) |
| Transport document description (IMDG) | : UN 2859 AMMONIUM METAVANADATE, 6.1, II |
| Transport document description (IATA) | : UN 2859 Ammonium metavanadate, 6.1, II |
| Transport document description (ADN) | : UN 2859 AMMONIUM METAVANADATE, 6.1, II |
| Transport document description (RID) | : UN 2859 AMMONIUM METAVANADATE, 6.1, II |

14.3. Transport hazard class(es)

ADR

| | |
|----------------------------------|-------|
| Transport hazard class(es) (ADR) | : 6.1 |
| Danger labels (ADR) | : 6.1 |



IMDG

| | |
|-----------------------------------|-------|
| Transport hazard class(es) (IMDG) | : 6.1 |
| Danger labels (IMDG) | : 6.1 |



IATA

| | |
|-----------------------------------|-------|
| Transport hazard class(es) (IATA) | : 6.1 |
| Danger labels (IATA) | : 6.1 |



ADN

| | |
|----------------------------------|-------|
| Transport hazard class(es) (ADN) | : 6.1 |
|----------------------------------|-------|

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Danger labels (ADN) : 6.1
:



RID

Transport hazard class(es) (RID) : 6.1
Danger labels (RID) : 6.1
:



14.4. Packing group


Packing group (ADR) : II
Packing group (IMDG) : II
Packing group (IATA) : II
Packing group (ADN) : II
Packing group (RID) : II

14.5. Environmental hazards

Dangerous for the environment : No
Marine pollutant : No
EmS-No. (Fire) : F-A
EmS-No. (Spillage) : S-A
Other information : No supplementary information available

14.6. Special precautions for user

Overland transport

Classification code (ADR) : T5
Limited quantities (ADR) : 500g
Excepted quantities (ADR) : E4
Packing instructions (ADR) : P002, IBC08
Special packing provisions (ADR) : B4
Mixed packing provisions (ADR) : MP10
Portable tank and bulk container instructions (ADR) : T3
Portable tank and bulk container special provisions (ADR) : TP33
Tank code (ADR) : SGAH
Tank special provisions (ADR) : TU15, TE19
Vehicle for tank carriage : AT
Transport category (ADR) : 2
Special provisions for carriage - Packages (ADR) : V11
Special provisions for carriage - Loading, unloading and handling (ADR) : CV13, CV28
Special provisions for carriage - Operation (ADR) : S9, S19
Hazard identification number (Kemler No.) : 60
Orange plates : 
Tunnel restriction code (ADR) : D/E
EAC code : 2Z

Transport by sea

Limited quantities (IMDG) : 500 g
Excepted quantities (IMDG) : E4
Packing instructions (IMDG) : P002
IBC packing instructions (IMDG) : IBC08

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| | |
|------------------------------------|---|
| IBC special provisions (IMDG) | : B21, B4 |
| Tank instructions (IMDG) | : T3 |
| Tank special provisions (IMDG) | : TP33 |
| Stowage category (IMDG) | : A |
| Segregation (IMDG) | : SGG2, SG6, SG8, SG10, SG12 |
| Properties and observations (IMDG) | : White crystalline powder. Slightly soluble in water. May act as an oxidizing substance. Toxic if swallowed, by skin contact or by inhalation. |
| MFAG-No | : 154 |

Air transport

| | |
|--|---------|
| PCA Excepted quantities (IATA) | : E4 |
| PCA Limited quantities (IATA) | : Y644 |
| PCA limited quantity max net quantity (IATA) | : 1kg |
| PCA packing instructions (IATA) | : 669 |
| PCA max net quantity (IATA) | : 25kg |
| CAO packing instructions (IATA) | : 676 |
| CAO max net quantity (IATA) | : 100kg |
| ERG code (IATA) | : 6L |

Inland waterway transport

| | |
|-----------------------------------|----------|
| Classification code (ADN) | : T5 |
| Special provisions (ADN) | : 802 |
| Limited quantities (ADN) | : 500 g |
| Excepted quantities (ADN) | : E4 |
| Equipment required (ADN) | : PP, EP |
| Number of blue cones/lights (ADN) | : 2 |

Rail transport

| | |
|---|--------------------|
| Classification code (RID) | : T5 |
| Limited quantities (RID) | : 500g |
| Excepted quantities (RID) | : E4 |
| Packing instructions (RID) | : P002, IBC08 |
| Special packing provisions (RID) | : B4 |
| Mixed packing provisions (RID) | : MP10 |
| Portable tank and bulk container instructions (RID) | : T3 |
| Portable tank and bulk container special provisions (RID) | : TP33 |
| Tank codes for RID tanks (RID) | : SGAH |
| Special provisions for RID tanks (RID) | : TU15 |
| Transport category (RID) | : 2 |
| Special provisions for carriage – Packages (RID) | : W11 |
| Special provisions for carriage - Loading, unloading and handling (RID) | : CW13, CW28, CW31 |
| Colis express (express parcels) (RID) | : CE9 |
| Hazard identification number (RID) | : 60 |

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

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

EU-Regulations

REACH Annex XVII (Restriction List)

Not listed on REACH Annex XVII

REACH Annex XIV (Authorisation List)

Not listed on REACH Annex XIV (Authorisation List)

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REACH Candidate List (SVHC)

Not listed on the REACH Candidate List

PIC Regulation (Prior Informed Consent)

Not listed on the PIC list (Regulation EU 649/2012)

POP Regulation (Persistent Organic Pollutants)

Not listed on the POP list (Regulation EU 2019/1021)

Ozone Regulation (1005/2009)

Not listed on the Ozone Depletion list (Regulation EU 1005/2009)

Dual-Use Regulation (428/2009)

Contains no substance subject to the COUNCIL REGULATION (EC) No 428/2009 of 5 May 2009 setting up a Community regime for the control of exports, transfer, brokering and transit of dual-use items.

Explosives Precursors Regulation (2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

National regulations

Germany

- Water hazard class (WGK) : WGK 3, Highly hazardous to water (Classification according to AwSV).
Chemicals Prohibition Ordinance (ChemVerbotsV) : This product is subject to ChemVerbotsV Annex 2 Entry 1. The following requirements must be observed: authorization requirement (according to § 6 paragraph 1 sentence 1), basic requirements for carrying out the delivery (according to § 8 paragraph 1, 3 and 4), identification and documentation (according to § 9 paragraph 1 to 3) and exclusion of the shipping route (according to § 10).
Hazardous Incident Ordinance (12. BImSchV) : Is not subject to the Hazardous Incident Ordinance (12. BImSchV)

Netherlands

- SZW-lijst van kankerverwekkende stoffen : AMMONIUM METAVANADATE is listed
SZW-lijst van mutagene stoffen : AMMONIUM METAVANADATE is listed
SZW-lijst van reprotoxische stoffen – Borstvoeding : The substance is not listed
SZW-lijst van reprotoxische stoffen – Vruchtbaarheid : The substance is not listed
SZW-lijst van reprotoxische stoffen – Ontwikkeling : The substance is not listed

Denmark

- Danish National Regulations : Young people below the age of 18 years are not allowed to use the product

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

| Abbreviations and acronyms: | |
|-----------------------------|---|
| ADN | European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways |
| ADR | European Agreement concerning the International Carriage of Dangerous Goods by Road |
| ATE | Acute Toxicity Estimate |
| BCF | Bioconcentration factor |
| BLV | Biological limit value |
| BOD | Biochemical oxygen demand (BOD) |
| COD | Chemical oxygen demand (COD) |

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Abbreviations and acronyms:

| | |
|---------|--|
| DMEL | Derived Minimal Effect level |
| DNEL | Derived-No Effect Level |
| EC-No. | European Community number |
| EC50 | Median effective concentration |
| EN | European Standard |
| IARC | International Agency for Research on Cancer |
| IATA | International Air Transport Association |
| IMDG | International Maritime Dangerous Goods |
| LC50 | Median lethal concentration |
| LD50 | Median lethal dose |
| LOAEL | Lowest Observed Adverse Effect Level |
| NOAEC | No-Observed Adverse Effect Concentration |
| NOAEL | No-Observed Adverse Effect Level |
| NOEC | No-Observed Effect Concentration |
| OECD | Organisation for Economic Co-operation and Development |
| OEL | Occupational Exposure Limit |
| PBT | Persistent Bioaccumulative Toxic |
| PNEC | Predicted No-Effect Concentration |
| RID | Regulations concerning the International Carriage of Dangerous Goods by Rail |
| SDS | Safety Data Sheet |
| STP | Sewage treatment plant |
| ThOD | Theoretical oxygen demand (ThOD) |
| TLM | Median Tolerance Limit |
| VOC | Volatile Organic Compounds |
| CAS-No. | Chemical Abstract Service number |
| N.O.S. | Not Otherwise Specified |
| vPvB | Very Persistent and Very Bioaccumulative |
| ED | Endocrine disruptor |

Full text of H- and EUH-statements:

| | |
|---------------------------|---|
| Acute Tox. 1 (Inhalation) | Acute toxicity (inhal.), Category 1 |
| Acute Tox. 3 (Oral) | Acute toxicity (oral), Category 3 |
| Eye Irrit. 2 | Serious eye damage/eye irritation, Category 2 |
| H301 | Toxic if swallowed. |
| H315 | Causes skin irritation. |
| H319 | Causes serious eye irritation. |
| H330 | Fatal if inhaled. |
| H335 | May cause respiratory irritation. |
| Skin Irrit. 2 | Skin corrosion/irritation, Category 2 |

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Full text of H- and EUH-statements:

| | |
|-----------|--|
| STOT SE 3 | Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation |
|-----------|--|

Safety Data Sheet (SDS), EU

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.