

SAFETY DATA SHEET

Nitric acid, 60 %

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

1.1 Product identifier

Product name : Nitric acid, 60 %
REACH Registration number : 01-2119487297-23-0027
Product type : Liquid.

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

Product use : Manufacture of substance : Nitric acid
Industrial use: Intermediate. / Formulation / Distribution / Cleaning Products / Surface treatment of metal, other / Industrial use of reactive processing aids / Surface treatment, other / regeneration of ion exchange resins / Laboratory chemicals - Reagents

Professional use : Distribution / dilution or suspension of fertilizers / Cleaning Products / Surface treatment of metal, other / pH-regulating agents / in laboratory chemicals, as surface etchant for concrete.
Further information : Exposure Scenario information

Common technical functions: Cleaning Products / pH-regulating agents / Intermediate.

Uses advised against : precursor use

Area of application : Industrial applications, Professional applications.

1.3 Details of the supplier of the safety data sheet

OCI Nitrogen BV
Mijnweg 1
P.O. Box 601
6160 AP Geleen, The Netherlands
Tel: +31(0)46 7020111
www.ocinitrogen.com

e-mail address of person responsible for this SDS : info.agro@ocinitrogen.com

1.4 Emergency telephone number

Supplier

Telephone number : (31) 46 4765555 (24/7)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Mixture

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

Met. Corr. 1, H290
Skin Corr. 1A, H314

Ingredients of unknown toxicity : Not applicable.

Ingredients of unknown ecotoxicity : Not applicable.

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SECTION 2: Hazards identification

Classification according to Directive 1999/45/EC [DPD]

The product is classified as dangerous according to Directive 1999/45/EC and its amendments.

Classification : C; R35

Human health hazards : Causes severe burns.

See Section 16 for the full text of the R phrases or H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements

Hazard pictograms

:



Signal word

: Danger

Hazard statements

: May be corrosive to metals.
Causes severe skin burns and eye damage.

Precautionary statements

Prevention

: Wear protective gloves: >8 hours (breakthrough time): butyl rubber, Viton®; 4-8 hours (breakthrough time): neoprene, polyethylene (PE); 1-4 hours (breakthrough time): PVC. Wear eye or face protection: Recommended: safety glasses with side-shields. Wear protective clothing: Recommended: chemical-resistant protective suit. Keep only in original container.
Do not breathe dust/fume/gas/mist/vapours/spray.

Response

: Absorb spillage to prevent material damage.
IF INHALED:
Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or physician.
IF SWALLOWED:
Immediately call a POISON CENTER or physician.
Rinse mouth.
Do NOT induce vomiting.
IF ON SKIN (or hair):
Take off immediately all contaminated clothing.
Rinse skin with water or shower.
Immediately call a POISON CENTER or physician.
IF IN EYES:
Immediately call a POISON CENTER or physician.
Rinse cautiously with water for several minutes.

Storage

: Store locked up. Store in corrosive resistant container with a resistant inner liner.

Disposal

: Dispose of contents and container in accordance with all local, regional, national and international regulations.

Hazardous ingredients

: nitric acid

Supplemental label elements

: Not applicable.

2.3 Other hazards

Other hazards which do not result in classification

: Not available.

SECTION 3: Composition/information on ingredients

Substance/mixture : Mixture

Product/ingredient name	Identifiers	%	<u>Classification</u>	
			67/548/EEC	Regulation (EC) No. 1272/2008 [CLP]
Nitric acid	EC: 231-714-2 CAS: 7697-37-2 REACH Reg.#: 01-2119487297-23-0027	20 - 64.99	O; R8 C; R35 See Section 16 for the full text of the R-phrases declared above.	Ox. Liq. 3, H272 Met. Corr. 1, H290 Skin Corr. 1A, H314 See Section 16 for the full text of the H statements declared above.

There are no additional ingredients present which, within the current knowledge of the supplier, are classified and contribute to the classification of the substance and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

SECTION 4: First aid measures

4.1 Description of first aid measures

- Eye contact** : Get medical attention immediately. Call a poison center or physician. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician.
- Inhalation** : Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Skin contact** : Get medical attention immediately. Call a poison center or physician. Wash contaminated skin with soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

4.2 Most important symptoms and effects, both acute and delayed

Potential acute health effects

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SECTION 4: First aid measures

- Eye contact** : Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the eyes.
- Inhalation** : May give off gas, vapor or dust that is very irritating or corrosive to the respiratory system. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure. No specific data.
- Skin contact** : Causes severe burns.
- Ingestion** : May cause burns to mouth, throat and stomach.

Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:
pain
watering
redness
- Inhalation** : No specific data.
- Skin contact** : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur
- Ingestion** : Adverse symptoms may include the following:
stomach pains

4.3 Indication of any immediate medical attention and special treatment needed

- Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Specific treatments** : No specific treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

- Suitable extinguishing media** : Non-combustible. Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None known.

5.2 Special hazards arising from the substance or mixture

- Hazards from the substance or mixture** : In a fire or if heated, a pressure increase will occur and the container may burst.
- Hazardous combustion products** : Decomposition products may include the following materials:
nitrogen oxides
Ammonia. Amines

5.3 Advice for firefighters

- Special precautions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece 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.
- Additional information** : References : Section 9. Physical and chemical properties

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Do not breathe vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

- 6.2 Environmental precautions** : Avoid dispersal of spilt 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 materials for containment and cleaning up

- Small spill** : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). The spilled material may be neutralized with sodium carbonate, sodium bicarbonate or sodium hydroxide. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

- 6.4 Reference to other sections** : See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

7.1 Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Do not get in eyes or on skin or clothing. Do not breathe vapour or mist. Do not ingest. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Keep away from alkalis. Empty containers retain product residue and can be hazardous. Do not reuse container. Spillages should be cleaned up promptly to avoid damage to surrounding materials.
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

SECTION 7: Handling and storage

7.2 Conditions for safe storage, including any incompatibilities

- : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store in corrosive resistant container with a resistant inner liner. Store locked up. Separate from alkalis. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination.
- Packaging materials :
 Suitable: Stainless steel, glass
 Not suitable: steel, copper, Aluminium.

7.3 Specific end use(s)

Recommendations : Not available.

Industrial sector specific solutions : Not available.

SECTION 8: Exposure controls/personal protection

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

8.1 Control parameters

Occupational exposure limits

Product/ingredient name	Exposure limit values
nitric acid	EU OEL (Europe, 12/2009). Notes: list of indicative occupational exposure limit values STEL: 2.6 MG/M3 15 minute(s). STEL: 1 PPM 15 minute(s).

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to European Standard EN 689 for methods for the assessment of exposure by inhalation to chemical agents and national guidance documents for methods for the determination of hazardous substances.

Derived effect levels

Product/ingredient name	Type	Exposure	Value	Population	Effects
nitric acid	DNEL	Long term Inhalation	1.3 mg/m ³	Workers	-

Predicted effect concentrations

No PECs available.

8.2 Exposure controls

Appropriate engineering controls : If user operations generate dust, fumes, gas, vapour or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

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SECTION 8: Exposure controls/personal protection

- 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, mists, gases or dusts. Recommended: safety glasses with side-shields
- Skin protection**
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. >8 hours (breakthrough time): butyl rubber, Viton®
4-8 hours (breakthrough time): neoprene, polyethylene (PE)
1-4 hours (breakthrough time): PVC
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Recommended: chemical-resistant protective suit
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Recommended: self-contained breathing apparatus (SCBA)
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

- Physical state** : Liquid.
- Colour** : Colourless./ Brown.
- Odour** : Pungent.
- Odour threshold** : 0.75 to 2.5 ppm
- pH** : <1
- Melting point/freezing point** : -35 to -18°C
- Initial boiling point and boiling range** : 104 to 122°C
- Flash point** : Not applicable.
- Evaporation rate** : Not available.
- Flammability (solid, gas)** : Not available.
- Burning time** : Not applicable.
- Burning rate** : Not applicable.
- Upper/lower flammability or explosive limits** : Not available.
- Vapour pressure** : 0.77 kPa at 20°C
- Vapour density** : 2.2 [Air = 1]
- Relative density** : 1.1 to 1.4 [Water = 1]
- Density** : <1.41 g/cm³
- Solubility(ies) (water)** : Easily soluble in the following materials: cold water
- Partition coefficient: n-octanol/ water** : Not available.
- Auto-ignition temperature** : Not applicable.
- Decomposition temperature** : >200°C

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SECTION 9: Physical and chemical properties

Viscosity	: Not available.
Explosive properties	: Not available.
Oxidising properties	: Not available.

9.2 Other information

Physical/chemical properties comments	: Boiling point 117°C (53%), 120°C (60%) Density: 1.327 g/cm ³ (53%), 1.363 g/cm ³ (60%) May intensify fire; oxidiser.
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No additional information.

SECTION 10: Stability and reactivity

10.1 Reactivity	: No specific test data related to reactivity available for this product or its ingredients.
10.2 Chemical stability	: The product is stable.
10.3 Possibility of hazardous reactions	: Under normal conditions of storage and use, hazardous reactions will not occur.
10.4 Conditions to avoid	: Exposure to heat
10.5 Incompatible materials	: Reactive or incompatible with the following materials: combustible materials, organic materials, metals and alkalis. Attacks many metals producing extremely flammable hydrogen gas which can form explosive mixtures with air. May intensify fire; oxidiser. risk of violent reaction: combustible materials, alcohols, organic solvents, Ketone., Aldehyde., amines Aniline, Acetic anhydride, strong alkalis, Metal. Metallic oxides. Ammonia. Halogens, acids Hydride salt. See specific literature as for example: Bretherick, SAX, Gefährliche Chemische Reaktionen.
10.6 Hazardous decomposition products	: Metals: → hydrogen (fire and explosion hazard).

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
nitric acid	LC50 Inhalation Gas.	Rat	1562.5 mg/m ³	4 hours

Conclusion/Summary : Not available.

Acute toxicity estimates

Not available.

Irritation/Corrosion

Conclusion/Summary

Skin : Corrosive to the skin.

Eyes : Corrosive to eyes.

Sensitiser

Conclusion/Summary : Not available.

Mutagenicity

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SECTION 11: Toxicological information

Product/ingredient name	Test	Experiment	Result
nitric acid	OECD 471 Ames test.	Experiment: In vitro Subject: Bacteria	Negative

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : Not available.

Reproductive toxicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure : Not available.

Potential acute health effects

- Inhalation** : May give off gas, vapor or dust that is very irritating or corrosive to the respiratory system. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.No specific data.
- Ingestion** : May cause burns to mouth, throat and stomach.
- Skin contact** : Causes severe burns.
- Eye contact** : Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the eyes.

Symptoms related to the physical, chemical and toxicological characteristics

- Inhalation** : No specific data.
- Ingestion** : Adverse symptoms may include the following:
stomach pains
- Skin contact** : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur
- Eye contact** : Adverse symptoms may include the following:
pain
watering
redness

Delayed and immediate effects and also chronic effects from short and long term exposure**Short term exposure**

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

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SECTION 11: Toxicological information

Not available.

Conclusion/Summary	: Not available.
General	: No known significant effects or critical hazards.
Carcinogenicity	: No known significant effects or critical hazards.
Mutagenicity	: No known significant effects or critical hazards.
Teratogenicity	: No known significant effects or critical hazards.
Developmental effects	: No known significant effects or critical hazards.
Fertility effects	: No known significant effects or critical hazards.
Other information	: Inhalation of vapour/mist may result in lung oedema. In case of inhalation of gas, symptoms may be delayed. Skin contact: Causes burns. Direct contact with the eyes can cause irreversible damage, including blindness. IF SWALLOWED: gastric perforation

SECTION 12: Ecological information

12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
nitric acid	Acute EC50 100 to 1000 mg/l	Algae	48 hours

Conclusion/Summary : Not available.

12.2 Persistence and degradability

Conclusion/Summary : Not available.

12.3 Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
nitric acid	-0.21	-	low

12.4 Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.

Mobility : Not available.

12.5 Results of PBT and vPvB assessment

PBT : Not applicable.

vPvB : Not applicable.

12.6 Other adverse effects : Harmful to aquatic organisms.
May cause adverse effects in the aquatic environment due to changes in pH.

SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

13.1 Waste treatment methods

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SECTION 13: Disposal considerations

- Methods of disposal** : The generation of waste should be avoided or minimised wherever possible. Significant quantities of waste product residues should not be disposed of via the foul sewer but processed in a suitable effluent treatment plant. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.
- Hazardous waste** : The classification of the product may meet the criteria for a hazardous waste.
- Packaging**
- Methods of disposal** : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.
- Special precautions** : 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 spilt material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

	ADR/RID	ADN	IMDG	IATA
14.1 UN number	UN2031	UN2031	UN2031	UN2031
14.2 UN proper shipping name	NITRIC ACID	NITRIC ACID	NITRIC ACID	Nitric acid
14.3 Transport hazard class(es)	8 	8 	8 	8 
14.4 Packing group	II	II	II	II
14.5 Environmental hazards	No.	No.	No.	No.
14.6 Special precautions for user	Not available.	Not available.	Not available.	Not available.
Additional information	<u>Hazard identification number</u> 80 <u>Limited quantity</u> 1 L <u>Tunnel code</u> (E)	-	<u>Emergency schedules (EmS)</u> F-A, S-B	<u>Passenger and Cargo Aircraft</u> Quantity limitation: Forbidden Packaging instructions: Forbidden <u>Cargo Aircraft Only</u> Quantity limitation: 30 L Packaging instructions: 855 <u>Limited Quantities - Passenger Aircraft</u> Quantity limitation: Forbidden Packaging instructions: Forbidden

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not available.

SECTION 15: Regulatory information

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

EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorisation

Substances of very high concern

None of the components are listed.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles : Not applicable.

Other EU regulations

Europe inventory : All components are listed or exempted.

Chemical Weapons Convention List Schedule I Chemicals : Not listed

Chemical Weapons Convention List Schedule II Chemicals : Not listed

Chemical Weapons Convention List Schedule III Chemicals : Not listed

15.2 Chemical Safety Assessment : Complete.

15.3 Registration status : Not applicable.

SECTION 16: Other information

🔍 Indicates information that has changed from previously issued version.

Abbreviations and acronyms : ATE = Acute Toxicity Estimate
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
DNEL = Derived No Effect Level
EUH statement = CLP-specific Hazard statement
PNEC = Predicted No Effect Concentration
RRN = REACH Registration Number

Key literature references and sources for data : Literature data and/or investigation reports are available through the manufacturer.

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification	Justification
Met. Corr. 1, H290 Skin Corr. 1A, H314	Expert judgment On basis of test data

Full text of abbreviated H statements : H272 May intensify fire; oxidiser.
H290 May be corrosive to metals.
H314 Causes severe skin burns and eye damage.

Full text of classifications [CLP/GHS] : Met. Corr. 1, H290 CORROSIVE TO METALS - Category 1
Ox. Liq. 3, H272 OXIDIZING LIQUIDS - Category 3
Skin Corr. 1A, H314 SKIN CORROSION/IRRITATION - Category 1A

Full text of abbreviated R phrases : R8- Contact with combustible material may cause fire.
R35- Causes severe burns.

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SECTION 16: Other information

Full text of classifications [DSD/DPD] : O - Oxidising
C - Corrosive

Training advice : Handling of this substance or preparation is restricted to skilled personnel only.

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Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.