

MATERIAL SAFETY DATA SHEET (MSDS)

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

1.1. Product identifier

Product form : Substance
:
EC Index-No. : 007-004-00-1
EC-No. : 231-714-2
CAS-No. : 7697-37-2
Product code : 00224

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

1.2.1. Relevant identified uses

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

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

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SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Oxidising Liquids, H272
Category 2
Skin corrosion/irritation, H314
Category 1A

Full text of H statements : see section 16

Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

O; R8
C; R35

Full text of R-phrases: see section 16

NITRIC ACID AR

Safety Data Sheet

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

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

Hazard pictograms (CLP) :



GHS03

GHS05

Signal word (CLP) : Danger

Hazard statements (CLP) : H272 - May intensify fire; oxidiser.
H314 - Causes severe skin burns and eye damage.

Precautionary statements (CLP) : P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P220 - Keep away from clothing and other combustible materials.
P260 - Do not breathe dust/fume/gas/mist/vapours/spray.
P264 - Wash hands, forearms and face thoroughly after handling.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P301+P330+P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting
P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with 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.
P310 - Immediately call a POISON CENTER or doctor.
P321 - Specific treatment (see supplemental first aid instruction on this label)
P370+P378 - In case of fire: Use media other than water to extinguish.
P405 - Store locked up.
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

EUH-statements : EUH071 - Corrosive to the respiratory tract.

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

Name : NITRIC ACID AR
CAS-No. : 7697-37-2
EC-No. : 231-714-2
EC Index-No. : 007-004-00-1

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

NITRIC ACID AR

Safety Data Sheet

3.2. Mixtures

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor.

First-aid measures after skin contact : Get medical advice/attention. Wash with plenty of water/....

First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.

First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER/doctor.

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

Symptoms/effects : Causes severe skin burns and eye damage.

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 extinguishing media containing water.

5.2. Special hazards arising from the substance or mixture

Fire hazard : May cause fire or explosion; strong oxidiser.

Explosion hazard : Heat may build pressure, rupturing closed containers, spreading fire and increasing risk of burns and injuries.

5.3. Advice for firefighters

Firefighting instructions : In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : No open flames. No smoking.

6.1.1. For non-emergency personnel

Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Use personal protective equipment as required.

Emergency procedures : Ventilate area.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : On land, sweep or shovel into suitable containers. Collect spillage.

6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed : Hazardous waste due to potential risk of explosion.

NITRIC ACID AR

Safety Data Sheet

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| Precautions for safe handling | : Avoid contact with skin and eyes. Keep away from sources of ignition - No smoking. Do not breathe vapours. |
| Hygiene measures | : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Do not eat, drink or smoke when using this product. |

7.2. Conditions for safe storage, including any incompatibilities

| | |
|------------------------|---|
| Technical measures | : Proper grounding procedures to avoid static electricity should be followed. Comply with applicable regulations. |
| Storage conditions | : Keep in fireproof place. Store in a closed container. |
| Incompatible materials | : Heat sources. combustible materials. |

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

| | |
|-------------------------------|--|
| Personal protective equipment | : Wear fire/flare resistant/retardant clothing. |
| Hand protection | : Protective gloves |
| Eye protection | : Chemical goggles or face shield |
| Skin and body protection | : Wear suitable protective clothing |
| Respiratory protection | : [In case of inadequate ventilation] wear respiratory protection. |

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| | |
|--|------------------------|
| Physical state | : Liquid |
| Molecular mass | : 63.01 g/mol |
| Colour | : Colorless to yellow. |
| Odour | : suffocating odour. |
| Odour threshold | : No data available |
| pH | : 1 |
| Relative evaporation rate (butylacetate=1) | : No data available |
| Melting point | : No data available |
| Freezing point | : No data available |
| Boiling point | : 122 °C |
| Flash point | : No data available |
| Auto-ignition temperature | : No data available |
| Decomposition temperature | : No data available |

NITRIC ACID AR

Safety Data Sheet

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| Flammability (solid, gas) | : No data available |
| Vapour pressure | : 48 mm Hg at 20°C |
| Relative vapour density at 20 °C | : 2 - 3 |
| Relative density | : No data available |
| Density | : 1.41 g/cm ³ |
| Solubility | : Water: Infinitely soluble |
| Log Pow | : No data available |
| Viscosity, kinematic | : No data available |
| Viscosity, dynamic | : No data available |
| Explosive properties | : No data available |
| Oxidising properties | : May cause fire or explosion; strong oxidiser. |
| Explosive limits | : No data available |

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Thermal decomposition generates : Corrosive vapours.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

Heat. Sparks. Open flame.

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Thermal decomposition generates : Corrosive vapours.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

| | |
|-----------------------------------|---|
| Acute toxicity | : Not classified |
| Skin corrosion/irritation | : Causes severe skin burns and eye damage. pH: 1 |
| Serious eye damage/irritation | : Serious eye damage, category 1, implicit pH: 1 |
| Respiratory or skin sensitisation | : Not classified |
| Germ cell mutagenicity | : Not classified |
| Carcinogenicity | : Not classified |

NITRIC ACID AR

Safety Data Sheet

Reproductive toxicity : Not classified

STOT-single exposure : Not classified

STOT-repeated exposure : Not classified

Aspiration hazard : Not classified

SECTION 12: Ecological information

12.1. Toxicity

No additional information available

12.2. Persistence and degradability

No additional information available

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. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

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.

Additional information : Hazardous waste due to potential risk of explosion.

SECTION 14: Transport information

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

14.1. UN number

UN-No. (ADR) : 2031

UN-No. (IMDG) : 2031

UN-No. (IATA) : 2031

UN-No. (ADN) : 2031

UN-No. (RID) : 2031

NITRIC ACID AR

Safety Data Sheet

14.2. UN proper shipping name

| | |
|---------------------------------------|---|
| Proper Shipping Name (ADR) | : NITRIC ACID |
| Proper Shipping Name (IMDG) | : NITRIC ACID |
| Proper Shipping Name (IATA) | : Nitric acid |
| Proper Shipping Name (ADN) | : NITRIC ACID |
| Proper Shipping Name (RID) | : NITRIC ACID |
| Transport document description (ADR) | : UN 2031 NITRIC ACID, 8 (5.1), II, (E) |
| Transport document description (IMDG) | : UN 2031 NITRIC ACID, 8, II |
| Transport document description (IATA) | : UN 2031 Nitric acid, 8, II |
| Transport document description (ADN) | : UN 2031 NITRIC ACID, 8 (5.1), II |
| Transport document description (RID) | : UN 2031 NITRIC ACID, 8 (5.1), II |

14.3. Transport hazard class(es)

ADR

| | |
|----------------------------------|-----------|
| Transport hazard class(es) (ADR) | : 8 (5.1) |
| Danger labels (ADR) | : 8, 5.1 |



IMDG

| | |
|-----------------------------------|-----|
| Transport hazard class(es) (IMDG) | : 8 |
| Danger labels (IMDG) | : 8 |



IATA

| | |
|-----------------------------------|-----|
| Transport hazard class(es) (IATA) | : 8 |
| Hazard labels (IATA) | : 8 |



ADN

| | |
|----------------------------------|-----------|
| Transport hazard class(es) (ADN) | : 8 (5.1) |
| Danger labels (ADN) | : 8, 5.1 |



RID

| | |
|----------------------------------|-----------|
| Transport hazard class(es) (RID) | : 8 (5.1) |
|----------------------------------|-----------|

NITRIC ACID AR

Safety Data Sheet

Danger labels (RID) : 8, 5.1



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

Other information : No supplementary information available

14.6. Special precautions for user

- Overland transport

Classification code (ADR) : CO1

Limited quantities (ADR) : 1I

Excepted quantities (ADR) : E2

Packing instructions (ADR) : P001, IBC02

Special packing provisions (ADR) : PP81, B15

Mixed packing provisions (ADR) : MP15

Portable tank and bulk container instructions (ADR) : T8

Portable tank and bulk container special provisions (ADR) : TP2

Tank code (ADR) : L4BN

Vehicle for tank carriage : AT

Transport category (ADR) : 2

Hazard identification number (Kemler No.) : 85

Orange plates : 

Tunnel restriction code (ADR) : E

EAC code : 2P

APP code : B

- Transport by sea

Limited quantities (IMDG) : 1 L

Excepted quantities (IMDG) : E2

Packing instructions (IMDG) : P001

Special packing provisions (IMDG) : PP81

IBC packing instructions (IMDG) : IBC02

IBC special provisions (IMDG) : B15, B20

Tank instructions (IMDG) : T8

Tank special provisions (IMDG) : TP2

EmS-No. (Fire) : F-A

NITRIC ACID AR

Safety Data Sheet

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|-------------------------|-------------------------|
| EmS-No. (Spillage) | : S-B |
| Stowage category (IMDG) | : D |
| Segregation (IMDG) | : SG6, SG16, SG17, SG19 |
| MFAG-No | : 157 |

- Air transport

| | |
|--|-------------|
| PCA Excepted quantities (IATA) | : E0 |
| PCA Limited quantities (IATA) | : Forbidden |
| PCA limited quantity max net quantity (IATA) | : Forbidden |
| PCA packing instructions (IATA) | : Forbidden |
| PCA max net quantity (IATA) | : Forbidden |
| CAO packing instructions (IATA) | : 855 |
| CAO max net quantity (IATA) | : 30L |
| ERG code (IATA) | : 8L |

- Inland waterway transport

| | |
|-----------------------------------|----------|
| Classification code (ADN) | : CO1 |
| Limited quantities (ADN) | : 1 L |
| Excepted quantities (ADN) | : E2 |
| Carriage permitted (ADN) | : T |
| Equipment required (ADN) | : PP, EP |
| Number of blue cones/lights (ADN) | : 0 |

- Rail transport

| | |
|---|---------------|
| Classification code (RID) | : CO1 |
| Limited quantities (RID) | : 1L |
| Excepted quantities (RID) | : E2 |
| Packing instructions (RID) | : P001, IBC02 |
| Special packing provisions (RID) | : PP81, B15 |
| Mixed packing provisions (RID) | : MP15 |
| Portable tank and bulk container instructions (RID) | : T8 |
| Portable tank and bulk container special provisions (RID) | : TP2 |
| Tank codes for RID tanks (RID) | : L4BN |
| Transport category (RID) | : 2 |
| Colis express (express parcels) (RID) | : CE6 |
| Hazard identification number (RID) | : 85 |

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

No REACH Annex XVII restrictions

NITRIC ACID AR is not on the REACH Candidate List

NITRIC ACID AR is not on the REACH Annex XIV List

NITRIC ACID AR

Safety Data Sheet

15.1.2. National regulations

Germany

Reference to AwSV : Water hazard class (WGK) 1, low hazard to water (Classification according to AwSV; ID No. 414)

12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

Netherlands

SZW-lijst van kankerverwekkende stoffen : The substance is not listed

SZW-lijst van mutagene stoffen : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling : The substance is not listed

Denmark

Recommendations Danish Regulation : Young people below the age of 18 years are not allowed to use the product

15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

Full text of R-, H- and EUH-statements:

| | |
|---------------|--|
| Ox. Liq. 2 | Oxidising Liquids, Category 2 |
| Skin Corr. 1A | Skin corrosion/irritation, Category 1A |
| H272 | May intensify fire; oxidiser. |
| H314 | Causes severe skin burns and eye damage. |
| EUH071 | Corrosive to the respiratory tract. |
| R35 | Causes severe burns |
| R8 | Contact with combustible material may cause fire |
| C | Corrosive |
| O | Oxidising |

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