

article number: **2422** Version: **2.0 en** Replaces version of: 2016-09-27 Version: (1)

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

1.1 Product identifier

Identification of the substance

Article number

Single-Element ICP - Standard Solution ROTI®Star 1 000 mg/l Ho

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Registration number (REACH)

not relevant (mixture)

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

Relevant identified uses:

Uses advised against:

Laboratory chemical Laboratory and analytical use

Do not use for products which come into contact with foodstuffs. Do not use for private purposes (household).

1.3 Details of the supplier of the safety data sheet

Carl Roth GmbH + Co KG Schoemperlenstr. 3-5 D-76185 Karlsruhe Germany

Telephone:+49 (0) 721 - 56 06 0 **Telefax:** +49 (0) 721 - 56 06 149 **e-mail:** sicherheit@carlroth.de **Website:** www.carlroth.de

Competent person responsible for the safety data :Department Health, Safety and Environment sheet:

e-mail (competent person):

sicherheit@carlroth.de

1.4 Emergency telephone number

| Name | Street | Postal code/city | Telephone | Website |
|--|-----------|----------------------|--------------|---------|
| National Poisons Information Service City Hospital | Dudley Rd | B187QH Birmingham | 844 892 0111 | |

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

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

| Section | Hazard class | Cat- egory | Hazard class and category | Hazard statement |
|---------|--|---------------|---------------------------|---------------------|
| 2.16 | Substance or mixture corrosive to metals | 1 | Met. Corr. 1 | H290 |
| 3.2 | Skin corrosion/irritation | | Skin Irrit. 2 | H315 |
| 3.3 | Serious eye damage/eye irritation | 2 | Eye Irrit. 2 | H319 |

For full text of abbreviations: see SECTION 16

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according to Regulation (EC) No. 1907/2006 (REACH)



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2.2 Label elements

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

| Signal word | Warning |
|----------------|---------|
| Pictograms | • |
| GHS05 | |
| Hazard stateme | nts |

| H290 | May be corrosive to metals |
|------|-------------------------------|
| H315 | Causes skin irritation |
| H319 | Causes serious eye irritation |

Precautionary statements

Precautionary statements - prevention

P280 Wear protective gloves/protective clothing/eye protection/face protection

Labelling of packages where the contents do not exceed 125 ml

Signal word: Warning

Symbol(s)



2.3 Other hazards

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 sub- stance | Identifier | Wt% | Classification acc. to GHS | Pictograms | Notes |
|----------------------------|---|-----|--|------------|-------------------------|
| Nitric acid% [C ≤ 70 %] | CAS No 7697-37-2 EC No 231-714-2 Index No 007-030-00-3 | 2 | Ox. Liq. 3 / H272 Met. Corr. 1 / H290 Acute Tox. 3 / H331 Skin Corr. 1A / H314 Eye Dam. 1 / H318 EUH071 | | B(a) GHS-HC IOELV |

Notes

B(a): The classification refers to an aqueous solution GHS-HC: Harmonised classification (the classification of the substance corresponds to the entry in the list according to 1272/ 2008/EC, Annex VI)

according to Regulation (EC) No. 1907/2006 (REACH)



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Notes

IOELV: Substance with a community indicative occupational exposure limit value

| Name of sub- stance | Identifier | Specific Conc. Limits | M-Factors | ATE | Exposure route |
|----------------------------|---|--|------------------|---------------------------------------|-------------------------|
| Nitric acid% [C ≤ 70 %] | CAS No 7697-37-2 EC No 231-714-2 Index No 007-030-00-3 | Ox. Liq. 3; H272: C ≥ 65 % Skin Corr. 1A; H314: C ≥ 20 % Skin Corr. 1B; H314: 5 % ≤ C < 20 % | - | 2,65 ^{mg} / _l /4h | inhalation: va- pour |

For full text of abbreviations: see SECTION 16

SECTION 4: First aid measures

4.1 Description of first aid measures



General notes

Take off contaminated clothing.

Following inhalation

Provide fresh air. In all cases of doubt, or when symptoms persist, seek medical advice.

Following skin contact

Rinse skin with water/shower. In case of skin irritation, consult a physician.

Following eye contact

Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart. In case of eye irritation consult an ophthalmologist.

Following ingestion

Rinse mouth. Call a doctor if you feel unwell.

4.2 Most important symptoms and effects, both acute and delayed

Irritation

4.3 Indication of any immediate medical attention and special treatment needed none

SECTION 5: Firefighting measures

5.1 Extinguishing media



Suitable extinguishing media

co-ordinate firefighting measures to the fire surroundings water spray, alcohol resistant foam, dry extinguishing powder, BC-powder, carbon dioxide (CO₂)

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Unsuitable extinguishing media

water jet

5.2 Special hazards arising from the substance or mixture

Non-combustible.

Hazardous combustion products

In case of fire may be liberated: Nitrogen oxides (NOx)

5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Fight fire with normal precautions from a reasonable distance. Wear self-contained breathing apparatus.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures



For non-emergency personnel

Avoid contact with skin, eyes and clothes. Do not breathe vapour/spray.

6.2 Environmental precautions

Keep away from drains, surface and ground water. The product is an acid. Before discharge into sewage plants the product normally needs to be neutralised.

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

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents).

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.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Use extractor hood (laboratory).

Advice on general occupational hygiene

Wash hands before breaks and after work. Keep away from food, drink and animal feedingstuffs.

7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed.

Incompatible substances or mixtures

Observe hints for combined storage.



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Consideration of other advice:

Specific designs for storage rooms or vessels

Recommended storage temperature: 15 - 25 °C

7.3 Specific end use(s)

No information available.

SECTION 8: Exposure controls/personal protection

8.1 **Control parameters**

National limit values

Occupational exposure limit values (Workplace Exposure Limits)

| Cou ntr y | Name of agent | CAS No | Identi- fier | TW A [pp m] | TWA [mg/ m³] | STE L [pp m] | STEL [mg/ m³] | Ceil ing- C [pp m] | Ceil- ing-C [mg/ m³] | Nota- tion | Source |
|-----------------|---------------|---------------|-----------------|----------------------|--------------------|-----------------------|---------------------|--------------------------------|-------------------------------|---------------|----------------|
| EU | nitric acid | 7697-37- 2 | IOELV | | | 1 | 2,6 | | | | 2006/15/ EC |
| GB | nitric acid | 7697-37- 2 | WEL | | | 1 | 2,6 | | | | EH40/ 2005 |

Notation

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

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) 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) STEL TWA

8.2 **Exposure controls**

Individual protection measures (personal protective equipment)

Eye/face protection



Use safety goggle with side protection.

Skin protection



hand protection

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. 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. The times are approximate values from measurements at 22° C and permanent contact. Increased temperatures due to heated substances, body heat etc. and a reduction of the effective layer thickness by stretching can lead to a considerable reduction of the breakthrough time. If in doubt, contact manufacturer. At an approx. 1.5 times larger / smaller layer thickness, the respective breakthrough time is doubled / halved. The data apply only to the pure substance. When transferred to substance mixtures, they may only be considered as a guide.



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- type of material
- NBR (Nitrile rubber)
- material thickness
- >0,11 mm
- breakthrough times of the glove material

>480 minutes (permeation: level 6)

other protection measures

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended.

Respiratory protection



Respiratory protection necessary at: Aerosol or mist formation.

Environmental exposure controls

Keep away from drains, surface and ground water.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

| Physical state | liquid |
|--|----------------------------|
| Colour | colourless |
| Odour | stinging |
| Melting point/freezing point | ~0 °C at 1.013 mPa |
| Boiling point or initial boiling point and boiling range | ~100 °C at 1.013 mPa |
| Flammability | non-combustible |
| Lower and upper explosion limit | not determined |
| Flash point | not determined |
| Auto-ignition temperature | not determined |
| Decomposition temperature | not relevant |
| pH (value) | <2 |
| Kinematic viscosity | not determined |
| Solubility(ies) | |
| Water solubility | miscible in any proportion |
| Partition coefficient | |
| Partition coefficient n-octanol/water (log value): | not relevant (inorganic) |
| | |
| Vapour pressure | not determined |



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| Density and/or relative density | |
|---|---|
| Density | ~1 ^g / _{cm³} at 20 °C |
| Relative vapour density | information on this property is not available |
| | |
| Particle characteristics | not relevant (liquid) |
| Other safety parameters | |
| Oxidising properties | none |
| Other information | |
| Information with regard to physical hazard classes: | |
| Corrosive to metals | category 1: corrosive to metals |
| Other safety characteristics: | |
| Miscibility | completely miscible with water |
| | |

SECTION 10: Stability and reactivity

10.1 Reactivity

9.2

Substance or mixture corrosive to metals.

10.2 Chemical stability

The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

10.3 Possibility of hazardous reactions

Violent reaction with: Ammonia (NH3), Bases, Metals, Reducing agents, Strong alkali, Organic solvents

10.4 Conditions to avoid

Keep away from heat.

10.5 Incompatible materials

different metals (due to the release of hydrogen in an acid/alkaline medium)

10.6 Hazardous decomposition products

Hazardous combustion products: see section 5.

SECTION 11: Toxicological information

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

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 according to GHS (1272/2008/EC, CLP)

Acute toxicity



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| Acute toxicity estimate (ATE) of components of the mixture | | | | |
|--|-----------|--------------------|---------------------------------------|--|
| Name of substance | CAS No | Exposure route | ATE | |
| Nitric acid% [C ≤ 70 %] | 7697-37-2 | inhalation: vapour | 2,65 ^{mg} / _l /4h | |

Acute toxicity of components of the mixture

| Name of substance | CAS No | Exposure route | Endpoint | Value | Species |
|-------------------------|-----------|-------------------------|----------|--|---------|
| Nitric acid% [C ≤ 70 %] | 7697-37-2 | inhalation: va- pour | LC50 | >2,65 ^{mg} / _l /4h | rat |

Skin corrosion/irritation

Causes skin irritation.

Serious eye damage/eye irritation

Causes serious eye irritation.

Respiratory or skin sensitisation

Shall not be classified as a respiratory or skin sensitiser.

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.

Symptoms related to the physical, chemical and toxicological characteristics

• If swallowed

Data are not available.

• If in eyes

Causes serious eye irritation

• If inhaled

Data are not available.

• If on skin

causes skin irritation

• Other information

This information is based upon the present state of our knowledge.

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- **11.2 Endocrine disrupting properties** None of the ingredients are listed.
- **11.3 Information on other hazards** There is no additional information.

SECTION 12: Ecological information

12.1 Toxicity

Shall not be classified as hazardous to the aquatic environment.

Biodegradation

The methods for determining the biological degradability are not applicable to inorganic substances.

12.2 Process of 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 Endocrine disrupting properties** None of the ingredients are listed.
- **12.7 Other adverse effects** Data are not available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods



This material and its container must be disposed of as hazardous waste. Dispose of contents/container in accordance with local/regional/national/international regulations.

Sewage disposal-relevant information

Do not empty into drains.

Waste treatment of containers/packagings

It is a dangerous waste; only packagings which are approved (e.g. acc. to ADR) may be used.

13.2 Relevant provisions relating to waste

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process. Waste catalogue ordinance (Germany).

13.3 Remarks

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



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| | TION 14: Transport information | | | | | |
|------|---|--|--|--|--|--|
| 14.1 | UN number or ID number | | | | | |
| | ADRRID | UN 3264 | | | | |
| | IMDG-Code | UN 3264 | | | | |
| | ICAO-TI | UN 3264 | | | | |
| 14.2 | UN proper shipping name | | | | | |
| | ADRRID | CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. | | | | |
| | IMDG-Code | CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. | | | | |
| | ICAO-TI | Corrosive liquid, acidic, inorganic, n.o.s. | | | | |
| | Technical name (hazardous ingredients) | Nitric acid% [C ≤ 70 %] | | | | |
| 14.3 | Transport hazard class(es) | | | | | |
| | ADRRID | 8 | | | | |
| | IMDG-Code | 8 | | | | |
| | ICAO-TI | 8 | | | | |
| 14.4 | Packing group | | | | | |
| | ADRRID | III | | | | |
| | IMDG-Code | III | | | | |
| | ICAO-TI | III | | | | |
| 14.5 | Environmental hazards | non-environmentally hazardous acc. to the dan- gerous goods regulations | | | | |
| 14.6 | Special precautions for user | | | | | |
| | Provisions for dangerous goods (ADR) shoul | ld be complied within the premises. | | | | |
| 14.7 | Maritime transport in bulk according to I | MO instruments | | | | |
| | The cargo is not intended to be carried in bu | ılk. | | | | |
| | | | | | | |

14.8 Information for each of the UN Model Regulations

| Transport of dangerous goods by road, rail information | and inland waterway (ADR/RID/ADN) - Additional |
|--|---|
| Proper shipping name | CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. |
| Particulars in the transport document | UN3264, CORROSIVE LIQUID, ACIDIC, INORGAN- IC, N.O.S., (contains: Nitric acid% [C ≤ 70 %]), 8, III, (E) |
| Classification code | C1 |
| Danger label(s) | 8 |
| Special provisions (SP) | 274 |
| Excepted quantities (EQ) | E1 |



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|---|--|
| Limited quantities (LQ) | 5 L |
| Transport category (TC) | 3 |
| Tunnel restriction code (TRC) | E |
| Hazard identification No | 80 |
| Emergency Action Code | 2X |
| Regulations concerning the International information | Carriage of Dangerous Goods by Rail (RID)Addition |
| Classification code | 8 |
| Danger label(s) | 8 |
| | |
| Special provisions (SP) | 274 |
| Excepted quantities (EQ) | E1 |
| Limited quantities (LQ) | 5 L |
| Transport category (TC) | 3 |
| Hazard identification No | 80 |
| International Maritime Dangerous Goods (| Code (IMDG) - Additional information |
| Proper shipping name | CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O |
| Particulars in the shipper's declaration | UN3264, CORROSIVE LIQUID, ACIDIC, INORGA IC, N.O.S., (contains: Nitric acid% [C ≤ 70 %]) III |
| Marine pollutant | - |
| Danger label(s) | 8 |
| | |
| Special provisions (SP) | 223, 274 |
| Excepted quantities (EQ) | E1 |
| Limited quantities (LQ) | 5 L |
| EmS | F-A, S-B |
| Stowage category | A |
| Segregation group | 1 - Acids |
| International Civil Aviation Organization (| ICAO-IATA/DGR) - Additional information |
| Proper shipping name | Corrosive liquid, acidic, inorganic, n.o.s. |
| Particulars in the shipper's declaration | UN3264, Corrosive liquid, acidic, inorganic, n.o (contains: Nitric acid% [C ≤ 70 %]), 8, III |
| Danger label(s) | 8 |
| | |

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|---------|---------|------|
|---------|---------|------|

| Special provisions (SP) | A3 |
|--------------------------|-----|
| Excepted quantities (EQ) | E1 |
| Limited quantities (LQ) | 1 L |

SECTION 15: Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture 15.1 **Relevant provisions of the European Union (EU)**

Restrictions according to REACH, Annex XVII

| angerous substances with restrictions (REACH, Annex XVII) | | | | |
|---|--|--------|-------------|----|
| Name of substance | Name acc. to inventory | CAS No | Restriction | No |
| Single-Element | this product meets the criteria for classification in accordance with Reg- ulation No 1272/2008/EC | | R3 | 3 |
| Nitric acid% [C ≤ 70 %] | substances in tattoo inks and perman- ent make-up | | R75 | 75 |

Legend R3

1. Shall not be used in:

- ornamental articles intended to produce light or colour effects by means of different phases, for example in ornamental lamps and ashtrays,

- tricks and jokes, games for one or more participants, or any article intended to be used as such, even with ornamental aspects,

 Articles not complying with paragraph 1 shall not be placed on the market.
 Shall not be placed on the market if they contain a colouring agent, unless required for fiscal reasons, or perfume, or both, if they: — can be used as fuel in decorative oil lamps for supply to the general public, and — present an aspiration hazard and are labelled with H304.

4. Decorative oil lamps for supply to the general public shall not be placed on the market unless they conform to the European Standard on Decorative oil lamps (EN 14059) adopted by the European Committee for Standardisation

(CEN). 5. Without prejudice to the implementation of other Union provisions relating to the classification, labelling and packaging of substances and mixtures, suppliers shall ensure, before the placing on the market, that the following require-ments are met:

(a) lamp oils, labelled with H304, intended for supply to the general public are visibly, legibly and indelibly marked as follows: "Keep lamps filled with this liquid out of the reach of children"; and, by 1 December 2010, "Just a sip of lamp oil – or even sucking the wick of lamps – may lead to life-threatening lung damage";
(b) grill lighter fluids, labelled with H304, intended for supply to the general public are legibly and indelibly marked by 1 December 2010 as follows: 'Just a sip of grill lighter fluid may lead to life threatening lung damage';
(c) lamps oils and grill lighters, labelled with H304, intended for supply to the general public are packaged in black opaque containers not exceeding 1 litre by 1 December 2010.';

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8. Mixtures that do not contain the statement "Mixture for use in tattoos or permanent make-up" shall not be used for tattooing purposes.



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Legend

9. This entry does not apply to substances that are gases at temperature of 20 °C and pressure of 101,3 kPa, or generate a vapour pressure of more than 300 kPa at temperature of 50 °C, with the exception of formaldehyde (CAS No 50-00-0, EC No 200-001-8).

10. This entry does not apply to the placing on the market of a mixture for use for tattooing purposes, or to the use of a mixture for tattooing purposes, when placed on the market exclusively as a medical device or an accessory to a medical device, within the meaning of Regulation (EU) 2017/745, or when used exclusively as a medical device or an accessory to a medical device, within the same meaning. Where the placing on the market or use may not be exclusively as a medical device or an accessory to a medical device or an accessory to a medical device, the requirements of Regulation (EU) 2017/745 and of this Regulation shall apply cumulatively.

List of substances subject to authorisation (REACH, Annex XIV)/SVHC - candidate list

None of the ingredients are listed.

Seveso Directive

| 2012/18/EU (Seveso III) | | | | |
|-------------------------|---------------------------------------|---|-------|--|
| No | Dangerous substance/hazard categories | Qualifying quantity (tonnes) for the ap- plication of lower and upper-tier re- quirements | Notes | |
| | not assigned | | | |

Deco-Paint Directive

| VOC content | 0 % 0 ⁹ /1 |
|-------------|--------------------------|
| | |

Industrial Emissions Directive (IED)

| VOC content | 0 % |
|--|-------------------------------|
| VOC content (Water content was discounted) | 0 ^g / _l |

Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS)

none of the ingredients are listed

Regulation concerning the establishment of a European Pollutant Release and Transfer Register (PRTR)

none of the ingredients are listed

Regulation on the marketing and use of explosives precursors

| Explosives precursors which are subject to restrictions | | | | | |
|---|-----------|----------------------|---------|----------------|---|
| Name of substance | CAS No | Type of registration | Remarks | Limit value | Upper limit value for the pur- pose of licensing under Article 5(3) |
| Nitric acid% [C ≤ 70 %] | 7697-37-2 | Annex I | | 3 % w/w | 10 % w/w |

Legend

annex I Substances which shall not be made available to members of the general public on their own, or in mixtures or substances including them, except if the concentration is equal to or lower than the limit values set out below



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Additional statements

If the product is passed on to third parties, in accordance with Article 7 "Notification of the supply chain" of Regulation EU 2019/1148, the information obligation is subject to the entire supply chain and all other provisions mentioned in Article 7 on restricted and regulated raw materials.

Regulation on drug precursors

none of the ingredients are listed

Regulation on substances that deplete the ozone layer (ODS)

none of the ingredients are listed

Regulation concerning the export and import of hazardous chemicals (PIC)

none of the ingredients are listed

Regulation on persistent organic pollutants (POP)

none of the ingredients are listed

Other information

Directive 94/33/EC on the protection of young people at work. Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

National inventories

| Country | Inventory | Status |
|---------|------------|--------------------------------|
| AU | AICS | all ingredients are listed |
| CA | DSL | not all ingredients are listed |
| CA | NDSL | not all ingredients are listed |
| CN | IECSC | all ingredients are listed |
| EU | ECSI | all ingredients are listed |
| EU | REACH Reg. | not all ingredients are listed |
| JP | CSCL-ENCS | all ingredients are listed |
| KR | KECI | all ingredients are listed |
| MX | INSQ | not all ingredients are listed |
| NZ | NZIoC | all ingredients are listed |
| РН | PICCS | not all ingredients are listed |
| TR | CICR | not all ingredients are listed |
| TW | TCSI | all ingredients are listed |
| US | TSCA | all ingredients are listed |

Legend

| AICS | Australian Inventory of Chemical Substances |
|------------|---|
| CICR | Chemical Inventory and Control Regulation |
| CSCL-ENCS | List of Existing and New Chemical Substances (CSCL-ENCS) |
| DSL | Domestic Substances List (DSL) |
| ECSI | EC Substance Inventory (EINECS, ELINCS, NLP) |
| IECSC | Inventory of Existing Chemical Substances Produced or Imported in China |
| INSQ | National Inventory of Chemical Substances |
| KECI | Korea Existing Chemicals Inventory |
| NDSL | Non-domestic Substances List (NDSL) |
| NZIoC | New Zealand Inventory of Chemicals |
| PICCS | Philippine Inventory of Chemicals and Chemical Substances (PICCS) |
| REACH Reg. | REACH registered substances |
| TCSI | Taiwan Chemical Substance Inventory |
| TSCA | Toxic Substance Control Act |
| | |

according to Regulation (EC) No. 1907/2006 (REACH)



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15.2 Chemical Safety Assessment

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

SECTION 16: Other information

Indication of changes (revised safety data sheet)

Alignment to regulation: Regulation (EC) No. 1907/2006 (REACH), amended by 2020/878/EU

| Section | Former entry (text/value) | Actual entry (text/value) | Safety- relev- ant |
|---------|---|---|--------------------------|
| 2.1 | | Classification according to Regulation (EC) No 1272/2008 (CLP): change in the listing (table) | yes |
| 2.1 | Remarks: For full text of Hazard- and EU Hazard-state- ments: see SECTION 16. | | yes |
| 2.2 | | Pictograms: change in the listing (table) | yes |
| 2.2 | | Precautionary statements - prevention: change in the listing (table) | yes |
| 2.2 | Precautionary statements - response | | yes |
| 2.2 | | Precautionary statements - response: change in the listing (table) | yes |
| 2.3 | Other hazards: There is no additional information. | Other hazards | yes |
| 2.3 | | Results of PBT and vPvB assessment: This mixture does not contain any substances that are assessed to be a PBT or a vPvB. | yes |

Restructuring: section 9, section 14

Abbreviations and acronyms

| Abbr. | Descriptions of used abbreviations |
|------------|---|
| 2006/15/EC | Commission Directive establishing a second list of indicative occupational exposure limit values in imple- mentation of Council Directive 98/24/EC and amending Directives 91/322/EEC and 2000/39/EC |
| Acute Tox. | Acute toxicity |
| ADN | Accord européen relatif au transport international des marchandises dangereuses par voies de naviga- tion intérieures (European Agreement concerning the International Carriage of Dangerous Goods by In- land Waterways) |
| ADR | Accord relatif au transport international des marchandises dangereuses par route (Agreement concern- ing the International Carriage of Dangerous Goods by Road) |
| ATE | Acute Toxicity Estimate |
| CAS | Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances) |
| Ceiling-C | Ceiling value |
| CLP | Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures |
| DGR | Dangerous Goods Regulations (see IATA/DGR) |
| EC No | The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identi- fier of substances commercially available within the EU (European Union) |



according to Regulation (EC) No. 1907/2006 (REACH)



Single-Element ICP - Standard Solution ROTI®Star 1 000 mg/l Ho

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| Abbr. | Descriptions of used abbreviations |
|-------------|--|
| EH40/2005 | EH40/2005 Workplace exposure limits (http://www.nationalarchives.gov.uk/doc/open-government-li- cence/) |
| EINECS | European Inventory of Existing Commercial Chemical Substances |
| ELINCS | European List of Notified Chemical Substances |
| EmS | Emergency Schedule |
| 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 Na- tions |
| IATA | International Air Transport Association |
| IATA/DGR | Dangerous Goods Regulations (DGR) for the air transport (IATA) |
| ICAO | International Civil Aviation Organization |
| ICAO-TI | Technical instructions for the safe transport of dangerous goods by air |
| IMDG | International Maritime Dangerous Goods Code |
| IMDG-Code | International Maritime Dangerous Goods Code |
| index No | The Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008 |
| IOELV | Indicative occupational exposure limit value |
| LC50 | Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval |
| Met. Corr. | Substance or mixture corrosive to metals |
| NLP | No-Longer Polymer |
| Ox. Liq. | Oxidising liquid |
| PBT | Persistent, Bioaccumulative and Toxic |
| ppm | Parts per million |
| REACH | Registration, Evaluation, Authorisation and Restriction of Chemicals |
| RID | Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regula- tions concerning the International carriage of Dangerous goods by Rail) |
| Skin Corr. | Corrosive to skin |
| Skin Irrit. | Irritant to skin |
| STEL | Short-term exposure limit |
| SVHC | Substance of Very High Concern |
| TWA | Time-weighted average |
| VOC | Volatile Organic Compounds |
| vPvB | Very Persistent and very Bioaccumulative |
| WEL | Workplace exposure limit |

according to Regulation (EC) No. 1907/2006 (REACH)



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Key literature references and sources for data

Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures. Regulation (EC) No. 1907/2006 (REACH), amended by 2020/878/EU.

Agreement concerning the International Carriage of Dangerous Goods by Road (ADR). Regulations concerning the International Carriage of Dangerous Goods by Rail (RID). 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).

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

| Code | Text |
|------|--|
| H272 | May intensify fire; oxidiser. |
| H290 | May be corrosive to metals. |
| H314 | Causes severe skin burns and eye damage. |
| H315 | Causes skin irritation. |
| H318 | Causes serious eye damage. |
| H319 | Causes serious eye irritation. |
| H331 | Toxic if inhaled. |

Disclaimer

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

