

Safety Data Sheet

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

PP14

Version number: 8.0Revision: 2017-04-28Replaces version of: 2016-08-30 (7)First version: 25.05.2014

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

1.1 Product identifier

Trade name PP14 Stainless Steel Pickling Paste

Registration number (REACH) not relevant (mixture)

CAS number not relevant (mixture)

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

Relevant identified usesPickling of welding seams and stainless steel sur-

faces

Uses advised againstDo not use for squirting or spraying

Do not use for products which come into direct

contact with the skin

1.3 Details of the supplier of the safety data sheet

Duralloy PO Box 19,

Campbelltown NSW 2560 Australia

Phone: # 1300369456

e-mail (competent person) sales@duralloy.net.au

1.4 Emergency telephone number

As above or next toxicological information centre.

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

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

Classification acc. to GHS

| Section | Hazard class | Category | Hazard class and category | Hazard state- ment |
|---------|--|----------|---------------------------|-----------------------|
| 2.16 | substance or mixture corrosive to metals | 1 | Met. Corr. 1 | H290 |
| 3.10 | acute toxicity (oral) | 3 | Acute Tox. 3 | H301 |
| 3.1D | acute toxicity (dermal) | 2 | Acute Tox. 2 | H310 |

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Classification acc. to GHS

| Section | Hazard class | Category | Hazard class and category | Hazard state- ment |
|---------|-----------------------------------|----------|---------------------------|-----------------------|
| 3.11 | acute toxicity (inhal.) | 3 | Acute Tox. 3 | H331 |
| 3.2 | skin corrosion/irritation | 1A | Skin Corr. 1A | H314 |
| 3.3 | serious eye damage/eye irritation | 1 | Eye Dam. 1 | H318 |

for full text of abbreviations: see SECTION 16

The most important adverse physicochemical, human health and environmental effects

Skin corrosion produces an irreversible damage to the skin; namely, visible necrosis through the epidermis and into the dermis.

Spillage and fire water can cause pollution of watercourses.

Additional information

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

2.2 Label elements

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

Signal word danger

Pictograms

GHS05, GHS06



Hazard statements

H290 May be corrosive to metals.H301+H331 Toxic if swallowed or if inhaled.H310 Fatal in contact with skin.

H314 Causes severe skin burns and eye damage.

Precautionary statements

P260 Do not breathe mist/vapours/spray.

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/shower.

P310 Immediately call a POISON CENTER/doctor.

P405 Store locked up.

Hazardous ingredients for labellingHydrofluoric acid, nitric acid

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2.3 Other hazards

Special danger of slipping by leaking/spilling product.

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

Hazardous ingredients acc. to GHS

| Name of sub- stance | Identifier | Wt% | Classification acc. to GHS | Pictograms | M-Factors |
|------------------------|---|-----------|---|------------|-----------|
| nitric acid | CAS No 7697-37-2 EC No 231-714-2 REACH Reg. No 01-2119487297- 23-xxxx | 10 - < 25 | Ox. Liq. 2 / H272 Met. Corr. 1 / H290 Acute Tox. 3 / H331 Skin Corr. 1A / H314 Eye Dam. 1 / H318 | | |
| Hydrofluoric acid | CAS No 7664-39-3 EC No 231-634-8 Index No 009-003-00-1 REACH Reg. No 01-2119458860- 33-xxxx | 5-<10 | Met. Corr. 1 / H290 Acute Tox. 2 / H300 Acute Tox. 1 / H310 Acute Tox. 2 / H330 Skin Corr. 1A / H314 Eye Dam. 1 / H318 | | |

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SECTION 4: First aid measures

4.1 Description of first aid measures

General notes

Take off immediately all contaminated clothing.

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

Symptoms may develop several hours following exposure; medical observation therefore necessary for at least 48 hours.

Self-protection of the first aider.

Following inhalation

Provide fresh air.

Mouth to mouth resuscitation should be avoided. Use alternative methods, preferably with oxygen or compressed air driven apparatus.

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

Following skin contact

Wash with plenty of soap and water.

Rub with a gel containing calcium gluconate.

Call a physician immediately. Causes poorly healing wounds.

Following eye contact

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Remove contact lenses, if present and easy to do. Continue rinsing.

Rinse copiously with a calcium gluconate solution.

Following ingestion

Rinse mouth immediately and drink plenty of water.

Do NOT induce vomiting.

Call a physician immediately.

Notes for the doctor

none

4.2 Most important symptoms and effects, both acute and delayed

These information are not available.

4.3 Indication of any immediate medical attention and special treatment needed

none

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SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

water spray, alcohol resistant foam, fire extinguishing powder, carbon dioxide (CO2)

Unsuitable extinguishing media

water jet

5.2 Special hazards arising from the substance or mixture

Hazardous decomposition products: Section 10.

Substance or mixture corrosive to metals.

5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes.

Co-ordinate firefighting measures to the fire surroundings.

Do not allow firefighting water to enter drains or water courses.

Collect contaminated firefighting water separately.

Fight fire with normal precautions from a reasonable distance.

Special protective equipment for firefighters

chemical protective clothing, self-contained breathing apparatus (EN 133)

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Remove persons to safety.

Ventilate affected area.

Wearing of suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing.

For emergency responders

Wear breathing apparatus if exposed to vapours/dust/spray/gases.

Chemical protection suit.

6.2 Environmental precautions

Keep away from drains, surface and ground water.

Retain contaminated washing water and dispose of it.

If substance has entered a water course or sewer, inform the responsible authority.

6.3 Methods and material for containment and cleaning up

Advices on how to clean up a spill

Collect spillage.

Universal binder.

Avoid mixing with flammable or combustible substances (e.g. sawdust).

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Appropriate containment techniques

Neutralisation techniques.

Use of adsorbent materials.

Other information relating to spills and releases

Place in appropriate containers for disposal.

Ventilate affected area.

6.4 Reference to other sections

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

Measures to prevent fire as well as aerosol and dust generation

Use local and general ventilation.

Never add water to this product.

Specific notes/details

None.

Handling of incompatible substances or mixtures

Do not mix with alkali.

Metals (due to the release of hydrogen in an acid/alkaline medium).

Keep away from

organic absorbing material, caustic solutions, metals (including their alloys)

Measures to protect the environment

Avoid release to the environment.

Advice on general occupational hygiene

Do not eat, drink and smoke in work areas.

Wash hands after use.

Preventive skin protection (barrier creams/ointments) is recommended.

Remove contaminated clothing and protective equipment before entering eating areas.

7.2 Conditions for safe storage, including any incompatibilities

Corrosive conditions

Store in corrosive resistant container with a resistant inner liner.

Flammability hazards

None.

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Incompatible substances or mixtures

Incompatible materials: see section 10. Observe hints for combined storage.

Protect against external exposure, such as

heat, frost

Consideration of other advice

Keep away from food, drink and animal feedingstuffs.

Ventilation requirements

Keep any substance that emits harmful vapours or gases in a place that allows these to be permanently extracted.

Provision of sufficient ventilation.

Packaging compatibilities

Only packagings which are approved (e.g. acc. to ADR) may be used.

7.3 Specific end use(s)

No information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

| Occup | Occupational exposure limit values (Workplace Exposure Limits) | | | | | | | | | | |
|--------------|--|-----------|---------------|-----------------|--------------|----------------|---------------|-----------------|------------|--|--|
| Coun- try | Name of agent | CAS No | Nota- tion | Identi- fier | TWA [ppm] | TWA [mg/m³] | STEL [ppm] | STEL [mg/m³] | Source | | |
| EU | hydrogen fluoride | 7664-39-3 | | IOELV | 1.8 | 1.5 | 3 | 2.5 | 2000/39/EC | | |
| EU | nitric acid | 7697-37-2 | | IOELV | | | 1 | 2.6 | 2006/15/EC | | |
| GB | hydrogen fluoride | 7664-39-3 | F | WEL | 1.8 | 1.5 | 3 | 2.5 | EH40/2005 | | |
| GB | nitric acid | 7697-37-2 | | WEL | | | 1 | 2.6 | EH40/2005 | | |

Notation

F calculated as F (fluorine)

STEL short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-

minute period unless otherwise specified

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

8 hours time-weighted average

| Relevant DNELs of components of the mixture | | | | | | | | | |
|---|-----------|---------------|--------------------|--|------------------------|---------------------------------|--|--|--|
| Name of sub- stance | CAS No | End- point | Threshold level | Protection goal, route of expos- ure | Used in | Exposure time | | | |
| Hydrofluoric acid | 7664-39-3 | DNEL | 1.5 mg/m³ | human, inhalatory | worker (in- dustry) | chronic - sys- temic effects | | | |

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| Relevant DNELs of components of the mixture | | | | | | | | | |
|---|-----------|---------------|-----------------------|--|------------------------|-----------------------------|--|--|--|
| Name of sub- stance | CAS No | End- point | Threshold level | Protection goal, route of expos- ure | Used in | Exposure time | | | |
| Hydrofluoric acid | 7664-39-3 | DNEL | 2.5 mg/m ³ | human, inhalatory | worker (in- dustry) | acute - systemic effects | | | |
| Hydrofluoric acid | 7664-39-3 | DNEL | 1.5 μg/m³ | human, inhalatory | worker (in- dustry) | chronic - local effects | | | |
| Hydrofluoric acid | 7664-39-3 | DNEL | 2.5 mg/m³ | human, inhalatory | worker (in- dustry) | acute - local ef- fects | | | |

| Name of substance | CAS No | Endpoint | Threshold level | Environmental com- partment |
|-------------------|-----------|----------|----------------------------------|---------------------------------|
| Hydrofluoric acid | 7664-39-3 | PNEC | 0.9 ^{mg} / _l | freshwater |
| Hydrofluoric acid | 7664-39-3 | PNEC | 0.9 ^{mg} / _l | marine water |
| Hydrofluoric acid | 7664-39-3 | PNEC | 51 ^{mg} / _l | sewage treatment plant (STP) |
| Hydrofluoric acid | 7664-39-3 | PNEC | 11 ^{mg} / _{kg} | soil |

8.2 Exposure controls

Appropriate engineering controls

General ventilation.

Individual protection measures (personal protective equipment)

Eye/face protection

Wear eye/face protection.

Hand protection

| Material | Material thickness | Breakthrough times of the glove material |
|-------------------------|--------------------|--|
| PVC: polyvinyl chloride | ≥ 1,2 mm | >480 minutes (permeation: level 6) |

Wear suitable gloves.

Chemical protection gloves are suitable, which are tested according to EN 374.

Check leak-tightness/impermeability prior to use.

In the case of wanting to use the gloves again, clean them before taking off and air them well.

For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

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Respiratory protection

ABEK-P3.

Environmental exposure controls

Use appropriate container to avoid environmental contamination.

Keep away from drains, surface and ground water.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state liquid

Form pasty

Colour green

Odour pungent

Odour threshold these information are not available

Other safety parameters

pH (value) <1

Melting point/freezing point these information are not available

Initial boiling point and boiling range 106 °C

Flash point not applicable

Evaporation rate these information are not available

Flammability (solid, gas) not relevant

(fluid)

Explosive limits

Lower explosion limit (LEL) these information are not available

Upper explosion limit (UEL) these information are not available

Vapour pressure these information are not available

Density $1.2 \, \mathrm{g/_{cm^3}}$

Vapour density these information are not available

Relative density these information are not available

Solubility(ies)

Water solubility miscible in any proportion

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Partition coefficient

n-octanol/water (log KOW) these information are not available

Auto-ignition temperature these information are not available

Relative self-ignition temperature for solids not relevant

(Fluid)

Decomposition temperature these information are not available

Viscosity

Kinematic viscosity these information are not available

Dynamic viscosity these information are not available

Explosive properties not explosive

Oxidising properties shall not be classified as oxidising

9.2 Other information

None

SECTION 10: Stability and reactivity

10.1 Reactivity

Substance or mixture corrosive to metals.

10.2 Chemical stability

See below "Conditions to avoid".

10.3 Possibility of hazardous reactions

No known hazardous reactions.

10.4 Conditions to avoid

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

10.5 Incompatible materials

bases

Release of flammable materials with:

light metals (due to the release of hydrogen in an acid/alkaline medium), glass

10.6 Hazardous decomposition products

Nitrogen oxides (NOx).

Hydrogen fluoride (HF).

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SECTION 11: Toxicological information

11.1 Information on toxicological effects

Classification procedure

If not otherwise specified the classification is based on:

Ingredients of the mixture (additivity formula).

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

Acute toxicity

Toxic if swallowed.

Fatal in contact with skin.

Toxic if inhaled.

Acute toxicity of components of the mixture

| Name of substance | CAS No | Exposure route | Endpoint | Value | Species |
|-------------------|-----------|-----------------------|----------|--|---------|
| nitric acid | 7697-37-2 | inhalation: vapour | LC50 | >2.65 ^{mg} / _l /4h | rat |

Skin corrosion/irritation

Causes severe skin burns and eye damage.

Classification procedure

The classification is based on an extreme pH value.

Serious eye damage/eye irritation

Causes serious eye damage.

Respiratory or skin sensitisation

Skin sensitisation

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Respiratory sensitisation

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Germ cell mutagenicity

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Carcinogenicity

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

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Reproductive toxicity

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Specific target organ toxicity - single exposure

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Specific target organ toxicity - repeated exposure

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity (acute)

Test data are not available for the complete mixture.

Aquatic toxicity (acute) of components of the mixture

| Name of substance | CAS No | Endpoint | Value | Species | Exposure time |
|-------------------|-----------|----------|---|------------------------------------|------------------|
| nitric acid | 7697-37-2 | LC50 | 1.25 – 2.5 ^{mg} / _l | Ceriodaphnia dubia (water flea) | 48 h |
| Hydrofluoric acid | 7664-39-3 | EC50 | 48 ^{mg} / _I | aquatic invertebrates | 96 h |

Aquatic toxicity (chronic)

Test data are not available for the complete mixture.

Aquatic toxicity (chronic) of components of the mixture

| Name of substance | CAS No | Endpoint | Value | Species | Exposure time |
|-------------------|-----------|----------|--------------------------------|--|------------------|
| Hydrofluoric acid | 7664-39-3 | NOEC | 4 ^{mg} / _l | rainbow trout (Onco- rhynchus mykiss) | 21 d |

12.2 Persistence and degradability

Biodegradation

Anorganic product, is not eliminable from water by means of biological cleaning processes.

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Persistence

Data are not available.

12.3 Bioaccumulative potential

Data are not available.

Bioaccumulative potential of components of the mixture

| Name of substance | CAS No | BCF | Log KOW |
|-------------------|-----------|---------|---------|
| Hydrofluoric acid | 7664-39-3 | 53 - 58 | |

12.4 Mobility in soil

Data are not available.

12.5 Results of PBT and vPvB assessment

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

12.6 Other adverse effects

Data are not available.

Endocrine disrupting potential

None of the ingredients are listed.

Remarks

Water hazard class - WHC (Wassergefährdungsklasse): 2 (Hazardous to water)

SECTION 13: Disposal considerations

13.1 Waste treatment methods

This material and its container must be disposed of as hazardous waste.

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. Handle contaminated packages in the same way as the substance itself.

Remarks

Please consider the relevant national or regional provisions.

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SECTION 14: Transport information

14.1 UN number 2922

14.2 UN proper shipping name CORROSIVE LIQUID, TOXIC, N.O.S.

Technical name (hazardous ingredients)

Hydrofluoric acid, NITRIC ACID

14.3 Transport hazard class(es)

Class 8

Subsidiary risk(s) 6.1

(acute toxicity)

14.4 Packing group II

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) should be complied within the premises.

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code

The cargo is not intended to be carried in bulk.

14.8 Information for each of the UN Model Regulations

Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN)

UN number 2922

Proper shipping name UN2922, CORROSIVE LIQUID, TOXIC, N.O.S., (con-

tains: Hydrofluoric acid, NITRIC ACID), 8 (6.1), II,

(E)

Class 8

Classification code CT1

Packing group II

Danger label(s) 8+6.1



Special provisions (SP) 274, 802(ADN)

Excepted quantities (EQ) E2

Limited quantities (LQ) 1 L

Transport category (TC) 2.

Tunnel restriction code (TRC)

Hazard identification No 86

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Emergency Action Code

International Maritime Dangerous Goods Code (IMDG)

UN number 2922

Proper shipping name UN2922, CORROSIVE LIQUID, TOXIC, N.O.S., (con-

2X

tains: Hydrofluoric acid, NITRIC ACID), 8 (6.1), II

Class 8

Subsidiary risk(s) 6.1

Packing group II

Danger label(s) 8+6.1

Special provisions (SP) 274

Excepted quantities (EQ) E2

Limited quantities (LQ) 1 L

EmS F-A, S-B

Stowage category B

International Civil Aviation Organization (ICAO-IATA/DGR)

UN number 2922

Proper shipping name UN2922, Corrosive liquid, toxic, n.o.s., (contains:

Hydrofluoric acid, NITRIC ACID), 8 (6.1), II

Class 8

Subsidiary risk(s) 6.1

Packing group II

Danger label(s) 8+6.1

Special provisions (SP) A3, 274

Excepted quantities (EQ) E2

Limited quantities (LQ) 0,5 L

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SECTION 15: Regulatory information

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

Relevant provisions of the European Union (EU)

Restrictions according to REACH, Annex XVII

none of the ingredients are listed

| Dangerous substances with restrictions (REACH, Annex XVII) | | | | | |
|--|---|--------|------------------------------|--|----|
| Name of substance | Name acc. to inventory | CAS No | Type of registra- tion | Condi- tions of restric- tion | No |
| PP14 | this product meets the criter- ia for classification in accord- ance with Regulation No 1272/2008/EC | | 1907/2006/EC an- nex XVII | R3 | 3 |

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,
 - 2. Articles not complying with paragraph 1 shall not be placed on the market.
 - 3. 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 R65 or 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 Community provisions relating to the classification, packaging and labelling of dangerous substances and mixtures, suppliers shall ensure, before the placing on the market, that the following requirements are met:
 - (a) lamp oils, labelled with R65 or 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 R65 or H304, intended for supply to the general public are legibly and in-
 - delibly marked by 1 December 2010 as follows: 'Just a sip of grill lighter may lead to life threatening lung damage';
 - (c) lamp oils and grill lighters, labelled with R65 or H304, intended for supply to the general public are packaged in black opaque containers not exceeding 1 litre by 1 December 2010.
 - 6. No later than 1 June 2014, the Commission shall request the European Chemicals Agency to prepare a dossier, in accordance with Article 69 of the present Regulation with a view to ban, if appropriate, grill lighter fluids and fuel for decorative lamps, labelled R65 or H304, intended for supply to the general public.
 - 7. Natural or legal persons placing on the market for the first time lamp oils and grill lighter fluids, labelled with R65 or H304, shall by 1 December 2011, and annually thereafter, provide data on alternatives to lamp oils and grill lighter fluids labelled R65 or H304 to the competent authority in the Member State concerned. Member States shall make those data available to the Commission.

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List of substances subject to authorisation (REACH, Annex XIV)

none of the ingredients are listed

Seveso Directive

| 2012/18/EU (Seveso III) | | | | |
|-------------------------|---------------------------------------|---|-----|-------|
| No | Dangerous substance/hazard categories | Qualifying quantity (tonnes) for the application of lower and upper-tier requirements | | Notes |
| H2 | acute toxic (cat. 2 + cat. 3, inhal.) | 50 | 200 | 41) |

Notation

- 41) category 2, all exposure routes
 - category 3, inhalation exposure route

Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS) - Annex II

none of the ingredients are listed

Regulation 166/2006/EC concerning the establishment of a European Pollutant Release and Transfer Register (PRTR)

none of the ingredients are listed

Directive 2000/60/EC establishing a framework for Community action in the field of water policy (WFD)

none of the ingredients are listed

Regulation 98/2013/EU on the marketing and use of explosives precursors

| Explosives precursors which are subject to restrictions | | | |
|---|-----------|----------------------|-------------|
| Name of substance | CAS No | Type of registration | Limit value |
| nitric acid | 7697-37-2 | Annex I | 3 % 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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SECTION 16: Other information

16.1 Indication of changes (revised safety data sheet)

| Section | Former entry (text/value) | Actual entry (text/value) |
|---------|---------------------------|---|
| 2.2 | | Hazardous ingredients for labelling: Hydrofluoric acid, nitric acid |
| 3.2 | | Hazardous ingredients acc. to GHS: change in the listing (table) |
| 8.1 | | Relevant DNELs of components of the mixture: change in the listing (table) |
| 8.1 | | Relevant PNECs of components of the mixture: change in the listing (table) |
| 15.1 | | Dangerous substances with restrictions (REACH, Annex XVII): change in the listing (table) |

Abbreviations and acronyms

| Abbr. | Descriptions of used abbreviations |
|------------|---|
| 2000/39/EC | Comission Directive establishing a first list of indicative occupational exposure limit values in implementation of Council Directive 98/24/EC |
| 2006/15/EC | Comission Directive establishing a second list of indicative occupational exposure limit values in implementation 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 navigation intérieures (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways) |
| ADR | Accord européen relatif au transport international des marchandises dangereuses par route (European Agreement concerning the International Carriage of Dangerous Goods by Road) |
| BCF | Bioconcentration factor |
| CAS | Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances) |
| CLP | Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures |
| DGR | Dangerous Goods Regulations (see IATA/DGR) |
| DNEL | Derived No-Effect Level |
| EC No | The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union) |
| EH40/2005 | EH40/2005 Workplace exposure limits (http://www.nationalarchives.gov.uk/doc/open-government-licence/) |
| EINECS | European Inventory of Existing Commercial Chemical Substances |

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| Abbr. | Descriptions of used abbreviations |
|-------------|--|
| 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 Nations |
| IATA | International Air Transport Association |
| IATA/DGR | Dangerous Goods Regulations (DGR) for the air transport (IATA) |
| ICAO | International Civil Aviation Organization |
| IMDG | International Maritime Dangerous Goods Code |
| 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 |
| log KOW | n-Octanol/water |
| MARPOL | International Convention for the Prevention of Pollution from Ships (abbr. of "Marine Pollutant") |
| Met. Corr. | Substance or mixture corrosive to metals |
| NLP | No-Longer Polymer |
| Ox. Liq. | Oxidising liquid |
| PBT | Persistent, Bioaccumulative and Toxic |
| PNEC | Predicted No-Effect Concentration |
| 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 |
| TWA | Time-weighted average |
| vPvB | Very Persistent and very Bioaccumulative |
| WEL | Workplace exposure limit |

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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 2015/830/EU.

Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN).

International Maritime Dangerous Goods Code (IMDG).

Dangerous Goods Regulations (DGR) for the air transport (IATA).

Classification procedure

Physical and chemical properties.

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 chapter 2 and 3)

| Code | Text |
|------|--|
| H272 | May intensify fire; oxidiser. |
| H290 | May be corrosive to metals. |
| H300 | Fatal if swallowed. |
| H301 | Toxic if swallowed. |
| H310 | Fatal in contact with skin. |
| H314 | Causes severe skin burns and eye damage. |
| H318 | Causes serious eye damage. |
| H330 | Fatal if inhaled. |
| 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.

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