

DESCALER CLEANERS FOR FAP FILTERS

Safety Data Sheet

According to Annex II to REACH - Regulation 2015/830

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

1.1. Product identifier

Code: 411 00 19420-6051
Product name: DESCALER CLEANERS FOR FAP FILTERS

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

Intended use: Water based detergent

1.3. Details of the supplier of the safety data sheet

Name: Meccanocar Italia S.r.l.
Full address: Via San Francesco, 22
District and Country: 56033 Capannoli (PI)
Italy

Tel. +39 0587 609433

Fax +39 0587 607145

e-mail address of the competent person
responsible for the Safety Data Sheet

moreno.meini@meccanocar.it

1.4. Emergency telephone number

For urgent inquiries refer to

National Poisons Information Service: +44 121 507 4123

SECTION 2. Hazards identification

2.1. Classification of the substance or mixture

The product is classified as hazardous pursuant to the provisions set forth in (EC) Regulation 1272/2008 (CLP) (and subsequent amendments and supplements). The product thus requires a safety datasheet that complies with the provisions of (EU) Regulation 2015/830. Any additional information concerning the risks for health and/or the environment are given in sections 11 and 12 of this sheet.

Hazard classification and indication:

| | | |
|--------------------------------|------|--|
| Skin corrosion, category 1B | H314 | Causes severe skin burns and eye damage. |
| Serious eye damage, category 1 | H318 | Causes serious eye damage. |

2.2. Label elements

Hazard labelling pursuant to EC Regulation 1272/2008 (CLP) and subsequent amendments and supplements.

Hazard pictograms:

DESCALER CLEANERS FOR FAP FILTERS

Signal words: Danger

Hazard statements:

H314 Causes severe skin burns and eye damage.

Precautionary statements:

P260 Do not breathe dust / fume / gas / mist / vapours / spray.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P280 Wear protective gloves/ protective clothing / eye protection / face protection.
P310 Immediately call a POISON CENTER / doctor / . . .
P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

Contains: SODIUM HYDROXIDE
ETHYLENDIAMMINOTETRAACETATE OF TETRASODIUM

2.3. Other hazards

On the basis of available data, the product does not contain any PBT or vPvB in percentage greater than 0,1%.

SECTION 3. Composition/information on ingredients

3.2. Mixtures

Contains:

| Identification | x = Conc. % | Classification 1272/2008 (CLP) |
|--|-------------------|---|
| 2-(2-BUTOXYETHOXY)ETHANOL | | |
| CAS 112-34-5 | $8,5 \leq x < 10$ | Eye Irrit. 2 H319 |
| EC 203-961-6 | | |
| INDEX 603-096-00-8 | | |
| Reg. no. 01-2119475104-44-XXXX | | |
| SODIUM HYDROXIDE | | |
| CAS 1310-73-2 | $4 \leq x < 4,5$ | Skin Corr. 1A H314, Eye Dam. 1 H318 |
| EC 215-185-5 | | |
| INDEX 011-002-00-6 | | |
| Reg. no. 01-2119457892-27-XXXX | | |
| ETHYLENDIAMMINOTETRAACETA TE OF TETRASODIUM | | |
| CAS 64-02-8 | $4 \leq x < 4,5$ | Acute Tox. 4 H302, Acute Tox. 4 H332, STOT RE 2 H373, Eye Dam. 1 H318 |

DESCALER CLEANERS FOR FAP FILTERS

EC 200-573-9

INDEX 607-428-00-2

Reg. no. 01-2119486762-27-XXXX

The full wording of hazard (H) phrases is given in section 16 of the sheet.

SECTION 4. First aid measures**4.1. Description of first aid measures**

EYES: Remove contact lenses, if present. Wash immediately with plenty of water for at least 30-60 minutes, opening the eyelids fully. Get medical advice/attention.

SKIN: Remove contaminated clothing. Rinse skin with a shower immediately. Get medical advice/attention.

INGESTION: Have the subject drink as much water as possible. Get medical advice/attention. Do not induce vomiting unless explicitly authorised by a doctor.

INHALATION: Get medical advice/attention immediately. Remove victim to fresh air, away from the accident scene. If the subject stops breathing, administer artificial respiration. Take suitable precautions for rescue workers.

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

Specific information on symptoms and effects caused by the product are unknown.

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

Information not available

SECTION 5. Firefighting measures**5.1. Extinguishing media**

SUITABLE EXTINGUISHING EQUIPMENT

The extinguishing equipment should be of the conventional kind: carbon dioxide, foam, powder and water spray.

UNSUITABLE EXTINGUISHING EQUIPMENT

None in particular.

5.2. Special hazards arising from the substance or mixture

HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE

Do not breathe combustion products.

5.3. Advice for firefighters

GENERAL INFORMATION

Use jets of water to cool the containers to prevent product decomposition and the development of substances potentially hazardous for health. Always wear full fire prevention gear. Collect extinguishing water to prevent it from draining into the sewer system. Dispose of contaminated water used for extinction and the remains of the fire according to applicable regulations.

SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS

Normal fire fighting clothing i.e. fire kit (BS EN 469), gloves (BS EN 659) and boots (HO specification A29 and A30) in combination with self-contained open circuit positive pressure compressed air breathing apparatus (BS EN 137).

SECTION 6. Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures**

DESCALER CLEANERS FOR FAP FILTERS

Block the leakage if there is no hazard.

Wear 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. These indications apply for both processing staff and those involved in emergency procedures.

6.2. Environmental precautions

The product must not penetrate into the sewer system or come into contact with surface water or ground water.

6.3. Methods and material for containment and cleaning up

Collect the leaked product into a suitable container. Evaluate the compatibility of the container to be used, by checking section 10. Absorb the remainder with inert absorbent material.

Make sure the leakage site is well aired. Contaminated material should be disposed of in compliance with the provisions set forth in point 13.

6.4. Reference to other sections

Any information on personal protection and disposal is given in sections 8 and 13.

SECTION 7. Handling and storage**7.1. Precautions for safe handling**

Ensure that there is an adequate earthing system for the equipment and personnel. Avoid contact with eyes and skin. Do not breathe powders, vapours or mists. Do not eat, drink or smoke during use. Wash hands after use. Avoid leakage of the product into the environment.

7.2. Conditions for safe storage, including any incompatibilities

Store only in the original container. Store in a ventilated and dry place, far away from sources of ignition. Keep containers well sealed. Keep the product in clearly labelled containers. Avoid overheating. Avoid violent blows. Keep containers away from any incompatible materials, see section 10 for details.

7.3. Specific end use(s)

Information not available

SECTION 8. Exposure controls/personal protection**8.1. Control parameters**

Regulatory References:

| | | |
|-----|----------------|---|
| ESP | España | LÍMITES DE EXPOSICIÓN PROFESIONAL PARA AGENTES QUÍMICOS EN ESPAÑA 2019 (INSST) |
| FRA | France | Valeurs limites d'exposition professionnelle aux agents chimiques en France. ED 984 - INRS |
| GBR | United Kingdom | EH40/2005 Workplace exposure limits (Third edition, published 2018) |
| ITA | Italia | DIRETTIVA (UE) 2017/164 DELLA COMMISSIONE del 31 gennaio 2017 |
| NOR | Norge | Fastsatt av Arbeids- og sosialdepartementet 21. august 2018 med hjemmel i lov 17. juni 2005 nr. 62 om arbeidsmiljø, arbeidstid, stillingsvern mv. (arbeidsmiljøloven) § 1-3, § 1-4 og § 4-5 |
| PRT | Portugal | Ministério da Economia e do Emprego Consolida as prescrições mínimas em matéria de protecção dos trabalhadores contra os riscos para a segurança e a saúde devido à exposição a agentes químicos no trabalho - Diário da República, 1.ª série - N.º 111 - 11 de junho de 2018 |
| EU | OEL EU | Directive (EU) 2017/2398; Directive (EU) 2017/164; Directive 2009/161/EU; Directive 2006/15/EC; Directive 2004/37/EC; Directive 2000/39/EC; Directive 91/322/EEC. |
| | TLV-ACGIH | ACGIH 2019 |

2-(2-BUTOXYETHOXY)ETHANOL**Threshold Limit Value**

DESCALER CLEANERS FOR FAP FILTERS

| Type | Country | TWA/8h | | STEL/15min | | Remarks / Observations |
|-----------|---------|--------|-----|------------|-----|------------------------|
| | | mg/m3 | ppm | mg/m3 | ppm | |
| VLA | ESP | 67,5 | 10 | 101,2 | 15 | |
| WEL | GBR | 67,5 | 10 | 101,2 | 15 | |
| VLEP | ITA | 67,5 | 10 | 101,2 | 15 | |
| TLV | NOR | 68 | 10 | | | |
| VLE | PRT | 67,5 | 10 | 101,2 | 15 | |
| OEL | EU | 67,5 | 10 | 101,2 | 15 | |
| TLV-ACGIH | | 66 | 10 | | | |

Predicted no-effect concentration - PNEC

| | | | | |
|---|--|------|--|-------|
| Normal value in fresh water | | 1,1 | | mg/l |
| Normal value in marine water | | 0,11 | | mg/l |
| Normal value for fresh water sediment | | 4,4 | | mg/kg |
| Normal value for marine water sediment | | 0,44 | | mg/kg |
| Normal value of STP microorganisms | | 200 | | mg/l |
| Normal value for the food chain (secondary poisoning) | | 56 | | mg/kg |
| Normal value for the terrestrial compartment | | 0,32 | | mg/kg |

Health - Derived no-effect level - DNEL / DMEL

| Route of exposure | Effects on consumers | | | | Effects on workers | | | |
|-------------------|----------------------|----------------|---------------|------------------|--------------------|----------------|---------------|------------------|
| | Acute local | Acute systemic | Chronic local | Chronic systemic | Acute local | Acute systemic | Chronic local | Chronic systemic |
| Oral | | | | 5 mg/kg bw/d | | | | |
| Inhalation | | | 40,5 mg/m3 | 40,5 mg/m3 | | | 67,5 mg/m3 | 67,5 mg/m3 |
| Skin | | | | 50 mg/kg bw/d | | | | 83 mg/kg bw/d |

ETHYLENDIAMMINOTETRAACETATE OF TETRASODIUM**Threshold Limit Value**

| Type | Country | TWA/8h | | STEL/15min | | Remarks / Observations |
|-----------|---------|--------|-----|------------|-----|------------------------|
| | | mg/m3 | ppm | mg/m3 | ppm | |
| TLV-ACGIH | | 3 | | | | RESP |
| TLV-ACGIH | | 2 | | | | |
| TLV-ACGIH | | 10 | | | | INHAL |

Predicted no-effect concentration - PNEC

| | | | | |
|--|--|------|--|-------|
| Normal value in fresh water | | 2,2 | | mg/l |
| Normal value in marine water | | 0,22 | | mg/l |
| Normal value for water, intermittent release | | 1,2 | | mg/l |
| Normal value of STP microorganisms | | 43 | | mg/l |
| Normal value for the terrestrial compartment | | 0,72 | | mg/kg |

Health - Derived no-effect level - DNEL / DMEL

| Route of exposure | Effects on consumers | | | | Effects on workers | | | |
|-------------------|----------------------|----------------|---------------|------------------|--------------------|----------------|---------------|------------------|
| | Acute local | Acute systemic | Chronic local | Chronic systemic | Acute local | Acute systemic | Chronic local | Chronic systemic |
| Oral | | | | 25 mg/kg bw/d | | | | |
| Inhalation | | 1,2 mg/m3 | | 0,6 mg/m3 | | 3 mg/m3 | | 1,5 mg/m3 |

DESCALER CLEANERS FOR FAP FILTERS

SODIUM HYDROXIDE

Threshold Limit Value

| Type | Country | TWA/8h | | STEL/15min | | Remarks / Observations |
|-----------|---------|--------|-----|------------|-----|------------------------|
| | | mg/m3 | ppm | mg/m3 | ppm | |
| VLA | ESP | | | 2 | | |
| VLEP | FRA | 2 | | | | |
| WEL | GBR | | | 2 | | |
| TLV | NOR | 2 | | | | |
| TLV-ACGIH | | | | 2 (C) | | |

Health - Derived no-effect level - DNEL / DMEL

| Route of exposure | Effects on consumers | | | | Effects on workers | | | |
|-------------------|----------------------|----------------|---------------|------------------|--------------------|----------------|---------------|------------------|
| | Acute local | Acute systemic | Chronic local | Chronic systemic | Acute local | Acute systemic | Chronic local | Chronic systemic |
| Inhalation | | | | 1 mg/m3 | | | | 1 mg/m3 |

Legend:

(C) = CEILING ; INHAL = Inhalable Fraction ; RESP = Respirable Fraction ; THORA = Thoracic Fraction.

VND = hazard identified but no DNEL/PNEC available ; NEA = no exposure expected ; NPI = no hazard identified.

8.2. Exposure controls

As the use of adequate technical equipment must always take priority over personal protective equipment, make sure that the workplace is well aired through effective local aspiration.

When choosing personal protective equipment, ask your chemical substance supplier for advice.

Personal protective equipment must be CE marked, showing that it complies with applicable standards.

Provide an emergency shower with face and eye wash station.

HAND PROTECTION

Protect hands with category III work gloves (see standard EN 374).

The following should be considered when choosing work glove material: compatibility, degradation, failure time and permeability.

The work gloves' resistance to chemical agents should be checked before use, as it can be unpredictable. The gloves' wear time depends on the duration and type of use.

SKIN PROTECTION

Wear category II professional long-sleeved overalls and safety footwear (see Regulation 2016/425 and standard EN ISO 20344). Wash body with soap and water after removing protective clothing.

EYE PROTECTION

Wear airtight protective goggles (see standard EN 166).

RESPIRATORY PROTECTION

If the threshold value (e.g. TLV-TWA) is exceeded for the substance or one of the substances present in the product, use a mask with a type A filter whose class (1, 2 or 3) must be chosen according to the limit of use concentration. (see standard EN 14387). In the presence of gases or vapours of various kinds and/or gases or vapours containing particulate (aerosol sprays, fumes, mists, etc.) combined filters are required.

Respiratory protection devices must be used if the technical measures adopted are not suitable for restricting the worker's exposure to the threshold values considered. The protection provided by masks is in any case limited.

If the substance considered is odourless or its olfactory threshold is higher than the corresponding TLV-TWA and in the case of an emergency, wear open-circuit compressed air breathing apparatus (in compliance with standard EN 137) or external air-intake breathing apparatus (in compliance with standard EN 138). For a correct choice of respiratory protection device, see standard EN 529.

ENVIRONMENTAL EXPOSURE CONTROLS

DESCALER CLEANERS FOR FAP FILTERS

The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensure compliance with environmental standards.

2-(2-BUTOXYETHOXY)ETHANOL

Gloves in butyl rubber, Neoprene™ rubber or nitrile rubber.

triethanolamine

Chemical resistant protective gloves (EN 374)

Suitable materials also with prolonged direct contact (Recommended: protection index 6, corresponding to > 480 minutes of permeation time according to EN 374):

for example: nitrile rubber (0.4 mm), chloroprene rubber (0.5 mm), polyvinyl chloride (0.7 mm) and others

The manufacturer's instructions for use must be observed due to the wide variety of types.

Additional note: specifications are based on tests, literature data and information from glove manufacturers or derive from similar substances by analogy.

Due to many conditions (eg temperature), it should be considered that the practical use of a chemical protective glove in practice can be much shorter than the breakthrough time determined through testing.

ETHYLENDIAMMINOTETRAACETATE OF TETRASODIUM

Suitable materials also with prolonged direct contact (Recommended: protection index 6, corresponding to > 480 minutes of breakthrough time according to EN 374): e.g. nitrile rubber (0.4 mm), chloroprene rubber (0.5 mm), polyvinyl chloride (0.7 mm).

SECTION 9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

| | |
|--|------------------|
| Appearance | liquido limpido |
| Colour | Not available |
| Odour | characteristic |
| Odour threshold | Not available |
| pH | 9,5-10,5 |
| Melting point / freezing point | Not available |
| Initial boiling point | 100 °C |
| Boiling range | 100 °C |
| Flash point | Not available |
| Evaporation rate | Not available |
| Flammability (solid, gas) | Not available |
| Lower inflammability limit | Not available |
| Upper inflammability limit | Not available |
| Lower explosive limit | Not available |
| Upper explosive limit | Not available |
| Vapour pressure | Not available |
| Vapour density | Not available |
| Relative density | Not available |
| Solubility | soluble in water |
| Partition coefficient: n-octanol/water | Not available |

DESCALER CLEANERS FOR FAP FILTERS

| | |
|---------------------------|---------------|
| Auto-ignition temperature | Not available |
| Decomposition temperature | Not available |
| Viscosity | Not available |
| Explosive properties | Not available |
| Oxidising properties | Not available |

9.2. Other information

Information not available

SECTION 10. Stability and reactivity**10.1. Reactivity**

There are no particular risks of reaction with other substances in normal conditions of use.

10.2. Chemical stability

The product is stable in normal conditions of use and storage.

2-(2-BUTOXYETHOXY)ETHANOL

May form peroxides upon prolonged exposure to air and light.

ETHYLENDIAMMINOTETRAACETATE OF TETRASODIUM

Decomposition temperatures > 150 ° C

SODIUM HYDROXIDE

Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

No hazardous reactions are foreseeable in normal conditions of use and storage.

2- (2-BUTOXYETHOXY) ETHANOL

May react with: oxidising substances. May form peroxides with: oxygen. Develops hydrogen on contact with: aluminum. May form explosive mixtures with: air.

triethanolamine

Reacts with acids. Reacts with oxidizing agents. Reacts with acid chlorides. Reacts with halogenated compounds. The progress of the reaction is exothermic. Incompatible with acid chlorides and acid anhydrides.

ETHYLENDIAMMINOTETRAACETATE OF TETRASODIUM

It can corrode metals in the presence of water or moisture

SODIUM HYDROXIDE

- Emits hydrogen by reaction with metals.
- Exothermic reaction with strong acids.

DESCALER CLEANERS FOR FAP FILTERS

- Risk of violent reaction.
- Risk of explosion.
- Reacts violently with water.

10.4. Conditions to avoid

None in particular. However the usual precautions used for chemical products should be respected.

2- (2-BUTOXYETHOXY) ETHANOL

Avoid exposure to: air.

high temperatures and sources of ignition. Prolonged exposure to air / oxygen and light.

triethanolamine

Avoid extreme temperatures. See section MSDS 7 - Handling and storage.

SODIUM HYDROXIDE

Avoid exposure to: air,moisture,sources of heat.

- Far from direct sunlight.
- To avoid thermal decomposition, do not overheat.
- Exposure to humidity.
- Freezing

10.5. Incompatible materials

2- (2-BUTOXYETHOXY) ETHANOL

Incompatible with: oxidising substances, strong acids, alkaline metals.

Oxidizing agents.

triethanolamine

Substances to avoid:
oxidizing agents, nitrosating agents, acids, acids forming substances

ETHYLENDIAMMINOTETRAACETATE OF TETRASODIUM

Oxidizing agents, amphoteric metals and light metals

SODIUM HYDROXIDE

Incompatible with: strong acids, ammonia, zinc, lead, aluminum, water, flammable liquids.

Metals, oxidizing agents, water, acids, aluminum, other light metals and their alloys.

10.6. Hazardous decomposition products

2- (2-BUTOXYETHOXY) ETHANOL

May develop: hydrogen.

Carbon oxides on combustion.

DESCALER CLEANERS FOR FAP FILTERS

triethanolamine

Hazardous decomposition products:
carbon oxides, nitrogen oxides, nitrous gases

SECTION 11. Toxicological information

11.1. Information on toxicological effects

Metabolism, toxicokinetics, mechanism of action and other information

Information not available

Information on likely routes of exposure

2-(2-BUTOXYETHOXY)ETHANOL

WORKERS: inhalation; contact with the skin.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

2-(2-BUTOXYETHOXY)ETHANOL

May be absorbed by inhalation, ingestion and skin contact; is irritating for the skin and especially for the eyes. May cause damage to the spleen. At room temperature the danger of inhalation is unlikely, due to the low vapour pressure of the substance.

Interactive effects

Information not available

ACUTE TOXICITY

LC50 (Inhalation) of the mixture:

> 5 mg/l

LD50 (Oral) of the mixture:

>2000 mg/kg

LD50 (Dermal) of the mixture:

Not classified (no significant component)

SODIUM HYDROXIDE

LD50 (Oral) 1350 mg/kg Rat

LD50 (Dermal) 1350 mg/kg Rat

ETHYLENDIAMMINOTETRAACETATE OF TETRASODIUM

LD50 (Oral) 1780 mg/kg Ratto (equivalente o similare a OECD 401)

DESCALER CLEANERS FOR FAP FILTERS**TRIETHANOLAMINE**

LD50 (Oral) 4190 mg/kg Rat

LD50 (Dermal) > 2000 mg/kg Rabbit

2-(2-BUTOXYETHOXY)ETHANOL

LD50 (Oral) 3384 mg/kg Rat

LD50 (Dermal) 2700 mg/kg Rabbit

ETHYLENDIAMMINOTETRAACETATE OF TETRASODIUM

Method: equivalent or similar to OECD 401

Reliability: 2

Species: Rat (Wistar; male / female)

Route of exposure: oral

Results: LD50 = 1780 mg / kg

Method: OECD 412

Reliability: 1

Species: Rat (wistar; male)

Route of exposure: inhalation (aerosol)

Results: harmful by inhalation

SKIN CORROSION / IRRITATION

Corrosive for the skin

2-(2-BUTOXYETHOXY)ETHANOL

Method: OECD 404

Reliability: 2

Species: Rabbit (Small white Russian, Chbb-SPF)

Route of exposure: Dermal

Results: Slightly irritating

ETHYLENDIAMMINOTETRAACETATE OF TETRASODIUM

Method: OECD 404

Reliability: 1

Species: Rabbit (Vienna White)

Route of exposure: cutaneous

Results: not irritating

SODIUM HYDROXIDE

Method: Not indicated

Reliability: 1

Human species

Route of exposure: Dermal

Results: Irritating

Bibliographic reference: York M, Griffiths E, Whittle E and Basketter DA, Evaluation of a human patch test for the identification and classification of skin irritation potential (1996)

SERIOUS EYE DAMAGE / IRRITATION

Causes serious eye damage

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ETHYLENDIAMMINOTETRAACETATE OF TETRASODIUM

Method: equivalent or similar to OECD 405

Reliability: 2

Species: Rabbit (Vienna White)

Route of exposure: ocular

Results: causes serious eye damage (Harmonized classification, Annex VI, CLP Reg.)

SODIUM HYDROXIDE

Method: OECD 405

Reliability: 1

Species: Rabbit (New Zealand White)

Route of exposure: Ocular

Results: Irritating

Bibliographic reference: Jacobs GA, OECD Eye Irritation Tests on Sodium Hydroxide (1992)

RESPIRATORY OR SKIN SENSITIZATION

Does not meet the classification criteria for this hazard class

ETHYLENDIAMMINOTETRAACETATE OF TETRASODIUM

Method: OECD 406 - Read across

Reliability: 1

Species: guinea pig (Hartley; female)

Route of exposure: cutaneous

Results: non sensitizing

SODIUM HYDROXIDE

Method: According to the OECD SIDS document for sodium hydroxide

Reliability: 2

Species: Human (male)

Route of exposure: Dermal

Results: Not sensitizing

Bibliographic reference: Park et al., Journal of Dermatological Science, 10, 159-165 (1995).

Skin sensitization

2- (2-BUTOXYETHOXY) ETHANOL

Method: Equivalent or similar to OECD 406

Reliability: 2

Species: guinea pig

Route of exposure: Dermal

Results: Not sensitizing

GERM CELL MUTAGENICITY

Does not meet the classification criteria for this hazard class

2- (2-BUTOXYETHOXY) ETHANOL

Method: Equivalent or similar to OECD 471 in vitro test

Reliability: 2

Species: *S. typhimurium*

Results: Negative with and without metabolic activation

Method: Equivalent or similar to OECD 475 in vivo test

Reliability: 2

Species: Mouse (CD-1; male / female)

Route of exposure: Oral

Results: Negative

DESCALER CLEANERS FOR FAP FILTERS

ETHYLENDIAMMINOTETRAACETATE OF TETRASODIUM

Method: equivalent or similar to 471 - In vitro test

Reliability: 2

Species: S. typhimurium, E.Coli

Results: negative with and without metabolic activation

Method: OECD 474 - in vivo test

Reliability: 1

Species: Mouse (NMR1; male)

Route of exposure: oral

Results: negative.

CARCINOGENICITY

Does not meet the classification criteria for this hazard class

ETHYLENDIAMMINOTETRAACETATE OF TETRASODIUM

Method: study report (1977)

Reliability: 2

Species: Mouse (B6C3F1; male / female)

Route of exposure: oral

Results: negative. NOAEL (carcinogenicity) = 938 mg / kg bw / day

REPRODUCTIVE TOXICITY

Does not meet the classification criteria for this hazard class

ETHYLENDIAMMINOTETRAACETATE OF TETRASODIUM

Reliability: 2

Species: Rat (Wistar; male / female)

Route of exposure: oral

Results: negative. NOAEL (reproduction) > = 250 mg / kg bw / day

Bibliographic reference: Oser, B.L. et al., Toxicology and Applied Pharmacology (1963)

Method: not indicated

Reliability: 2

Species: Rat (Albino)

Route of exposure: oral

Results: negative. NOAEL (development, fetus) > = 1 374 mg / kg bw / day

Bibliographic reference: Schardein, J.L. et al., Toxicology and Applied Pharmacology (1981)

Adverse effects on development of the offspring

2-(2-BUTOXYETHOXY)ETHANOL

Method: Equivalent or similar to OECD 414

Reliability: 2

Species: Rabbit (New Zealand White)

Route of exposure: Dermal

Results: NOAEL 1 000 mg / kg bw / day

STOT - SINGLE EXPOSURE

Does not meet the classification criteria for this hazard class

2- (2-BUTOXYETHOXY) ETHANOL

Based on available data and through expert judgment, the substance is not classified in the target organ toxicity class for single exposure.

triethanolamine

DESCALER CLEANERS FOR FAP FILTERS

Based on available data and through expert judgment, the substance is not classified in the target organ toxicity class for single exposure.

ETHYLENDIAMMINOTETRAACETATE OF TETRASODIUM

Based on available data and through expert judgment, the substance is not classified in the target organ toxicity class for single exposure.

STOT - REPEATED EXPOSURE

Does not meet the classification criteria for this hazard class

2- (2-BUTOXYETHOXY) ETHANOL

Method: OECD 408

Reliability: 2

Species: Rat (Fischer 344; male / female)

Route of exposure: Oral

Results: NOAEL 250 mg / kg bw / day

Method: OECD 413

Reliability: 1

Species: Rat (Wistar; male / female)

Route of exposure: Inhalation

Results: NOAEL 14 ppm

Method: Equivalent or similar to OECD 411

Reliability: 2

Species: Rat (Sprague-Dawley; male / female)

Route of exposure: Dermal

Results: NOAEL

<200 mg / kg bw / day

triethanolamine

Method: OECD 408

Reliability: 2

Species: Rat (Cox CD; male / female)

Route of exposure: Oral

Results: NOAEL 1 000 mg / kg bw / day

Method: OECD 412

Reliability: 1

Species: Rat (Wistar; male / female)

Route of exposure: Inhalation

Results: NOAEC 500 mg / m³ air

Method: Equivalent or similar to OECD 411

Reliability: 2

Species: Rat (Fischer 344; male / female)

Route of exposure: Dermal

Results: NOAEL 125 mg / kg bw / day

ETHYLENDIAMMINOTETRAACETATE OF TETRASODIUM

Based on the available data, the substance can cause damage to organs through prolonged or repeated exposure and is therefore classified in this hazard class.

Target organ

ETHYLENDIAMMINOTETRAACETATE OF TETRASODIUM

Respiratory tract

Route of exposure

ETHYLENDIAMMINOTETRAACETATE OF TETRASODIUM

Inhalation

ASPIRATION HAZARD

Does not meet the classification criteria for this hazard class

DESCALER CLEANERS FOR FAP FILTERS

ETHYLENDIAMMINOTETRAACETATE OF TETRASODIUM

Aspiration toxicity data are not available.

SECTION 12. Ecological information

12.1. Toxicity

Information not available

12.2. Persistence and degradability

2- (2-BUTOXYETHOXY) ETHANOL

Quickly biodegradable, 92% in 28 days.

ETHYLENDIAMMINOTETRAACETATE OF TETRASODIUM

Not rapidly degradable, 0-10% in 28 days (OECD 302 B)

SODIUM HYDROXIDE

Solubility in water > 10000 mg/l

Degradability: information not available

TRIETHANOLAMINE

Solubility in water > 1000000 mg/l

Rapidly degradable

2-(2-BUTOXYETHOXY)ETHANOL

Solubility in water 1000 - 10000 mg/l

Rapidly degradable

12.3. Bioaccumulative potential

TRIETHANOLAMINE

Partition coefficient: n-octanol/water -1,75

BCF < 3,9

2-(2-BUTOXYETHOXY)ETHANOL

Partition coefficient: n-octanol/water 1

12.4. Mobility in soil

TRIETHANOLAMINE

Partition coefficient: soil/water 1

12.5. Results of PBT and vPvB assessment

On the basis of available data, the product does not contain any PBT or vPvB in percentage greater than 0,1%.

12.6. Other adverse effects

Information not available

DESCALER CLEANERS FOR FAP FILTERS**SECTION 13. Disposal considerations****13.1. Waste treatment methods**

Reuse, when possible. Product residues should be considered special hazardous waste. The hazard level of waste containing this product should be evaluated according to applicable regulations.

Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations.

CONTAMINATED PACKAGING

Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.

2-(2-BUTOXYETHOXY)ETHANOL

Product disposal: dispose of as hazardous waste. Recover or recycle if possible. Otherwise incineration. Dispose according to local regulations.

Disposal of the container: empty the container completely. After emptying, vent to a safe place. Send to drum recovery or metal recovery.

triethanolamine

Incinerate in an appropriate incineration plant, observing the regulations of the local authorities.

It is not possible to specify a waste code compliant with the European waste catalog (EWC), due to dependence on use.

The waste code in accordance with the European waste catalog (EWC) must be specified in collaboration with the agency / producer / disposal authorities.

Contaminated packaging:

Contaminated packaging should be emptied as much as possible; therefore it can be switched to recycling after being thoroughly cleaned.

SODIUM HYDROXIDE

- Dilute with plenty of water.

- Solutions with a high pH value must be neutralized before discharging.

- Neutralize with acid.

- In accordance with local and national regulations.

SECTION 14. Transport information

The product is not dangerous under current provisions of the Code of International Carriage of Dangerous Goods by Road (ADR) and by Rail (RID), of the International Maritime Dangerous Goods Code (IMDG), and of the International Air Transport Association (IATA) regulations.

14.1. UN number

Not applicable

14.2. UN proper shipping name

Not applicable

14.3. Transport hazard class(es)

Not applicable

14.4. Packing group

DESCALER CLEANERS FOR FAP FILTERS

Not applicable

14.5. Environmental hazards

Not applicable

14.6. Special precautions for user

Not applicable

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

Information not relevant

SECTION 15. Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

Seveso Category - Directive 2012/18/EC: None

Restrictions relating to the product or contained substances pursuant to Annex XVII to EC Regulation 1907/2006

Product

| | |
|-------|---|
| Point | 3 |
|-------|---|

Contained substance

| | | |
|-------|----|--|
| Point | 55 | 2-(2-BUTOXYETHOXY)ETHANOL Reg. no.: 01-2119475104-44-XXXX |
|-------|----|--|

Substances in Candidate List (Art. 59 REACH)

On the basis of available data, the product does not contain any SVHC in percentage greater than 0,1%.

Substances subject to authorisation (Annex XIV REACH)

None

Substances subject to exportation reporting pursuant to (EC) Reg. 649/2012:

None

DESCALER CLEANERS FOR FAP FILTERSSubstances subject to the Rotterdam Convention:

None

Substances subject to the Stockholm Convention:

None

Healthcare controls

Workers exposed to this chemical agent must not undergo health checks, provided that available risk-assessment data prove that the risks related to the workers' health and safety are modest and that the 98/24/EC directive is respected.

15.2. Chemical safety assessment

A chemical safety assessment has not been performed for the preparation/for the substances indicated in section 3.

SECTION 16. Other information

Text of hazard (H) indications mentioned in section 2-3 of the sheet:

| | |
|----------------------|--|
| Acute Tox. 4 | Acute toxicity, category 4 |
| STOT RE 2 | Specific target organ toxicity - repeated exposure, category 2 |
| Skin Corr. 1A | Skin corrosion, category 1A |
| Skin Corr. 1B | Skin corrosion, category 1B |
| Eye Dam. 1 | Serious eye damage, category 1 |
| Eye Irrit. 2 | Eye irritation, category 2 |
| H302 | Harmful if swallowed. |
| H332 | Harmful if inhaled. |
| H373 | May cause damage to organs through prolonged or repeated exposure. |
| H314 | Causes severe skin burns and eye damage. |
| H318 | Causes serious eye damage. |
| H319 | Causes serious eye irritation. |

LEGEND:

- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- CAS NUMBER: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50% effect)
- CE NUMBER: Identifier in ESIS (European archive of existing substances)
- CLP: EC Regulation 1272/2008
- DNEL: Derived No Effect Level
- EmS: Emergency Schedule
- GHS: Globally Harmonized System of classification and labeling of chemicals
- IATA DGR: International Air Transport Association Dangerous Goods Regulation
- IC50: Immobilization Concentration 50%
- IMDG: International Maritime Code for dangerous goods
- IMO: International Maritime Organization
- INDEX NUMBER: Identifier in Annex VI of CLP
- LC50: Lethal Concentration 50%
- LD50: Lethal dose 50%
- OEL: Occupational Exposure Level
- PBT: Persistent bioaccumulative and toxic as REACH Regulation

DESCALER CLEANERS FOR FAP FILTERS

- PEC: Predicted environmental Concentration
- PEL: Predicted exposure level
- PNEC: Predicted no effect concentration
- REACH: EC Regulation 1907/2006
- RID: Regulation concerning the international transport of dangerous goods by train
- TLV: Threshold Limit Value
- TLV CEILING: Concentration that should not be exceeded during any time of occupational exposure.
- TWA STEL: Short-term exposure limit
- TWA: Time-weighted average exposure limit
- VOC: Volatile organic Compounds
- vPvB: Very Persistent and very Bioaccumulative as for REACH Regulation
- WGK: Water hazard classes (German).

GENERAL BIBLIOGRAPHY

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 2. Regulation (EC) 1272/2008 (CLP) of the European Parliament
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- The Merck Index. - 10th Edition
 - Handling Chemical Safety
 - INRS - Fiche Toxicologique (toxicological sheet)
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 - N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition
 - IFA GESTIS website
 - ECHA website
 - Database of SDS models for chemicals - Ministry of Health and ISS (Istituto Superiore di Sanità) - Italy

Note for users:

The information contained in the present sheet are based on our own knowledge on the date of the last version. Users must verify the suitability and thoroughness of provided information according to each specific use of the product.

This document must not be regarded as a guarantee on any specific product property.

The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the current health and safety laws and regulations. The producer is relieved from any liability arising from improper uses.

Provide appointed staff with adequate training on how to use chemical products.

Product's classification is based on the calculation methods set out in Annex I of the CLP Regulation, unless otherwise indicated in sections 11 and 12.

The data for evaluation of chemical-physical properties are reported in section 9.

Changes to previous review:

The following sections were modified:

01 / 02 / 03 / 04 / 07 / 08 / 09 / 10 / 11 / 12 / 13 / 14 / 15 / 16.