# Safety Data Sheet

According to Annex II to REACH - Regulation 2020/878 and to Annex II to UK REACH

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

**1.1. Product identifier**

| | |
| --- | --- |
| Code: | **0030130** |
| Product name | **ACIDO HP4** |
| Chemical name and synonym | **ACIDO HP4** |

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

Field of use SU22 - Professional uses

**Uses not recommended. Avoid use:**

- involving the formation of aerosols where workers are exposed without respiratory protection.
- which involves the risk of splashing in the eyes/face where workers have no eye/face protection.

**1.3. Details of the supplier of the safety data sheet**

| | |
| --- | --- |
| Name | **MARBEC S.R.L.** |
| Full address | **VIA CROCE ROSSA 5/i** |
| District and Country | **51037 MONTALE (PISTOIA)**<br>**ITALIA** |
| | **Tel. +039 0573/959848** |
| | **Fax** |
| e-mail address of the competent person responsible for the Safety Data Sheet Supplier: | **info@marbec.it** |

**1.4. Emergency telephone number**

| | |
| --- | --- |
| For urgent inquiries refer to | **MARBEC srl**<br>**0573959848 h8.30-13 h14-18 o 3357267921**<br>**Numero telefonico di Centri Antiveleni attivi 24/24 ore**<br>**IRCSS Fondazione Maugeri –**<br>**Pavia 0039-0382-24444**<br>**CAV Ospedali Riuniti –**<br>**Bergamo 0039-800-883300**<br>**CAV Ospedale Niguarda Ca` Granda –**<br>**Milano 0039-02-66101029**<br>**CAV Ospedale Careggi- Firenze 0039-055-7947819**<br>**CAV Policlinico Gemelli –**<br>**Roma 0039-06-3054343**<br>**CAV Policlinico Umberto I –**<br>**Roma 0039-06 49978000**<br>**CAV Ospedale Cardarelli –**<br>**Napoli 0039-081 5453333**<br>**CAV Azienda Ospedaliera Integrata Verona - Verona 800011858** |

## 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 2020/878.
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:

| | | |
|---|---|---|
| Acute toxicity, category 4 | H302 | Harmful if swallowed. |
| 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:

Signal words: Danger

Hazard statements:

| | |
|---|---|
| **H302** | Harmful if swallowed. |
| **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. |
| **P301+P330+P331** | IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. |
| **P304+P340** | IF INHALED: Remove person to fresh air and keep comfortable for breathing. |

**Contains:** 75% phosphoric acid, ammonium bifluoride, non-ionic surfactants <5%

**2.3. Other hazards**

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

The product does not contain substances with endocrine disrupting properties in concentration ≥ 0.1%.

## SECTION 3. Composition/information on ingredients

**3.2. Mixtures**

Contains:

| Identification | x = Conc. % | Classification (EC) 1272/2008 (CLP) |
|---|---|---|
| **Phosphoric Acid 75%** | | |
| CAS 7664-38-2 | 30 ≤ x < 50 | Met. Corr. 1 H290, Acute Tox. 4 H302, Skin Corr. 1B H314, Eye Dam. 1 H318 |
| EC 231-633-2 | | LD50 Oral: >300 mg/kg |
| INDEX 015-011-00-6 | | |
| REACH Reg. 01-2119485924-24-005 | | |
| **PROPAN-2-OL** | | |
| CAS 67-63-0 | 1 ≤ x < 3 | Flam. Liq. 2 H225, Eye Irrit. 2 H319, STOT SE 3 H336 |
| EC 200-661-7 | | |
| INDEX 603-117-00-0 | | |
| REACH Reg. 01-2119457558-25-xxxx | | |
| **AMMONIUM BIFLUORIDE** | | |
| CAS 1341-49-7 | 1 ≤ x < 3 | Acute Tox. 3 H301, Skin Corr. 1B H314, Eye Dam. 1 H318 |
| EC 215-676-4 | | Skin Corr. 1B H314: ≥ 1%, Skin Irrit. 2 H315: ≥ 0,1%, Eye Dam. 1 H318: ≥ 1%, Eye Irrit. 2 H319: ≥ 0,1% |
| INDEX 009-009-00-4 | | LD50 Oral: 130 |
| REACH Reg. 01-2119489180-38-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: The exposure causes intense tearing and can cause edema and burns with possible permanent damage to the sight. Burns are difficult to diagnose at first. Wash immediately and abundantly with water while keeping the eyelids open. Consult a doctor immediately and continue washing with saline solution.

SKIN: Depending on the duration of contact and the speed of intervention, the product causes rashes, edema, severe burns. Burns are initially difficult to identify. Even contact with the product solutions can lead to chemical burns that are difficult to diagnose at first. The fluoride ions penetrate quickly through the skin and tissues, causing necrosis and decalcification of the bones. Unlike other easily contained cases, the decalcification process can continue for days. Immediately remove all clothing even if you only suspect that you are contaminated. Wash thoroughly and apply a calcium gluconate ointment, wash thoroughly with water.
If the irritation is as extensive as the palm of the hand orally administer six effervescent tablets of calcium in water (400 mg of calcium per tablet). Repeat treatment every two hours until hospitalization. If the burns are very extensive, a full bath in a 1% calcium gluconate solution is recommended. Medical help should be immediate.

INGESTION: May cause necrosis in the mouth, esophagus and stomach. May cause nausea, vomiting, diarrhea, circulatory collapse. Orally administer six effervescent calcium tablets in water (400 mg of calcium per tablet). If calcium is not available in tablets, give milk. Do not induce vomiting. Urgently consult a doctor.

INHALATION: May cause irritation of the respiratory tract and inflammation of the upper airways, pulmonary edema, fever, cyanosis with delayed effects of even 12/24 hours. Prolonged and repeated exposure of small doses can cause nasal congestion, bronchitis, nose bleeding. Remove the patient from the contaminated area, keep him at rest and protect him from the cold. In case of respiratory difficulties administer oxygen. Orally administer six effervescent calcium tablets in water (400 mg of calcium per tablet). Consult a doctor urgently.

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

ACUTE EFFECTS. Any treatment should be timely and can reduce the extent of damage caused by the product (burns, poisoning). In any case of certain or suspected contamination consult your doctor immediately. Have total showers and eye showers in all places of use of the product.

DELAYED EFFECTS. For symptoms and effects due to the substances contained see chap. 11

**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
Extinguishing substances are: carbon dioxide, foam, chemical powder. For product loss or leakage that has not caught fire, water spray can be used to disperse flammable vapours and protect those trying to stem the leak.
UNSUITABLE EXTINGUISHING EQUIPMENT
Do not use jets of water. Water is not effective for putting out fires but can be used to cool containers exposed to flames to prevent explosions.

**5.2. Special hazards arising from the substance or mixture**

The product is not combustible. When heated to the decomposition temperature (>230 µµµı C), toxic and corrosive vapours or gases (HF and ammonium fluoride) may develop.

FIRE EXPOSURE HAZARDS
The product is neither flammable nor combustible.

**5.3. Advice for firefighters**

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**

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**

If the product is LIQUID: Vacuum the spilled product into a suitable container. Assess the compatibility of the vessel to be used with the product by checking Section 10. Absorb the remaining with inert absorbent material.
If the product is SOLID: collect the spilled product by mechanical means and insert it into containers for recovery or disposal. Remove the residue with water jets if there are no contraindications. Ensure sufficient ventilation of the place affected by the leak. Check any incompatibilities for the material of the containers in Section 7. Disposal of the contaminated material shall be carried out in accordance with 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**

Avoid formation of aerosols. In the case of aerosol formation it is necessary to take special protective measures (aspiration, respiratory protection). Ensure good ventilation of work environments. Remove contaminated clothing and protective equipment before entering the eating areas.

**7.2. Conditions for safe storage, including any incompatibilities**

Store only in the original container. Store the containers sealed, in a well ventilated place, away from direct sunlight. Store in a cool and well ventilated place, keep far away from sources of heat, naked flames and sparks and other sources of ignition. Keep containers away from any incompatible materials, see section 10 for details.

Storage class TRGS 510 (Germany):
8A

**7.3. Specific end use(s)**

Information not available

## SECTION 8. Exposure controls/personal protection

**8.1. Control parameters**

Regulatory References:

| | | |
|---|---|---|
| DEU | Deutschland | Technischen Regeln für Gefahrstoffe (TRGS 900) - Liste der Arbeitsplatzgrenzwerte und Kurzzeitwerte. MAK- und BAT-Werte-Liste 2020, Ständige Senatskommission zur Prüfung gesundheitsschädlicher Arbeitsstoffe, Mitteilung 56 |
| ESP | España | Límites de exposición profesional para agentes químicos en España 2021 |
| FRA | France | Valeurs limites d'exposition professionnelle aux agents chimiques en France. ED 984 - INRS |
| ITA | Italia | Decreto Legislativo 9 Aprile 2008, n.81 |
| PRT | Portugal | Decreto-Lei n.º 1/2021 de 6 de janeiro, valores-limite de exposição profissional indicativos para os agentes químicos. Decreto-Lei n.º 35/2020 de 13 de julho, proteção dos trabalhadores contra os riscos ligados à exposição durante o trabalho a agentes cancerígenos ou mutagénicos |
| GBR | United Kingdom | EH40/2005 Workplace exposure limits (Fourth Edition 2020) |
| EU | OEL EU | Directive (EU) 2019/1831; Directive (EU) 2019/130; Directive (EU) 2019/983; 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 98/24/EC; Directive 91/322/EEC. |
| | TLV-ACGIH | ACGIH 2021 |

**Phosphoric Acid 75%**

**Threshold Limit Value**

| Type | Country | TWA/8h | | STEL/15min | | Remarks / Observations |
|---|---|---|---|---|---|---|
| | | mg/m3 | ppm | mg/m3 | ppm | |
| AGW | DEU | 2 | | 4 | | inalabile |
| MAK | DEU | 2 | | 4 | | inalabile |
| VLA | ESP | 1 | | 2 | | |
| VLEP | FRA | 1 | 0,2 | 2 | 0,5 | |

| | | | | |
|---|---|---|---|---|
| VLEP | ITA | 1 | 2 | |
| VLE | PRT | 1 | 2 | |
| WEL | GBR | 1 | 2 | |
| OEL | EU | 1 | 2 | |

**Health - Derived no-effect level - DNEL / DMEL**

| | Effects on consumers | | | | Effects on workers | | | |
|---|---|---|---|---|---|---|---|---|
| Route of exposure | Acute local | Acute systemic | Chronic local | Chronic systemic | Acute local | Acute systemic | Chronic local | Chronic systemic |
| Oral | | | | 0,1 mg/kg bw/d | | | | |
| Inhalation | | | 0,36 mg/m3 | 4,57 mg/m3 | 2 mg/m3 | | 1 mg/m3 | 10.7 mg/m3 |
| Skin | | | | | | | | VND |

**PROPAN-2-OL**

**Threshold Limit Value**

| Type | Country | TWA/8h | | STEL/15min | | Remarks / Observations |
|---|---|---|---|---|---|---|
| | | mg/m3 | ppm | mg/m3 | ppm | |
| AGW | DEU | 500 | 200 | 1000 | 400 | |
| MAK | DEU | 500 | 200 | 1000 | 400 | |
| VLA | ESP | 500 | 200 | 1000 | 400 | |
| VLEP | FRA | | | 980 | 400 | |
| WEL | GBR | 999 | 400 | 1250 | 500 | |
| TLV-ACGIH | | 492 | 200 | 983 | 400 | |

| Predicted no-effect concentration - PNEC | | |
|---|---|---|
| Normal value in fresh water | 140,9 | mg/l |
| Normal value in marine water | 140,9 | mg/l |
| Normal value for fresh water sediment | 552 | mg/kg |
| Normal value for marine water sediment | 552 | mg/kg |
| Normal value for the terrestrial compartment | 28 | mg/kg |

**Health - Derived no-effect level - DNEL / DMEL**

| | Effects on consumers | | | | Effects on workers | | | |
|---|---|---|---|---|---|---|---|---|
| Route of exposure | Acute local | Acute systemic | Chronic local | Chronic systemic | Acute local | Acute systemic | Chronic local | Chronic systemic |
| Oral | | | | 26 mg/kg/d | | | | |
| Inhalation | | | | 89 mg/kg | | | | 500 mg/m3 |
| Skin | | | | 319 mg/kg/d | | | | 888 mg/kg/d |

**AMMONIUM BIFLUORIDE**

**Threshold Limit Value**

| Type | Country | TWA/8h | | STEL/15min | | Remarks / Observations | |
|---|---|---|---|---|---|---|---|
| | | mg/m3 | ppm | mg/m3 | ppm | | |
| MAK | DEU | 1 | | 4 | | INHAL | Als F |
| MAK | DEU | 1 | | 4 | | SKIN | Als F |
| VLA | ESP | 2,5 | | | | | Como F |
| VLEP | FRA | 2,5 | | | | | |
| VLEP | ITA | 2,5 | | | | | come F |
| VLE | PRT | 2,5 | | | | | Como F |

| | | | |
|---|---|---|---|
| WEL | GBR | 2,5 | As F |
| OEL | EU | 2,5 | |
| TLV-ACGIH | | 2,5 | |

| Predicted no-effect concentration - PNEC | | |
|---|---|---|
| Normal value in fresh water | 1,3 | mg/l |
| Normal value of STP microorganisms | 76 | mg/l |
| Normal value for the terrestrial compartment | 22 | mg/kg |

**Health - Derived no-effect level - DNEL / DMEL**

| | Effects on consumers | | | | Effects on workers | | | |
|---|---|---|---|---|---|---|---|---|
| Route of exposure | Acute local | Acute systemic | Chronic local | Chronic systemic | Acute local | Acute systemic | Chronic local | Chronic systemic |
| Oral | | 0,015 mg/kg bw/d | | 0,015 mg/kg bw/d | | | | |
| Inhalation | | | | 0,045 mg/m3 | 3,8 mg/m3 | | | 2,3 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).

In the presence of risks of exposure to splashes or squirts during work, adequate mouth, nose and eye protection should be used to prevent accidental absorption.

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

## SECTION 9. Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

| Properties | Value | Information |
|---|---|---|
| Appearance | liquid | |
| Colour | colourless | |
| Odour | characteristic | |
| Melting point / freezing point | Not available | |
| Initial boiling point | Not available | |
| Flammability | Not available | |
| Lower explosive limit | Not available | |
| Upper explosive limit | Not available | |
| Flash point | > 90°C | |
| Auto-ignition temperature | Not applicable | |
| pH | 0-1 | |
| Kinematic viscosity | Not available | |
| Solubility | soluble in water | |
| Partition coefficient: n-octanol/water | Not available | |
| Vapour pressure | Not available | |
| Density and/or relative density | 1,155 kg/l | |
| Relative vapour density | Not available | |
| Particle characteristics | Not applicable | |

### 9.2. Other information

9.2.1. Information with regard to physical hazard classes

**Flammable liquids**

| | |
|---|---|
| Sustained combustibility | does not sustain combustion |

9.2.2. Other safety characteristics

| | |
|---|---|
| VOC (Directive 2010/75/EU) | 3,00 % - 34,65 g/litre |
| Explosive properties | Not explosive |
| Oxidising properties | Not oxidising |

## SECTION 10. Stability and reactivity

### 10.1. Reactivity

PHOSPHORIC ACID
It decomposes at temperatures above 200 ºC/392 ºC.

AMMONIUM BIFLUORIDE
It decomposes at temperatures above 230 ºC/446 ºF.

**10.2. Chemical stability**

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

**10.3. Possibility of dangerous reactions**

Vapours can form explosive mixtures with air.

PHOSPHORIC ACID
Risk of explosion in contact with: nitromethane. May react dangerously with: alkali, sodium boron hydride.

AMMONIUM BIFLUORIDE
Risk of explosion in contact with: chlorine trifluoride, bromine trifluoride. May react dangerously with: acids.

**10.4. Conditions to be avoided**

Avoid the overheating process.

**10.5. Incompatible materials**

PHOSPHORIC ACID
May develop: oxides of phosphorus.

AMMONIUM BIFLUORIDE
It can develop: fluoride, hydrogen fluoride, ammonia, nitrogen gas.

**10.6. Dangerous decomposition products**

Thermal decomposition or fire can release gases and vapours that are potentially harmful to health.

PHOSPHORIC ACID
May develop: oxides of phosphorus.

AMMONIUM BIFLUORIDE
May develop: fluoride, hydrogen fluoride, ammonia, nitrogen gas.

## SECTION 11. Toxicological information

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

Metabolism, toxicokinetics, mechanism of action and other information

Information not available

Information on likely routes of exposure

Information not available

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

Information not available

Interactive effects

Information not available

ACUTE TOXICITY

| | |
|---|---|
| ATE (Inhalation) of the mixture: | Not classified (no significant component) |
| ATE (Oral) of the mixture: | 527,18 mg/kg |
| ATE (Dermal) of the mixture: | Not classified (no significant component) |

Phosphoric Acid 75%

| | |
|---|---|
| LD50 (Oral): | > 300 mg/kg ratto |

PROPAN-2-OL

| | |
|---|---|
| LD50 (Dermal): | 12800 mg/kg Rat |
| LD50 (Oral): | 4710 mg/kg Rat |
| LC50 (Inhalation vapours): | 72,6 mg/l/4h Rat |

AMMONIUM BIFLUORIDE

| | |
|---|---|
| LD50 (Oral): | 130 mg/kg Rat |

SKIN CORROSION / IRRITATION

Corrosive for the skin

SERIOUS EYE DAMAGE / IRRITATION

Causes serious eye damage

RESPIRATORY OR SKIN SENSITISATION

Does not meet the classification criteria for this hazard class

Respiratory sensitization

Information not available

Skin sensitization

Information not available

GERM CELL MUTAGENICITY

Does not meet the classification criteria for this hazard class

CARCINOGENICITY

Does not meet the classification criteria for this hazard class

REPRODUCTIVE TOXICITY

Does not meet the classification criteria for this hazard class

Adverse effects on sexual function and fertility

Information not available

Adverse effects on development of the offspring

Information not available

Effects on or via lactation

Information not available

STOT - SINGLE EXPOSURE

Does not meet the classification criteria for this hazard class

Target organs

Information not available

Route of exposure

Information not available

STOT - REPEATED EXPOSURE

Does not meet the classification criteria for this hazard class

Target organs

Information not available

Route of exposure

Information not available

ASPIRATION HAZARD

Does not meet the classification criteria for this hazard class

**11.2. Information on other hazards**

Based on the available data, the product does not contain substances listed in the main European lists of potential or suspected endocrine disruptors with human health effects under evaluation.

## SECTION 12. Ecological information

**12.1. Toxicity**

| | |
|---|---|
| PROPAN-2-OL | |
| LC50 - for Fish | > 100 mg/l/96h leuciscus idus melanotus, statico |
| EC50 - for Crustacea | > 100 mg/l/48h dafnia magna Prova statica |
| EC50 - for Algae / Aquatic Plants | > 100 mg/l/72h scenedesmus subspicatus. Prova statica |

Phosphoric Acid 75%

| | |
|---|---|
| LC50 - for Fish | > 1,3 mg/l/96h Lepomis macrochirus |
| EC50 - for Crustacea | > 100 mg/l/48h Daphnia magna |
| EC50 - for Algae / Aquatic Plants | > 100 mg/l/72h alga |

**12.2. Persistence and degradability**

AMMONIUM BIFLUORIDE

| | |
|---|---|
| Solubility in water | > 10000 mg/l |

Degradability: information not available

PROPAN-2-OL

Rapidly degradable

Phosphoric Acid 75%

Degradability: information not available

**12.3. Bioaccumulative potential**

AMMONIUM BIFLUORIDE

| | |
|---|---|
| BCF | 0,5 |

PROPAN-2-OL

| | |
|---|---|
| Partition coefficient: n-octanol/water | 0,05 |

**12.4. Mobility in soil**

Information not available

**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 ≥ than 0,1%.

**12.6. Endocrine disrupting properties**

Based on the available data, the product does not contain substances listed in the main European lists of potential or suspected endocrine disruptors with environmental effects under evaluation.

**12.7. Other adverse effects**

Information not available

## 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.
Waste transportation may be subject to ADR restrictions.
CONTAMINATED PACKAGING
Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.

## SECTION 14. Transport information

**14.1. UN number or ID number**

| | |
|---|---|
| ADR / RID, IMDG, IATA: | 3264 |

**14.2. UN proper shipping name**

| | |
|---|---|
| ADR / RID: | CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (PHOSPHORIC ACID; AMMONIUM BIFLUORIDE) |
| IMDG: | CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (PHOSPHORIC ACID; AMMONIUM BIFLUORIDE) |
| IATA: | CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (PHOSPHORIC ACID; AMMONIUM BIFLUORIDE) |

**14.3. Transport hazard class(es)**

| | | |
|---|---|---|
| ADR / RID: | Class: 8 | Label: 8 |
| IMDG: | Class: 8 | Label: 8 |
| IATA: | Class: 8 | Label: 8 |

**14.4. Packing group**

| | |
|---|---|
| ADR / RID, IMDG, IATA: | III |

**14.5. Environmental hazards**

| | |
|---|---|
| ADR / RID: | NO |
| IMDG: | NO |
| IATA: | NO |

**14.6. Special precautions for user**

| | | | |
|---|---|---|---|
| ADR / RID: | HIN - Kemler: 80<br>Special provision: - | Limited Quantities: 1 L | Tunnel restriction code: (E) |
| IMDG: | EMS: F-A, S-B | Limited Quantities: 1 L | |
| IATA: | Cargo: | Maximum quantity: 60 L | Packaging instructions: 856 |

| | | | |
|---|---|---|---|
| | Pass.: | Maximum quantity: 1 L | Packaging instructions: 852 |
| | Special provision: | A3, A803 | |

**14.7. Maritime transport in bulk according to IMO instruments**

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/EU: None

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

Product

| | | |
|---|---|---|
| Point | 3 - 40 | |

Contained substance

| | | |
|---|---|---|
| Point | 75 | |
| Point | 65 | AMMONIUM BIFLUORIDE<br>REACH Reg.: 01-2119489180-38-xxxx |

Regulation (EU) 2019/1148 - on the marketing and use of explosives precursors

Not applicable

Substances in Candidate List (Art. 59 REACH)

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

Substances subject to authorisation (Annex XIV REACH)

None

Substances subject to exportation reporting pursuant to Regulation (EU) 649/2012:

None

Substances subject to the Rotterdam Convention:

None

Substances subject to the Stockholm Convention:

None

Healthcare controls

Workers exposed to this chemical agent dangerous to health must be subject to health surveillance carried out in accordance with the provisions of art. 41 of D.Lgs. 81 of 9 April 2008 unless the risk to the safety and health of the worker has been assessed irrelevant, in accordance with art. 224 paragraph 2.

**15.2. Chemical safety assessment**

A chemical safety assessment has been prepared for the following substances in the mixture:
Phosphoric acid, Ammonium Bifluoride, Alccol isopropyl.

## SECTION 16. Other information

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

| | |
|---|---|
| **Flam. Liq. 2** | Flammable liquid, category 2 |
| **Met. Corr. 1** | Substance or mixture corrosive to metals, category 1 |
| **Acute Tox. 3** | Acute toxicity, category 3 |
| **Acute Tox. 4** | Acute toxicity, category 4 |
| **Skin Corr. 1B** | Skin corrosion, category 1B |
| **Eye Dam. 1** | Serious eye damage, category 1 |
| **Eye Irrit. 2** | Eye irritation, category 2 |
| **STOT SE 3** | Specific target organ toxicity - single exposure, category 3 |
| **H225** | Highly flammable liquid and vapour. |
| **H290** | May be corrosive to metals. |
| **H301** | Toxic if swallowed. |
| **H302** | Harmful if swallowed. |
| **H314** | Causes severe skin burns and eye damage. |
| **H318** | Causes serious eye damage. |
| **H319** | Causes serious eye irritation. |
| **H336** | May cause drowsiness or dizziness. |

LEGEND:
- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- ATE: Acute Toxicity Estimate
- CAS: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50% effect)
- CE: Identifier in ESIS (European archive of existing substances)
- CLP: Regulation (EC) 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: 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
- PEC: Predicted environmental Concentration
- PEL: Predicted exposure level
- PNEC: Predicted no effect concentration

- REACH: Regulation (EC) 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: Time-weighted average exposure limit
- TWA STEL: Short-term exposure limit
- VOC: Volatile organic Compounds
- vPvB: Very Persistent and very Bioaccumulative as for REACH Regulation
- WGK: Water hazard classes (German).

GENERAL BIBLIOGRAPHY

1. Regulation (EC) 1907/2006 (REACH) of the European Parliament
2. Regulation (EC) 1272/2008 (CLP) of the European Parliament
3. Regulation (EU) 2020/878 (II Annex of REACH Regulation)
4. Regulation (EC) 790/2009 (I Atp. CLP) of the European Parliament
5. Regulation (EU) 286/2011 (II Atp. CLP) of the European Parliament
6. Regulation (EU) 618/2012 (III Atp. CLP) of the European Parliament
7. Regulation (EU) 487/2013 (IV Atp. CLP) of the European Parliament
8. Regulation (EU) 944/2013 (V Atp. CLP) of the European Parliament
9. Regulation (EU) 605/2014 (VI Atp. CLP) of the European Parliament
10. Regulation (EU) 2015/1221 (VII Atp. CLP) of the European Parliament
11. Regulation (EU) 2016/918 (VIII Atp. CLP) of the European Parliament
12. Regulation (EU) 2016/1179 (IX Atp. CLP)
13. Regulation (EU) 2017/776 (X Atp. CLP)
14. Regulation (EU) 2018/669 (XI Atp. CLP)
15. Regulation (EU) 2019/521 (XII Atp. CLP)
16. Delegated Regulation (UE) 2018/1480 (XIII Atp. CLP)
17. Regulation (EU) 2019/1148
18. Delegated Regulation (UE) 2020/217 (XIV Atp. CLP)
19. Delegated Regulation (UE) 2020/1182 (XV Atp. CLP)
20. Delegated Regulation (UE) 2021/643 (XVI Atp. CLP)
21. Delegated Regulation (UE) 2021/849 (XVII Atp. CLP)
- The Merck Index. - 10th Edition
- Handling Chemical Safety
- INRS - Fiche Toxicologique (toxicological sheet)
- Patty - Industrial Hygiene and Toxicology
- 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.
CALCULATION METHODS FOR CLASSIFICATION
Chemical and physical hazards: Product classification derives from criteria established by the CLP Regulation, Annex I, Part 2. The data for evaluation of chemical-physical properties are reported in section 9.
Health hazards: Product classification is based on calculation methods as per Annex I of CLP, Part 3, unless determined otherwise in Section 11.
Environmental hazards: Product classification is based on calculation methods as per Annex I of CLP, Part 4, unless determined otherwise in Section 12.

Changes to previous review:
The following sections were modified:
02 / 03 / 09 / 11 / 12 / 15 / 16.