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

1.1. Product identifier

Product form : Mixture
Product name : Hydronet-T

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

Use of the substance/mixture : Acidic degreaser, phosphoric acid-based

1.3. Details of the supplier of the safety data sheet

SOPRIN S.r.l.
Via dell’Industria 106
31052 Maserada Sul Piave (TV), - Italy
T (+39) 0422 521025 - F (+39) 0422 521060
soprin@soprin.it (Alessandro Padovan)

1.4. Emergency telephone number

Emergency number : (+39) 0422 521025

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS-US classification
Flam. Liq. 4 H227
Acute Tox. 4 (Inhalation) H332
Skin Corr. 1B H314

2.2. Label elements

GHS-US labelling
Hazard pictograms (GHS-US) :

GHS05  GHS07

Signal word (GHS-US) : Danger
Hazard statements (GHS-US) : H227 - Combustible liquid
H314 - Causes severe skin burns and eye damage
H332 - Harmful if inhaled

Precautionary statements (GHS-US) :
P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking
P260 - Do not breathe dust/fume/gas/mist/vapours/spray
P261 - Avoid breathing dust/fume/gas/mist/vapours/spray
P264 - Wash ... thoroughly after handling
P271 - Use only outdoors or in a well-ventilated area
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): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
P304+P340 - IF INHALED: remove victim to fresh air and keep at rest in a position comfortable for breathing
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P310 - Immediately call a POISON CENTER or doctor/physician
P312 - Call a POISON CENTER/doctor/physician if you feel unwell
P321 - Specific treatment (see ... on this label)
P363 - Wash contaminated clothing before reuse
P370+P378 - In case of fire: Use ... for extinction
P403+P235 - Store in a well-ventilated place. Keep cool
P405 - Store locked up
P501 - Dispose of contents/container to ...

2.3. Other hazards

No additional information available
2.4. Unknown acute toxicity (GHS-US)
No data available

SECTION 3: Composition/information on ingredients

3.1. Substances
Not applicable
Full text of H-phrases: see section 16

3.2. Mixture

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>GHS-US classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phosphoric acid</td>
<td>(CAS No) 7664-38-2</td>
<td>13.5 - 15</td>
<td>Acute Tox. 4 (Oral), H302 Skin Corr. 1B, H314</td>
</tr>
<tr>
<td>Hydrogen chloride</td>
<td>(CAS No) 7647-01-0</td>
<td>3 - 3.5</td>
<td>Acute Tox. 3 (Inhalation:gas), H331 Skin Corr. 1A, H314</td>
</tr>
</tbody>
</table>

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation: Remove to open air. If breathing is irregular or stopped, administer artificial respiration. Obtain immediate medical attention.

First-aid measures after skin contact: Immediately wash with plenty of water. Remove all contaminated clothing. Obtain immediate medical attention. Wash contaminated clothing separately before using them again.

First-aid measures after eye contact: Irrigate copiously with clean, fresh water for at least 15 minutes. Seek medical advice.

First-aid measures after ingestion: Obtain immediate medical attention. Induce vomiting only if indicated by the doctor. Give nothing by mouth to an unconscious person.

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

Symptoms/injuries after inhalation: Possible vapours are caustic for the respiratory system and may cause pulmonary edema, whose symptoms sometimes arise only after some hours. Exposure symptoms may include: sting, cough, asthma, laryngitis, respiratory disorders, headache, nausea and sickness.

Symptoms/injuries after skin contact: This product is corrosive and causes abrasions of skin surface, accompanied by rubefaction, warmth and sting. In the most serious cases, small vesicles appear, which cause strong sting and pain.

Symptoms/injuries after eye contact: Upon contact with eyes, it may cause serious harm, such as cornea opacity, iris lesions, irreversible eye coloration.

Symptoms/injuries after ingestion: If swallowed, it may cause mouth, throat and oesophagus burns; sickness, diarrhoea, edema, larynx swelling and, consequently, asphyxia. Perforation of the gastro-intestinal tract is also possible.

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

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media: Carbon dioxide, foam, powder and water spray.

Unsuitable extinguishing media: None.

5.2. Special hazards arising from the substance or mixture

Fire hazard: Combustible liquid.

Explosion hazard: None known.

5.3. Advice for firefighters

Firefighting instructions: 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.

Protection during firefighting: Firefighters should wear full protective gear.
SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel
Wear appropriate protective equipment. Send away individuals who are not suitably equipped. Use breathing equipment if fumes or powders are released into the air. Block the leakage if there is no hazard. Do not handle damaged containers or the leaked product before donning appropriate protective gear.

6.1.2. For emergency responders
No additional information available

6.2. Environmental precautions
Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment: Stop the flow of material, if this is without risk.
Methods for cleaning up: For liquid products, vacuum into a suitable container (made of material not incompatible with the product) and soak up any leaked product with absorbent inert material (sand, vermiculite, diatomaceous earth, Kieselguhr, etc). Collect the majority of the remaining material and deposit in containers for disposal. For solid products, use spark proof mechanical tools to collect the leaked product and place in plastic containers. If there are no contraindications, use jets of water to eliminate product residues. Make sure the leakage site is well aired.

6.4. Reference to other sections
No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Precautions for safe handling: Do not smoke while handling.

7.2. Conditions for safe storage, including any incompatibilities
Storage conditions: Store in a well ventilated place, keep far away from sources of heat, bright flames and sparks and other sources of ignition.

7.3. Specific end use(s)
Acidic degreaser, phosphoric acid-based

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

<table>
<thead>
<tr>
<th>Substance</th>
<th>USA ACGIH</th>
<th>ACGIH TWA (mg/m³)</th>
<th>1 mg/m³</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phosphoric acid (7664-38-2)</td>
<td>USA ACGIH</td>
<td>ACGIH TWA (mg/m³)</td>
<td>1 mg/m³</td>
</tr>
<tr>
<td></td>
<td>USA ACGIH</td>
<td>ACGIH STEL (mg/m³)</td>
<td>3 mg/m³</td>
</tr>
<tr>
<td></td>
<td>USA OSHA</td>
<td>OSHA PEL (TWA) (mg/m³)</td>
<td>1 mg/m³</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Substance</th>
<th>USA ACGIH</th>
<th>ACGIH Ceiling (ppm)</th>
<th>2 ppm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrogen chloride (7647-01-0)</td>
<td>USA ACGIH</td>
<td>ACGIH Ceiling (ppm)</td>
<td>2 ppm</td>
</tr>
<tr>
<td></td>
<td>USA OSHA</td>
<td>OSHA PEL (Ceiling) (mg/m³)</td>
<td>7 mg/m³</td>
</tr>
<tr>
<td></td>
<td>USA OSHA</td>
<td>OSHA PEL (Ceiling) (ppm)</td>
<td>5 ppm</td>
</tr>
</tbody>
</table>

8.2. Exposure controls
Appropriate engineering controls: Local exhaust and general ventilation must be adequate to meet exposure standards.
Hand protection: Use impervious gloves such as neoprene, nitrile, or rubber for hand protection.
Eye protection: Wear protective airtight goggles.
Skin and body protection: Wear suitable working clothes.
Respiratory protection: If airborne concentrations are above the applicable exposure limits, use NIOSH approved respiratory protection.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties
Physical state: Liquid
Colour: Light blue
Odour: Slightly pungent
Odour threshold: No data available
pH: < 1
Relative evaporation rate (butylacetate=1): No data available
Melting point: No data available
Freezing point: < -5 °C
Boiling point: No data available
Flash point: > 69 °C
Self ignition temperature: No data available
Decomposition temperature: No data available
Flammability (solid, gas): No data available
Vapour pressure: No data available
Relative vapour density at 20 °C: No data available
Relative density: No data available
Specific gravity: 1.075 kg/m³
Solubility: No data available
Log Pow: No data available
Log Kow: No data available
Viscosity, kinematic: No data available
Viscosity, dynamic: No data available
Explosive properties: No data available
Oxidising properties: No data available
Explosive limits: No data available

9.2. Other information
No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity
No additional information available

10.2. Chemical stability
The product is stable at normal handling and storage conditions.

10.3. Possibility of hazardous reactions
Will not occur.

10.4. Conditions to avoid
Extremely high or low temperatures.

10.5. Incompatible materials
PHOSPHORIC ACID: Metals, strong alkalis, aldehydes, sulphides and peroxides.
HYDROCHLORIC ACID: alkalis, organic substances, strong oxidants and metals.

10.6. Hazardous decomposition products
PHOSPHORIC ACID: phosphorus oxide.
HYDROCHLORIC ACID: above decomposition temperature hydrochloric acid fumes may develop.

SECTION 11: Toxicological information

11.1. Information on toxicological effects
Acute toxicity: Harmful if inhaled.

<table>
<thead>
<tr>
<th>Hydronet-T</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>ATE (gases)</td>
<td>4500.000 ppmV/4h</td>
</tr>
<tr>
<td>ATE (vapours)</td>
<td>11.000 mg/l/4h</td>
</tr>
<tr>
<td>ATE (dust,mist)</td>
<td>1.500 mg/l/4h</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Phosphoric acid (7664-38-2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 oral rat</td>
</tr>
</tbody>
</table>
Phosphoric acid (7664-38-2)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 dermal rabbit</td>
<td>2730 mg/kg</td>
</tr>
<tr>
<td>LC50 inhalation rat (mg/l)</td>
<td>&gt; 850 mg/m³ (Exposure time: 1 h)</td>
</tr>
</tbody>
</table>

Hydrogen chloride (7647-01-0)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 oral rat</td>
<td>700 mg/kg</td>
</tr>
<tr>
<td>LD50 dermal rabbit</td>
<td>&gt; 5010 mg/kg</td>
</tr>
<tr>
<td>LC50 inhalation rat (ppm)</td>
<td>3124 ppm/1h</td>
</tr>
</tbody>
</table>

Skin corrosion/irritation: Causes severe skin burns and eye damage. pH: < 1

Serious eye damage/irritation: Not classified pH: < 1

Respiratory or skin sensitisation: Not classified

Germ cell mutagenicity: Not classified

Carcinogenicity: Not classified

Hydrogen chloride (7647-01-0)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>IARC group</td>
<td>3 - Not classifiable</td>
</tr>
<tr>
<td>Reproductive toxicity</td>
<td>Not classified</td>
</tr>
<tr>
<td>Specific target organ toxicity (single exposure)</td>
<td>Not classified</td>
</tr>
<tr>
<td>Specific target organ toxicity (repeated exposure)</td>
<td>Not classified</td>
</tr>
<tr>
<td>Aspiration hazard</td>
<td>Not classified</td>
</tr>
</tbody>
</table>

SECTION 12: Ecological information

12.1. Toxicity
No additional information available

12.2. Persistence and degradability
No additional information available

12.3. Bioaccumulative potential
No additional information available

12.4. Mobility in soil
No additional information available

12.5. Other adverse effects
No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods
Waste disposal recommendations: Dispose of contents/container in accordance with local/regional/national/international regulations.

SECTION 14: Transport information

In accordance with DOT
Transport document description: UN3264 Corrosive liquid, acidic, inorganic, n.o.s. (Phosphoric acid; Hydrochloric acid), 8, II
UN-No.(DOT): 3264
DOT NA no.: UN3264
DOT Proper Shipping Name: Corrosive liquid, acidic, inorganic, n.o.s. (Phosphoric acid; Hydrochloric acid)
Department of Transportation (DOT) Hazard Classes: 8 - Class 8 - Corrosive material 49 CFR 173.136
Hazard labels (DOT): 8 - Corrosive
Hydronet-T
Safety Data Sheet

DOT Symbols : G - Identifies PSN requiring a technical name
Packing group (DOT) : II - Medium Danger

IB2 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized.

T11 - 6 178.274(d)(2) Normal............. 178.275(d)(3)

TP2 - a. The maximum degree of filling must not exceed the degree of filling determined by the following: (image) Where: tr is the maximum mean bulk temperature during transport, tf is the temperature in degrees celsius of the liquid during filling, and a is the mean coefficient of cubical expansion of the liquid between the mean temperature of the liquid during filling (tf) and the maximum mean bulk temperature during transportation (tr) both in degrees celsius. b. For liquids transported under ambient conditions may be calculated using the formula: (image)

Where: d15 and d50 are the densities (in units of mass per unit volume) of the liquid at 15 C (59 F) and 50 C (122 F), respectively.

TP27 - A portable tank having a minimum test pressure of 4 bar (400 kPa) may be used provided the calculated test pressure is 4 bar or less based on the MAWP of the hazardous material, as defined in 178.275 of this subchapter, where the test pressure is 1.5 times the MAWP.

DOT Packaging Exceptions (49 CFR 173.xxx) : 154
DOT Packaging Non Bulk (49 CFR 173.xxx) : 202
DOT Packaging Bulk (49 CFR 173.xxx) : 242
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 1 L
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 30 L

DOT Vessel Stowage Location : B - (i) The material may be stowed “on deck” or “under deck” on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length; and (ii) “On deck only” on passenger vessels in which the number of passengers specified in paragraph (k)(2)(i) of this section is exceeded.

DOT Vessel Stowage Other : 40 - Stow “clear of living quarters”

SECTION 15: Regulatory information

15.1. US Federal regulations

Phosphoric acid (7664-38-2)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Hydrogen chloride (7647-01-0)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
Listed on SARA Section 302 (Specific toxic chemical listings)
Listed on SARA Section 313 (Specific toxic chemical listings)
SARA Section 302 Threshold Planning Quantity (TPQ) 500 (gas only)
SARA Section 313 - Emission Reporting 1.0 % (acid aerosols including mists, vapors, gas, fog, and other airborne forms of any particle size)

15.2. US State regulations

Phosphoric acid (7664-38-2)
U.S. - Massachusetts - Right To Know List
U.S. - Minnesota - Hazardous Substance List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) List

Hydrogen chloride (7647-01-0)
U.S. - Massachusetts - Right To Know List
U.S. - Minnesota - Hazardous Substance List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) List
### SECTION 16: Other information

Full text of H-phrases:

<table>
<thead>
<tr>
<th>H-Phrase</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Tox. 3 (Inhalation:gas)</td>
<td>Acute toxicity (inhalation:gas) Category 3</td>
</tr>
<tr>
<td>Acute Tox. 4 (Inhalation)</td>
<td>Acute toxicity (inhal.), Category 4</td>
</tr>
<tr>
<td>Acute Tox. 4 (Oral)</td>
<td>Acute toxicity (oral), Category 4</td>
</tr>
<tr>
<td>Flam. Liq. 4</td>
<td>Flammable liquids, Category 4</td>
</tr>
<tr>
<td>Skin Corr. 1A</td>
<td>Skin corrosion/irritation, Category 1A</td>
</tr>
<tr>
<td>Skin Corr. 1B</td>
<td>Skin corrosion/irritation, Category 1B</td>
</tr>
<tr>
<td>H227</td>
<td>Combustible liquid</td>
</tr>
<tr>
<td>H302</td>
<td>Harmful if swallowed</td>
</tr>
<tr>
<td>H314</td>
<td>Causes severe skin burns and eye damage</td>
</tr>
<tr>
<td>H331</td>
<td>Toxic if inhaled</td>
</tr>
<tr>
<td>H332</td>
<td>Harmful if inhaled</td>
</tr>
</tbody>
</table>

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.