# **Safety Data Sheet**



# Section 1: Identification of the Substance/Mixture and of the Company/Undertaking

1.1 Product identifier

Product Name Phosphoric Acid 80-87%

Product Code 70197

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

Relevant identified use(s) Semiconductor Uses

1.3 Details of the supplier of the safety data sheet

Manufacturer Air Liquide

2700 Post Oak Blvd. Houston, TX 77056 United States

www.us.airliquide.com sds@airliquide.com

**Telephone (Technical)** 713-896-2896 **Telephone (Technical)** 800-819-1704

1.4 Emergency telephone number

Manufacturer 800-424-9300 - CHEMTREC

Manufacturer +1 703-527-3887 - Outside United States

## **Section 2: Hazards Identification**

#### **EU/EEC**

According to Regulation (EC) No 1272/2008 (CLP)/REACH 1907/2006 [amended by 453/2010] According to EU Directive 67/548/EEC (DSD) or 1999/45/EC (DPD)

#### 2.1 Classification of the substance or mixture

CLP Skin Corrosion 1B - H314

Serious Eye Damage 1 - H318

**DSD/DPD** Corrosive (C)

R34

2.2 Label Elements

CLP

# **DANGER**



Hazard statements H314 - Causes severe skin burns and eye damage.

H318 - Causes serious eye damage

# **Precautionary statements**

**Prevention** P260 - Do not breathe mist/vapours/spray.

P264 - Wash thoroughly after handling.

P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P304+P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position

**Response** P304+P340 - IF INHALED comfortable for breathing.

P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated

clothing. Rinse skin with water/shower.

P321 - Specific treatment, see supplemental first aid information.

P363 - Wash contaminated clothing before reuse.

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.

P301+P330+P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

**Storage/Disposal** P405 - Store locked up.

P501 - Dispose of content and/or container in accordance with local, regional,

national, and/or international regulations.

DSD/DPD

10 m

Risk phrases

R34 - Causes burns.

Safety phrases

S36 - Wear suitable protective clothing.

S37 - Wear suitable gloves. S39 - Wear eye/face protection.

S45 - In case of accident or if you feel unwell, seek medical advice immediately (show

the label where possible).

2.3 Other Hazards

CLP According to Regulation (EC) No. 1272/2008 (CLP) this material is considered

hazardous.

**DSD/DPD** This product is considered dangerous according to the European Directive

67/548/EEC.

# **United States (US)**

According to OSHA 29 CFR 1910.1200 HCS

#### 2.1 Classification of the substance or mixture

OSHA HCS 2012 Skin Corrosion 1C - H314

Serious Eye Damage 1 - H318

2.2 Label elements

**OSHA HCS 2012** 

#### **DANGER**



Hazard statements Causes severe skin burns and eye damage. - H314

Causes serious eye damage - H318

**Precautionary statements** 

Prevention Do not breathe mist/vapours/spray. - P260

Wash thoroughly after handling. - P264

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

**Response** IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for

breathing. - P304+P340

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with

water/shower. - P303+P361+P353

Specific treatment, see supplemental first aid information. - P321

Wash contaminated clothing before reuse. - P363

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses,

if present and easy to do. Continue rinsing. - P305+P351+P338 Immediately call a POISON CENTER or doctor/physician. - P310

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. - P301+P330+P331

Storage/Disposal Store locked up. - P405

Dispose of content and/or container in accordance with local, regional, national, and/or

international regulations. - P501

2.3 Other hazards
OSHA HCS2012

Under United States Regulations (29 CFR 1910.1200 - Hazard Communication

Standard), this product is considered hazardous.

#### Canada

## **According to WHMIS**

## 2.1 Classification of the substance or mixture

WHMIS Corrosive - E

# 2.2 Label elements

**WHMIS** 



Corrosive - E

## 2.3 Other hazards

**WHMIS** 

In Canada, the product mentioned above is considered hazardous under the Workplace Hazardous Materials Information System (WHMIS).

## 2.4 Other information

NFPA



# Section 3 - Composition/Information on Ingredients

# 3.1 Substances

|                 | Composition                        |               |  |   |  |  |  |
|-----------------|------------------------------------|---------------|--|---|--|--|--|
| Chemical Name   | Identifiers                        | %             | LD50/LC50  | Classifications According to Regulation/Directive   |  |  |  |
| Phosphoric acid | CAS:7664-38-2<br>EC<br>Number:231- | 80% TO<br>87% | Ingestion/Oral-Rat LD50 • 1.25<br>g/kg<br>Inhalation-Rat LC50 • 25.5 mg/m³ | EU DSD/DPD: Annex I: C; R34 EU CLP: Annex VI: Skin Corr. 1B, H314 OSHA HCS 2012: Eye Dam. 1; Skin Corr.1C |  |  |  |
| Water           | CAS:7732-18-5<br>EC Number:231-    | Balance       | NDA  | EU DSD/DPD: NotHazardous<br>EU CLP: NotHazardous  |  |  |  |

I 791-2 I I OSHA HCS 2012: Not hazardous

#### 3.2 Mixtures

Material does not meet the criteria of a mixture in accordance with Regulation (EC) No 1272/2008.

## **Section 4 - First Aid Measures**

# 4.1 Description of first aid measures

**Inhalation** Move victim to fresh air. Administer oxygen if breathing is difficult. Give artificial

respiration if victim is not breathing. Do not use mouth-to-mouth method if victim inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Get medical

attention immediately.

**Skin** For minor skin contact, avoid spreading material on unaffected skin. In case of contact

with substance, immediately flush skin with running water for at least 20 minutes. Remove and isolate contaminated clothing. Get medical attention immediately. Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove

contact lenses, if present, after the first five minutes, then continue rinsing eye. Get

medical attention immediately.

Ingestion If swallowed, rinse mouth with water (only if the person is conscious) Do NOT induce

vomiting. Never give anything by mouth to an unconscious person. Give plenty of water to drink. Do not use mouth-to-mouth method if victim ingested the substance. Obtain

medical attention immediately ifingested.

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

Refer to Section 11 - Toxicological Information.

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

Notes to Physician

All treatments should be based on observed signs and symptoms of distress in the

patient. Consideration should be given to the possibility that overexposure to materials

other than this product may have occurred.

#### Section 5 - Firefighting Measures

#### 5.1 Extinguishing media

**Suitable Extinguishing Media** LARGE FIRES: Dry chemical, CO2, alcohol-resistant foam or water spray.

SMALL FIRES: Dry chemical, CO2 or water spray.

Unsuitable Extinguishing

Media

Eye

No data available

## 5.2 Special hazards arising from the substance or mixture

Unusual Fire and Explosion

Hazards

Containers may explode when heated.

Acid reacts with most metals to release hydrogen gas, which can form explosive

mixtures with air.

**Hazardous Combustion** 

**Products** 

Non-combustible, substance itself does not burn but may decompose upon heating to produce corrosive and/or toxic fumes.

#### 5.3 Advice for firefighters

Structural firefighters' protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations where direct contact with the substance is possible.

Wear chemical protective clothing that is specifically recommended by the

manufacturer. It may provide little or no thermal protection.

Wear positive pressure self-contained breathing apparatus (SCBA). SMALL FIRES: Move containers from fire area if you can do it without risk.

Runoff from fire control may cause pollution.

## **Section 6 - Accidental Release Measures**

## 6.1 Personal precautions, protective equipment and emergency procedures

Ventilate enclosed areas. Do not walk through spilled material. Wear appropriate **Personal Precautions** 

personal protective equipment, avoid direct contact. Do not touch damaged containers

or spilled material unless wearing appropriate protective clothing.

**Emergency Procedures** ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate

> area). As an immediate precautionary measure, isolate spill or leak area for at least 50 meters (150 feet) in all directions. Keep unauthorized personnel away. Stay

upwind. Keep out of low areas. Do not get water inside container.

## 6.2 Environmental precautions

Prevent entry into waterways, sewers, basements or confined areas.

# 6.3 Methods and material for containment and cleaning up

Containment/Clean-up Measures

Absorb or cover with dry earth, sand or other non-combustible material and transfer to

containers.

Dike to collect large liquid spills.

A vapor suppressing foam may be used to reduce vapors. Use water spray to reduce vapors or divert vapor cloud drift.

Neutralize residue with neutralizing agent appropriate for acidic materials. Test area

with litmus paper to ensure neutralization is complete.

#### 6.4 Reference to other sections

Refer to Section 8 - Exposure Controls/Personal Protection and Section 13 - Disposal

Considerations.

## Section 7 - Handling and Storage

#### 7.1 Precautions for safe handling

Handling

Handle and open container with care. Use only with adequate ventilation. Use caution when combining with water; DO NOT add water to corrosive liquid, ALWAYS add corrosive liquid to water while stirring to prevent release of heat, steam and fumes. Wear appropriate personal protective equipment, avoid direct contact. Do not breathe mist, vapours, spray. Do not get in eyes, on skin, or on clothing. Wash thoroughly with soap and water after handling and before eating, drinking, or using tobacco.

# 7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed. Store in a cool, dry, well-ventilated place. Keep away Storage

from incompatible materials. Inspect all incoming containers before storage, to ensure

containers are properly labeled and not damaged.

7.3 Specific end use(s)

Refer to Section 1.2 - Relevant identified uses.

# Section 8 - Exposure Controls/Personal Protection

#### 8.1 Control parameters

| Exposure Limits/Guidelines |        |              |                |               |              |   |  |
|----------------------------|--------|--------------|----------------|---------------|--------------|---|--|
|                            | Result | ACGIH        | Canada Ontario | Canada Quebec | China        | France  |  |
| Phosphoric acid            | STELs  | 3 mg/m3 STEL | 3 mg/m3 STEL   | 3 mg/m3 STEV  | 3 mg/m3 STEL | 0.5 ppm STEL [VLCT]<br>(indicative limit); 2<br>mg/m3 STEL [VLCT]<br>(indicative limit) |  |
| (7664-38-2)                |        |              |                |               |              | 0.2 ppm TWA [VME]   |  |

|                                | TWAs     | 1 mg/m3 TWA   | 1 mg  | g/m3 TWA   | 1 m             | g/m3 TWAEV               | 1 mg/m3 TWA   | (indicative limit); 1<br>mg/m3 TWA [VME]<br>(indicative limit) |
|--------------------------------|----------|---|-------|--|-----------------|--------------------------|---|--|
|                                |          | E   | xpos  | ure Limits/Gu  | idel            | ines (Con't.)            |   |  |
|                                | Result   | Germany DFG   | G     | ermany TRGS  |                 | Ireland                  | Israel  | Italy  |
|                                | STELs    | Not established   | Not   | established  | 2 m             | g/m3 STEL                | 3 mg/m3 STEL  | 2 mg/m3 STEL   |
| Phosphoric acid<br>(7664-38-2) | TWAs     | 2 mg/m3 TWA AGW (The risk of damage to the embryo or fetus can be excluded when AGV and BGW values are observed, inhalable fraction, exposure factor 2) |       | e risk of damage<br>ne embryo or<br>s can be<br>luded when AGW<br>BGW values are<br>erved, inhalable<br>tion, exposure | 1 mg/m3 TWA     |                          | 1 mg/m3 TWA   | 1 mg/m3 TWA  |
|                                | Ceilings | 4 mg/m3 Peak<br>(inhalable fraction)  | Not   | Not established No   |                 | established              | Not established   | Not established  |
|                                | MAKs     | 2 mg/m3 TWA MAK (inhalable fraction)  | Not   | established  | Not established |                          | Not established   | Not established  |
|                                |          | E   | kpos  | ure Limits/Gu  | idel            | ines(Con't.)             |   |  |
|                                | Result   | NIOSH   |       | OSHA   | 0               | SHA Vacated              | Portugal  | Spain  |
|                                | STELs    | 3 mg/m3 STEL  | Not e | established  | 3mg             | /m3STEL                  | 3 mg/m3 STEL [VLE-<br>CD  | 2 mg/m3 STEL[VLA-<br>EC]                                       |
| Phosphoric acid<br>(7664-38-2) | TWAs     | 1 mg/m3TWA  | 1 mg  | g/m3TWA 1 mg/m3TWA   |                 | 1 mg/m3 TWA [VLE-<br>MP] | 1 mg/m3 TWA [VLA-<br>ED] (indicative limit<br>value; it is prohibited<br>the partial or complete<br>commercialization or<br>use of this substance<br>as a phytosanitary or<br>biocide compound) |  |
|                                |          | Ex  | kpos  | ure Limits/Gu  | idel            | ines(Con't.)             |   |  |
|                                |          |   |       | Result   |                 | Sweden                   |   |  |
| Phosphoric acid                |          |   |       | STELs  | 3 mg/m3 STV     |                          |   |  |
| (7664-38-2) TWAs 1 mg/m3 LLV   |          |   |       |  |                 |                          |   |  |

## 8.2 Exposure controls

Engineering Measures/Controls Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

## **Personal Protective Equipment**

Respiratory

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved

respirator if exposure limits are exceeded or symptoms are experienced.

**Eye/Face** Wear chemical splash safety goggles.

**Skin/Body** Wear appropriate gloves.

**Environmental Exposure** 

Controls

Controls should be engineered to prevent release to the environment, including procedures to prevent spills, atmospheric release and release to waterways. Follow

best practice for site management and disposal of waste.

#### Key to abbreviations

ACGIH = American Conference of Governmental Industrial Hygiene

OSHA = Occupational Safety and Health Administration

LLV = Limit Level Value is the exposure limit for 8-hour work day

Maximale Arbeitsplatz Konzentration is the maximum permissible

MAK = concentration

NIOSH = National Institute of Occupational Safety and Health

STEL Short Term Exposure Limits are based on 15-minute exposures

TWAEV = Time-Weighted Average Exposure Value

Time-Weighted Averages are based on 8h/day, 40h/week

TWA = exposures

# **Section 9 - Physical and Chemical Properties**

# 9.1 Information on Physical and Chemical Properties

| Material Description                |                                |                        |  |
|-------------------------------------|--------------------------------|------------------------|--|
| Physical Form                       | Liquid                         | Appearance/Description | Clear, colorless, corrosive liquid with an acrid odor. |
| Color                               | Clear, colorless.              | Odor                   | Acrid  |
| Odor Threshold                      | Data lacking                   |                        |  |
| General Properties                  |                                |                        | -  |
| Boiling Point                       | 146 to 158 C(294.8 to 316.4 F) | Melting Point          | 0 to 21 C(32 to 69.8 F)                                |
| Decomposition Temperature           | Data lacking                   | рН                     | Data lacking   |
| Specific Gravity/Relative Density   | 1.6 to 1.685 Water=1           | Water Solubility       | Miscible   |
| Viscosity                           | Data lacking                   | Explosive Properties   | Data lacking   |
| Oxidizing Properties:               | Data lacking                   |                        |  |
| Volatility                          |                                |                        | -  |
| Vapor Pressure                      | 0.03 mmHg (torr) @ 20 C(68 F)  | Vapor Density          | 3.4 Air=1  |
| Evaporation Rate                    | Data lacking                   |                        |  |
| Flammability                        |                                |                        |  |
| Flash Point                         | Data lacking                   | UEL                    | Data lacking   |
| LEL                                 | Data lacking                   | Autoignition           | Data lacking   |
| Flammability (solid, gas)           | Data lacking                   |                        |  |
| Environmental                       |                                |                        |  |
| Octanol/Water Partition coefficient | Data lacking                   |                        |  |

# 9.2 Other Information

No additional physical and chemical parameters noted.

# **Section 10: Stability and Reactivity**

### 10.1 Reactivity

No dangerous reaction known under conditions of normal use.

# 10.2 Chemical stability

Stable

# 10.3 Possibility of hazardous reactions

Hazardous polymerization will not occur.

#### 10.4 Conditions to avoid

Excess heat.

## 10.5 Incompatible materials

Aliphatic amines, alkanolamines, alkylene oxides, aromatic amines, amides, ammonia, ammonium hydoxide, bases, calcium oxide, epichlorohydrin, isocyanates, nitromethane (explosive), oleum, organic anhydrides, sulfuric acid, sodium

tetrahydroborate, strong oxidizers, vinyl acetate. Contact with most metals form hydrogen gas.

# 10.6 Hazardous decomposition products

Products of thermal decomposition include phosphorous oxides.

# **Section 11 - Toxicological Information**

# 11.1 Information on toxicological effects

|                            | Components  |
|----------------------------|---|
|                            | Impurities, Stabilizers, etc  |
| Phosphoric<br>acid (80% TO | Acute Toxicity: Ingestion/Oral-Rat LD50 • 1.25 g/kg; Lungs, Thorax, or Respiration: Acute pulmonary edema; Liver. Changes in liver weight; Inhalation-Rat LC50 • 25.5 mg/m³; Lungs, Thorax, or Respiration: Acute pulmonary edema; Liver. Changes in liver weight |

| GHS Properties                | Classification  |
|-------------------------------|---|
| Acute toxicity                | EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met  |
| Aspiration Hazard             | EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met  |
| Carcinogenicity               | EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met  |
| Germ Cell Mutagenicity        | EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met  |
| Skin corrosion/Irritation     | EU/CLP • Skin Corrosion 1B  OSHA HCS 2012 • Skin Corrosion 1C                             |
| Skin sensitization            | EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met  |
| STOT-RE                       | EU/CLP   Classification criteria not met  OSHA HCS 2012   Classification criteria not met |
| STOT-SE                       | EU/CLP   Classification criteria not met  OSHA HCS 2012   Classification criteria not met |
| Toxicity for Reproduction     | EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met  |
| Respiratory sensitization     | EU/CLP   Classification criteria not met OSHA HCS 2012   Classification criteria not met  |
| Serious eye damage/Irritation | EU/CLP • Serious Eye Damage 1 OSHA HCS 2012 • Serious Eye Damage 1                        |

## **Potential Health Effects**

Inhalation

Acute (Immediate) May cause corrosive burns - irreversible damage.

Chronic (Delayed) Repeated or prolonged exposure to corrosive fumes may cause bronchial irritation with

chronic cough.

Skin

**Acute (Immediate)** Causes severe skin burns and eye damage.

**Chronic (Delayed)** Repeated or prolonged exposure to corrosive materials will cause dermatitis.

Eye

Acute (Immediate) Causes serious eye damage.

**Chronic (Delayed)** Repeated or prolonged exposure to corrosive materials or fumes may cause

conjunctivitis.

Ingestion

Acute (Immediate) May cause irreversible damage to mucous membranes.

**Chronic (Delayed)**Repeated or prolonged exposure to corrosive materials or fumes may cause

gastrointestinal distrubances.

Key to abbreviations

LC = Lethal Concentration

LD = Lethal Dose

# **Section 12 - Ecological Information**

## 12.1 Toxicity

Material data lacking.

# 12.2 Persistence and degradability

Material data lacking.

## 12.3 Bioaccumulative potential

Material data lacking.

# 12.4 Mobility in Soil

Material data lacking.

#### 12.5 Results of PBT and vPvB assessment

No PBT and vPvB assessment has been conducted.

## 12.6 Other adverse effects

No studies have been found.

# **Section 13 - Disposal Considerations**

#### 13.1 Waste treatment methods

Product waste Dispose of content and/or container in accordance with local, regional, national, and/or

international regulations.

Packaging waste Dispose of content and/or container in accordance with local, regional, national, and/or

international regulations.

# **Section 14 - Transport Information**

|           | 14.1 UN<br>number | 14.2 UN proper<br>shipping name | 14.3 Transport hazard class(es) | 14.4 Packing<br>group | 14.5 Environmental hazards |
|-----------|-------------------|---------------------------------|---------------------------------|-----------------------|----------------------------|
| DOT       | UN1805            | Phosphoric acid solution        | 8                               | III                   | NDA                        |
| TDG       | UN1805            | PHOSPHORIC ACID, LIQUID         | 8                               | III                   | NDA                        |
| IMO/IMDG  | UN1805            | PHOSPHORIC ACID SOLUTION        | 8                               | III                   | NDA                        |
| IATA/ICAO | UN1805            | Phosphoric acid, solution       | 8                               | III                   | NDA                        |

14.6 Special precautions for

None known.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not relevant.

# **Section 15 - Regulatory Information**

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

SARA Hazard Classifications Acute

| State Right To Know    |           |     |     |     |  |
|------------------------|-----------|-----|-----|-----|--|
| Component CAS MA NJ PA |           |     |     |     |  |
| Phosphoric acid        | 7664-38-2 | Yes | Yes | Yes |  |

| Inventory       |           |            |               |       |      |          |           |
|-----------------|-----------|------------|---------------|-------|------|----------|-----------|
| Component       | CAS       | Canada DSL | Canada NDSL   | Cł    | hina | EUEINECS | EU ELNICS |
| Phosphoric acid | 7664-38-2 | Yes        | No            | Y     | ⁄es  | Yes      | No        |
|                 |           |            | Inventory (Co | n't.) |      |          |           |
| Component       |           |            | CAS           |       | TSC  | A        |           |
| Phosphoric acid |           | 70         | 664-38-2      |       | Ye   | S        |           |

#### Canada

Canada - WHMIS - Classifications of Substances

• Phosphoric acid 7664-38-2 E (including <=85%)

Canada - WHMIS - Ingredient Disclosure List

Phosphoric acid
 7664-38-2
 1 %

**Environment** 

Canada - CEPA - Priority Substances List

Phosphoric acid
 7664-38-2
 Not Listed

#### China

# -Environment

China - Ozone Depleting Substances - First Schedule

Phosphoric acid
 7664-38-2
 Not Listed

China - Ozone Depleting Substances - Second Schedule

Phosphoric acid
 7664-38-2 Not Listed

China - Ozone Depleting Substances - Third Schedule

• Phosphoric acid 7664-38-2 Not Listed

#### Other

China - Annex I & II - Controlled Chemicals Lists

• Phosphoric acid 7664-38-2 Not Listed

| China - Dangerous Goods List  • Phosphoric acid   | 7664-38-2 | (liquid or solid)                                  |
|---|-----------|--|
| China - Export Control List - Part I Chemicals  • Phosphoric acid   | 7664-38-2 | Not Listed   |
| urope   |           |  |
| Other   |           |  |
| EU - CLP (1272/2008) - Annex VI - Table 3.2 - Classification  • Phosphoric acid   | 7664-38-2 | C; R34   |
| EU - CLP (1272/2008) - Annex VI - Table 3.2 - Concentration Limits  |           |  |
| Phosphoric acid   | 7664-38-2 | 10%<=C<25%: Xi; R:36/38<br>25%<=C: C; R:34         |
| EU - CLP (1272/2008) - Annex VI - Table 3.2 - Labelling • Phosphoric acid   | 7664-38-2 | C R:34 S:(1/2)-26-45                               |
| EU - CLP (1272/2008) - Annex VI - Table 3.2 - Notes - Substances and Preparations • Phosphoric acid                             | 7664-38-2 | В  |
| EU - CLP (1272/2008) - Annex VI - Table 3.2 - Safety Phrases  • Phosphoric acid   | 7664-38-2 | S:(1/2)-26-45                                      |
| ermany  |           |  |
| Environment   |           |  |
| Germany - TA Luft - Types and Classes  • Phosphoric acid  | 7664-38-2 | Not Listed   |
| Germany - Water Classification (VwVwS) - Annex 1  • Phosphoric acid   | 7664-38-2 | Not Listed   |
| Germany - Water Classification (VwVwS) - Annex 2 - Water Hazard Classes   |           |  |
| Phosphoric acid   | 7664-38-2 | ID Number 392, hazard class - low hazard to waters |
| Germany - Water Classification (VwVwS) - Annex 3 • Phosphoric acid  | 7664-38-2 | Not Listed   |
| Other   |           |  |
| Germany - Specifically Regulated Chemicals in TRGS  • Phosphoric acid   | 7664-38-2 | Not Listed   |
| ortugal   |           |  |
| Other   |           |  |
| Portugal - Prohibited Substances  • Phosphoric acid   | 7664-38-2 | Not Listed   |
| nited Kingdom   |           |  |
| Environment   |           |  |
| <ul> <li>United Kingdom - Pollution Inventory - Schedule 1 - Thresholds for Releases to Air</li> <li>Phosphoric acid</li> </ul> | 7664-38-2 | Not Listed   |

| Other  |           |                                    |
|--|-----------|------------------------------------|
| United Kingdom - Workplace Exposure Limits (WELs) - Substances in Review  • Phosphoric acid                    | 7664 20 2 | Not Listed                         |
| • Friosphoric acid   | 7664-38-2 | Not Listed                         |
| United Kingdom - List of Dangerous Substances in Water   |           |                                    |
| Phosphoric acid  | 7664-38-2 | Not Listed                         |
| nited States   |           |                                    |
| Labor CSUA Braces Sefety Management Highly Hazardova Chemicale   |           |                                    |
| <ul><li>U.S OSHA - Process Safety Management - Highly Hazardous Chemicals</li><li>Phosphoric acid</li></ul>    | 7664-38-2 | Not Listed                         |
|  |           |                                    |
| U.S OSHA - Specifically Regulated Chemicals  • Phosphoric acid   | 7664-38-2 | Not Listed                         |
|  |           |                                    |
| Environment  |           |                                    |
| U.S CAA (Clean Air Act) - 1990 Hazardous Air Pollutants  • Phosphoric acid                                     | 7664-38-2 | Not Listed                         |
|  | 7001002   | Not Liotod                         |
| U.S CERCLA/SARA - Hazardous Substances and their Reportable Quantities   |           |                                    |
| • Phosphoric acid  | 7664-38-2 | 5000 lb final RQ; 2270 kg final RQ |
| U.S CERCLA/SARA - Radionuclides and Their Reportable Quantities  |           |                                    |
| Phosphoric acid  | 7664-38-2 | Not Listed                         |
| U.S CERCLA/SARA - Section 302 Extremely Hazardous Substances EPCRA RQs • Phosphoric acid                       | 7664-38-2 | Not Listed                         |
| II.S. CEDCLA/SADA Soction 202 Extremely Hazardous Substances. TDOs   |           |                                    |
| <ul> <li>U.S CERCLA/SARA - Section 302 Extremely Hazardous Substances TPQs</li> <li>Phosphoric acid</li> </ul> | 7664-38-2 | Not Listed                         |
| U.S CERCLA/SARA - Section 313 - Emission Reporting   |           |                                    |
| Phosphoric acid  | 7664-38-2 | Not Listed                         |
| U.S CERCLA/SARA - Section 313 - PBT Chemical Listing   |           |                                    |
| Phosphoric acid  | 7664-38-2 | Not Listed                         |
| nited States -California   |           |                                    |
| Environment  |           |                                    |
| U.S California - Proposition 65 - Carcinogens List  • Phosphoric acid  | 7664-38-2 | Not Listed                         |
| Theophisia dalid   | 7004 00 2 | Not Elotod                         |
| <ul><li>U.S California - Proposition 65 - Developmental Toxicity</li><li>Phosphoric acid</li></ul>             | 7664 20 2 | Not Listed                         |
| - т поэртопо абій  | 7664-38-2 | Not Listed                         |
| U.S California - Proposition 65 - Maximum Allowable Dose Levels (MADL)   | 7664 20 0 | Not Listed                         |
| Phosphoric acid  | 7664-38-2 | Not Listed                         |
| U.S California - Proposition 65 - No Significant Risk Levels (NSRL)  |           |                                    |
| Phosphoric acid  | 7664-38-2 | Not Listed                         |
| U.S California - Proposition 65 - Reproductive Toxicity - Female   |           |                                    |
| Phosphoric acid  | 7664-38-2 | Not Listed                         |

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Phosphoric acid

Not Listed

7664-38-2

U.S. - California - Proposition 65 - Reproductive Toxicity - Male

• Phosphoric acid 7664-38-2 Not Listed

# **United States - Pennsylvania**

Labor

U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List

• Phosphoric acid 7664-38-2

U.S. - Pennsylvania - RTK (Right to Know) - Special Hazardous Substances

Phosphoric acid
 7664-38-2
 Not Listed

# 15.2 Chemical Safety Assessment

No Chemical Safety Assessment has been carried out.

# **Section 16 - Other Information**

Last Revision Date 19/February/2015

Preparation Date 22/December/2014

Disclaimer/Statement of Liability

To the best of Air Liquide's knowledge, the information contained herein is reliable and accurate as of this date; however, accuracy, suitability or completeness are not guaranteed and no warranties of any type, either express or implied, are provided. The information contained herein relates only to this specific product. If this gas mixture is combined with other materials, all component properties must be considered. Data may be changed from time to time. Be sure to consult the latest edition.

**Key to abbreviations** NDA = No data available