

Safety Data Sheet

according to OSHA HCS (29CFR 1910.1200)

Revision: March 20, 2020

1 Identification

- **Product identifier**
- **Trade name:** Clear 1
- **Product code:** 100719000
- **Recommended use and restriction on use**
- **Recommended use:** Used for cleaning ice making systems
- **Restrictions on use:** No relevant information available.
- **Details of the supplier of the Safety Data Sheet**
- **Manufacturer/Supplier:**
Vapco Products
401 Marshall Rd
Valley Park, MO 63088
Phone: 636-923-2121
- **Emergency telephone number:**
ChemTel Inc.
(800)255-3924 (North America)
+1 (813)248-0585 (International)

2 Hazard(s) identification

- **Classification of the substance or mixture**
Met. Corr.1 H290 May be corrosive to metals.
Skin Corr. 1C H314 Causes severe skin burns and eye damage.
Eye Dam. 1 H318 Causes serious eye damage.
- **Label elements**
- **GHS label elements**
The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms:**



GHS05

- **Signal word:** Danger
- **Hazard statements:**
H290 May be corrosive to metals.
H314 Causes severe skin burns and eye damage.
- **Precautionary statements:**
P234 Keep only in original container.
P260 Do not breathe mist/vapors/spray.
P264 Wash thoroughly after handling.
P280 Wear protective gloves/protective clothing/eye protection.
P301+P330+P331 If swallowed: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340 IF INHALED: Remove person to fresh air and keep 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.

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P310	Immediately call a poison center/doctor.
P363	Wash contaminated clothing before reuse.
P390	Absorb spillage to prevent material damage.
P405	Store locked up.
P406	Store in corrosive resistant container with a resistant inner liner.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Other hazards** There are no other hazards not otherwise classified that have been identified.

3 Composition/information on ingredients

· **Chemical characterization: Mixtures**

· **Components:**

7664-38-2	Phosphoric acid ⚠ Met. Corr. 1, H290; Skin Corr. 1B, H314; Eye Dam. 1, H318	40-60%
77-92-9	Citric acid ⚠ Eye Irrit. 2A, H319; STOT SE 3, H335	<3%

· **Additional information:**

For the listed ingredient(s), the identity and/or exact percentage(s) are being withheld as a trade secret.
For the wording of the listed Hazard Statements, refer to section 16.

4 First-aid measures

· **Description of first aid measures**

· **General information:** Immediately remove any clothing soiled by the product.

· **After inhalation:**

Supply fresh air.

If experiencing respiratory symptoms: Call a doctor.

Provide oxygen treatment if affected person has difficulty breathing.

· **After skin contact:**

Immediately rinse with water.

If skin irritation continues, consult a doctor.

Seek immediate help for blistering or open wounds.

· **After eye contact:**

Protect unharmed eye.

Remove contact lenses if worn.

Rinse opened eye for several minutes under running water. Then consult a doctor.

· **After swallowing:**

Rinse out mouth and then drink plenty of water.

Do not induce vomiting; immediately call for medical help.

· **Most important symptoms and effects, both acute and delayed:**

Eye damage.

Strong caustic effect on skin and mucous membranes.

Gastric or intestinal disorders when ingested.

· **Danger:**

Danger of gastric perforation.

Causes serious eye damage.

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- **Indication of any immediate medical attention and special treatment needed:**
Medical supervision for at least 48 hours.
If medical advice is needed, have product container or label at hand.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **For safety reasons unsuitable extinguishing agents:** No relevant information available.
- **Special hazards arising from the substance or mixture**
During heating or in case of fire poisonous gases are produced.
- **Advice for firefighters**
- **Protective equipment:**
Wear self-contained respiratory protective device.
Wear fully protective suit.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation.
For large spills, use respiratory protective device against the effects of fumes/dust/aerosol.
- **Environmental precautions**
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **Methods and material for containment and cleaning up**
Use calcium oxide as a neutralizing agent.
Sweep up and place into an appropriate container.
Send for recovery or disposal in suitable receptacles.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Handling**
- **Precautions for safe handling:**
Prevent formation of aerosols.
Avoid splashes or spray in enclosed areas.
Use only in well ventilated areas.
- **Information about protection against explosions and fires:** The product is not flammable.
- **Conditions for safe storage, including any incompatibilities**
- **Requirements to be met by storerooms and receptacles:**
Store in a well-ventilated place. Keep cool.
Store only in the original receptacle.

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- **Information about storage in one common storage facility:**
Do not store together with alkalis (caustic solutions).
Store away from metals.
Store away from foodstuffs.
- **Further information about storage conditions:** Keep containers tightly sealed.
- **Specific end use(s)** No relevant information available.

8 Exposure controls/personal protection

- **Control parameters**
- **Components with limit values that require monitoring at the workplace:**
The following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.

7664-38-2 Phosphoric acid

PEL (USA)	Long-term value: 1 mg/m ³
REL (USA)	Short-term value: 3 mg/m ³ Long-term value: 1 mg/m ³
TLV (USA)	Short-term value: 3 mg/m ³ Long-term value: 1 mg/m ³
EL (Canada)	Short-term value: 3 mg/m ³ Long-term value: 1 mg/m ³
EV (Canada)	Short-term value: 3 mg/m ³ Long-term value: 1 mg/m ³
LMPE (Mexico)	Short-term value: 3 mg/m ³ Long-term value: 1 mg/m ³

- **Exposure controls**
- **General protective and hygienic measures:**
The usual precautionary measures for handling chemicals should be followed.
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.
- **Engineering controls:** Provide adequate ventilation.
- **Breathing equipment:** In case of inadequate ventilation wear respiratory protection.
- **Protection of hands:**



Protective gloves

- **Material of gloves**
Nitrile rubber, NBR
Fluorocarbon rubber (Viton)
PVC gloves
Butyl rubber, BR
Neoprene gloves
Natural rubber, NR
Sensibilization by the components in the glove materials is possible.

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· Eye protection:



Safety glasses

Follow relevant national guidelines concerning the use of protective eyewear.

- **Body protection:** Acid resistant protective clothing.
- **Limitation and supervision of exposure into the environment**
No relevant information available.
- **Risk management measures** No relevant information available.

9 Physical and chemical properties

· Information on basic physical and chemical properties

· Appearance:

Form:	Liquid
Color:	Light amber.
· Odor:	Characteristic
· Odor threshold:	Not determined.

· pH-value:	<1
· Melting point/Melting range:	Not determined.
· Boiling point/Boiling range:	Not determined.

· Flash point: Not applicable.

· Flammability (solid, gaseous): Not applicable.

· Auto-ignition temperature: Not determined.

· Decomposition temperature: Not determined.

· Danger of explosion: Product does not present an explosion hazard.

· Explosion limits

Lower:	Not determined.
Upper:	Not determined.

· Oxidizing properties: Non-oxidizing.

· Vapor pressure: Not determined.

· Density:

Relative density:	Not determined.
Vapor density:	Not determined.
Evaporation rate:	Not determined.

· Solubility in / Miscibility with

Water: Fully miscible.

· Partition coefficient (n-octanol/water): Not determined.

· Viscosity

Dynamic:	Not determined.
Kinematic:	Not determined.

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· **Other information**

No relevant information available.

10 Stability and reactivity

- **Reactivity:** No relevant information available.
- **Chemical stability:** Stable under normal temperatures and pressures.
- **Thermal decomposition / conditions to be avoided:**
Toxic fumes may be released if heated above the decomposition point.
No decomposition if used and stored according to specifications.
- **Possibility of hazardous reactions**
Reacts with alkali and metals.
Reacts with metals forming hydrogen.
Toxic fumes may be released if heated above the decomposition point.
- **Conditions to avoid** Excessive heat.
- **Incompatible materials**
Alkalis.
Metals.
- **Hazardous decomposition products**
Due to thermal decomposition:
Phosphorus compounds

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:** Based on available data, the classification criteria are not met.
- **LD/LC50 values that are relevant for classification:** None.
- **Primary irritant effect:**
- **On the skin:** Strong caustic effect on skin and mucous membranes.
- **On the eye:** Strong caustic effect.
- **Sensitization:** Based on available data, the classification criteria are not met.
- **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer):**

None of the ingredients are listed.

· **NTP (National Toxicology Program):**

None of the ingredients are listed.

· **OSHA-Ca (Occupational Safety & Health Administration):**

None of the ingredients are listed.

· **Probable route(s) of exposure:**

Ingestion.
Inhalation.
Eye contact.
Skin contact.

- **Acute effects (acute toxicity, irritation and corrosivity):** Causes severe skin burns and eye damage.
- **Repeated dose toxicity:** No relevant information available.
- **Germ cell mutagenicity:** Based on available data, the classification criteria are not met.

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- **Carcinogenicity:** Based on available data, the classification criteria are not met.
- **Reproductive toxicity:** Based on available data, the classification criteria are not met.
- **STOT-single exposure:** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure:** Based on available data, the classification criteria are not met.
- **Aspiration hazard:** Based on available data, the classification criteria are not met.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity** No relevant information available.
- **Persistence and degradability** No relevant information available.
- **Bioaccumulative potential:** No relevant information available.
- **Mobility in soil:** No relevant information available.
- **Additional ecological information**
- **General notes:**
Aquatic hazards are greatly reduced by dilution.
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
Rinse off of bigger amounts into drains or the aquatic environment may lead to decreased pH-values. A low pH-value harms aquatic organisms. If the dilution of the use-level pH-value is considerably increased after use, the aqueous waste, emptied into drains, is only low water-dangerous.
- **Other adverse effects** No relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**
The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes.
- **Uncleaned packagings**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- | | |
|--|---|
| <ul style="list-style-type: none"> · UN-Number · DOT, ADR/RID/ADN, IMDG, IATA | <p style="text-align: center;">UN1805</p> |
| <ul style="list-style-type: none"> · UN proper shipping name · DOT · ADR/RID/ADN, IMDG, IATA | <p style="text-align: center;">Phosphoric acid solution
PHOSPHORIC ACID, SOLUTION</p> |
| <ul style="list-style-type: none"> · Transport hazard class(es) | |

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· DOT



· Class 8
· Label 8

· ADR/RID/ADN



· Class 8 (C2)
· Label 8

· IMDG, IATA



· Class 8
· Label 8

· Packing group

· DOT, ADR/RID/ADN, IMDG, IATA III

· Environmental hazards Not applicable.

· Special precautions for user Warning: Corrosive substances

· Hazard identification number (Kemler code): 80

· EMS Number: F-A,S-B

· Segregation groups Acids

· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code Not applicable.

· Transport/Additional information:

· DOT



Limited Quantity for packages less than 30 kg gross and inner packagings less than 5 L.

· ADR/RID/ADN



Limited Quantity for packages less than 30 kg gross and inner packagings less than 5 L.

· IMDG

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Limited Quantity for packages less than 30 kg gross and inner packagings less than 5 L.

· IATA



Limited Quantity for packages less than 30 kg gross and inner packagings less than 5 L.

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- United States (USA)
- SARA

· Section 302 (extremely hazardous substances):

None of the ingredients are listed.

· Section 313 (Specific toxic chemical listings):

None of the ingredients are listed.

· TSCA (Toxic Substances Control Act)

All ingredients are listed or exempt.

· Proposition 65 (California)

· Chemicals known to cause cancer:

None of the ingredients are listed.

· Chemicals known to cause developmental toxicity for females:

None of the ingredients are listed.

· Chemicals known to cause developmental toxicity for males:

None of the ingredients are listed.

· Chemicals known to cause developmental toxicity:

None of the ingredients are listed.

· EPA (Environmental Protection Agency):

None of the ingredients are listed.

· IARC (International Agency for Research on Cancer):

None of the ingredients are listed.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Relevant phrases

H290 May be corrosive to metals.

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H314 Causes severe skin burns and eye damage.

H318 Causes serious eye damage.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

- **Date of preparation / last revision** March 20, 2020 / -

- **Abbreviations and acronyms:**

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

OSHA: Occupational Safety & Health Administration

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

Met. Corr. 1: Corrosive to metals – Category 1

Skin Corr. 1B: Skin corrosion/irritation – Category 1B

Skin Corr. 1C: Skin corrosion/irritation – Category 1C

Eye Dam. 1: Serious eye damage/eye irritation – Category 1

Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

- **Sources**

Website, European Chemicals Agency (echa.europa.eu)Website, US EPA Substance Registry Services (ofmpub.epa.gov/sorinternet/registry/substreg/home/overview/home.do)Website, Chemical Abstracts Registry, American Chemical Society (www.cas.org)

Patty's Industrial Hygiene, 6th ed., Rose, Vernon, ed. ISBN: 978-0-470-07488-6

Casarett and Doull's Toxicology: The Basic Science of Poisons, 8th Ed., Klaasen, Curtis D., ed., ISBN: 978-0-07-176923-5.

Safety Data Sheets, Individual Manufacturers