

**Safety Data Sheet**  
acc. to OSHA HCS (29 CFR 1910.1200)

Printing date: 03/08/2016

Revision: 03/08/2016

**1 Identification**

- **Product identifier**
- **Trade name:** PEPPER
- **Article number:** No other identifiers
- **Recommended use and restriction on use**
- **Recommended use:** Water treatment
- **Restrictions on use:** See Sections 8 and 10 for further information.
- **Details of the supplier of the Safety Data Sheet**
- **Manufacturer/Supplier:**  
APi  
880 Jupiter Park Drive, Suite 14  
Jupiter, FL 33458 USA  
Phone: 561-743-0449
- **Emergency telephone number:**  
ChemTel Inc.  
+1 (800)255-3924, +1 (813)248-0585

**2 Hazard(s) identification**

- **Classification of the substance or mixture**
- Acute Tox. 4 H302 Harmful if swallowed.
- Skin Irrit. 2 H315 Causes skin irritation.
- Eye Dam. 1 H318 Causes serious eye damage.
- Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- Skin Sens. 1 H317 May cause an allergic skin reaction.
- Repr. 1B H360 May damage fertility or the unborn child.
- STOT SE 3 H335 May cause respiratory irritation.

· **Label elements**

· **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms:**



GHS05 GHS07 GHS08

· **Signal word:** Danger

· **Hazard-determining components of labeling:**

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· **Hazard statements:**

H302 Harmful if swallowed.

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H315 Causes skin irritation.  
 H318 Causes serious eye damage.  
 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
 H317 May cause an allergic skin reaction.  
 H360 May damage fertility or the unborn child.  
 H335 May cause respiratory irritation.

**Precautionary statements:**

P201 Obtain special instructions before use.  
 P202 Do not handle until all safety precautions have been read and understood.  
 P284 In case of inadequate ventilation wear respiratory protection.  
 P261 Avoid breathing dust.  
 P264 Wash thoroughly after handling.  
 P280 Wear protective gloves and eye protection.  
 P270 Do not eat, drink or smoke when using this product.  
 P271 Use only outdoors or in a well-ventilated area.  
 P272 Contaminated work clothing must not be allowed out of the workplace.  
 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/doctor.  
 P302+P352 IF ON SKIN: Wash with plenty of water.  
 P304+P341 If inhaled: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.  
 P330 Rinse mouth.  
 P308+P313 IF exposed or concerned: Get medical advice/attention.  
 P362+P364 Take off contaminated clothing and wash it before reuse.  
 P405 Store locked up.  
 P403+P233 Store in a well-ventilated place. Keep container tightly closed.  
 P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

**Classification system****NFPA ratings (scale 0 - 4)**


Health = 3  
 Fire = 1  
 Reactivity = 1

**HMIS-ratings (scale 0 - 4)**


HEALTH **3** Health = \*3  
 FIRE **1** Fire = 1  
 REACTIVITY **1** Reactivity = 1

\* - Indicates a long term health hazard from repeated or prolonged exposures.

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

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### 3 Composition/information on ingredients

- **Chemical characterization: Mixtures**

- **Components:**

	Trade Secret <ul style="list-style-type: none"> <li>⚠ Ox. Sol. 3, H272</li> <li>⚠ Resp. Sens. 1, H334</li> <li>⚠ Acute Tox. 4, H302; Skin Irrit. 2, H315; Eye Irrit. 2A, H319; Skin Sens. 1, H317; STOT SE 3, H335</li> </ul>	
	Trade Secret <ul style="list-style-type: none"> <li>⚠ Repr. 1B, H360</li> </ul>	
	Trade Secret <ul style="list-style-type: none"> <li>⚠ Eye Dam. 1, H318</li> </ul>	
	Trade Secret <ul style="list-style-type: none"> <li>⚠ Eye Dam. 1, H318</li> <li>⚠ Acute Tox. 4, H302; Acute Tox. 4, H332</li> </ul>	
	Trade Secret <ul style="list-style-type: none"> <li>⚠ Met. Corr. 1, H290; Eye Dam. 1, H318</li> </ul>	

- **Additional information:**

For the wording of the listed Hazard Statements refer to section 16.

For the listed ingredient(s), the identity and exact percentage(s) are being withheld as a trade secret.

### 4 First-aid measures

- **Description of first aid measures**

- **General information:**

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

Take affected persons out into the fresh air.

- **After inhalation:**

Supply fresh air.

Seek immediate medical advice.

Seek medical treatment in case of complaints.

Provide oxygen treatment if affected person has difficulty breathing.

In case of irregular breathing or respiratory arrest provide artificial respiration.

- **After skin contact:**

Brush off loose particles from skin.

Immediately rinse with water.

If skin irritation continues, consult a doctor.

- **After eye contact:**

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.

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

Asthma attacks  
Breathing difficulty  
Cramp  
Thirst  
Nausea  
Allergic reactions  
Strong irritant with the danger of severe eye injury.

**· Danger:**

Danger of impaired breathing.  
Danger of disturbed cardiac rhythm.  
Danger of pulmonary edema.

**· Indication of any immediate medical attention and special treatment needed:**

Severe allergic skin reaction, bronchial spasms and anaphylactic shock are possible.  
Treat skin and mucous membrane with antihistamine and corticoid preparations.  
In cases of irritation to the lungs, initial treatment with cortical steroid inhalants.  
Monitor circulation, possible shock treatment.  
If necessary oxygen respiration treatment.  
Later observation for pneumonia and pulmonary edema.  
Medical supervision for at least 48 hours.

### 5 Fire-fighting measures

**· Extinguishing media**

· **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.

· **For safety reasons unsuitable extinguishing agents:** None.

**· Special hazards arising from the substance or mixture**

Formation of toxic gases is possible during heating or in case of fire.

**· Advice for firefighters****· Protective equipment:**

Wear self-contained respiratory protective device.  
Wear fully protective suit.

**· Additional information:**

Eliminate all ignition sources if safe to do so.  
Cool endangered receptacles with water in flooding quantities.

### 6 Accidental release measures

**· Personal precautions, protective equipment and emergency procedures:**

Use respiratory protective device against the effects of fumes/dust/aerosol.

Product forms slippery surface when combined with water.

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation.

Isolate area and prevent access.

Keep away from ignition sources.

Avoid formation of dust.

· **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.

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**· Methods and material for containment and cleaning up:**

- Pick up mechanically.
- Send for recovery or disposal in suitable receptacles.
- Clean the affected area carefully; suitable cleaners are:
  - Warm water

**· 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:**

- Open and handle receptacle with care.
- Prevent formation of dust.
- Any deposit of dust which cannot be avoided must be regularly removed.
- Use only in well ventilated areas.

**· Information about protection against explosions and fires:**

- Keep respiratory protective device available.
- Keep ignition sources away - Do not smoke.

**· Conditions for safe storage, including any incompatibilities****· Storage****· Requirements to be met by storerooms and receptacles:**

- Provide ventilation for receptacles.
- Store in a cool location.
- Avoid storage near extreme heat, ignition sources or open flame.
- Use only receptacles specifically permitted for this substance/product.
- Unsuitable material for receptacle: aluminium.

**· Information about storage in one common storage facility:**

- Store away from foodstuffs.
- Store away from flammable substances.
- Do not store together with acids.
- Protect from humidity and water.

**· Further information about storage conditions:**

- Store in cool, dry conditions in well sealed receptacles.
- Keep containers tightly sealed.
- This product is hygroscopic.
- Protect from humidity and water.

**· Specific end use(s):** No relevant information available.

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**8 Exposure controls/personal protection**

· **Control parameters**

· **Components with limit values that require monitoring at the workplace:**

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TLV	Long-term value: 0.1 mg/m <sup>3</sup> as Persulfates
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REL	Long-term value: 1 mg/m <sup>3</sup>
TLV	Short-term value: 6* mg/m <sup>3</sup> Long-term value: 2* mg/m <sup>3</sup> *as inhalable fraction

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REL	Long-term value: 2 mg/m <sup>3</sup> as Al
TLV	Long-term value: 1* mg/m <sup>3</sup> as Al;*as respirable fraction

· **Exposure controls**

· **Personal protective equipment:**

· **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.

Do not inhale dust / smoke / mist.

Clean skin thoroughly immediately after handling the product.

Pregnant women should strictly avoid inhalation or skin contact.

· **Engineering controls:** No relevant information available.

· **Breathing equipment:**

Suitable respiratory protective device recommended.

Particulate mask should filter at least 99% of airborne particles.

· **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

· **Eye protection:**



Safety glasses

· **Body protection:** Protective work clothing

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- **Limitation and supervision of exposure into the environment**  
No relevant information available.
- **Risk management measures** See Section 7 for additional information.

**9 Physical and chemical properties**· **Information on basic physical and chemical properties**· **Appearance:**

Form: Crystalline

Color: White

· **Odor:** Odorless· **Odor threshold:** Not determined.· **pH-value:** Not applicable.· **Melting point/Melting range:** Not determined.· **Boiling point/Boiling range:** Not determined.· **Flash point:** Not applicable.· **Flammability (solid, gaseous):** Contact with combustible material may cause fire.· **Auto-ignition temperature:** Not determined.· **Decomposition temperature:** Not determined.· **Auto igniting:** Product is not self-igniting.· **Danger of explosion:** Not determined.· **Explosion limits**

Lower: Not determined.

Upper: Not determined.

· **Oxidizing properties:** Oxidizer· **Vapor pressure:** Not applicable.· **Density:** Not determined.· **Relative density:** Not determined.· **Vapor density:** Not applicable.· **Evaporation rate:** Not applicable.· **Solubility in / Miscibility with**

Water: Soluble.

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

Dynamic: Not applicable.

Kinematic: Not applicable.

· **Other information** No relevant information available.

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**10 Stability and reactivity**

- **Reactivity:** No relevant information available.
- **Chemical stability:**
- **Thermal decomposition / conditions to be avoided:**  
No decomposition if used and stored according to specifications.
- **Possibility of hazardous reactions:**  
Reacts with organic substances.  
Reacts with strong acids.  
Reacts with strong alkali.  
Reacts with flammable substances.  
As the product is supplied it is not capable of dust explosion; however enrichment with fine dust causes risk of dust explosion.  
Corrosive action on metals.  
Reacts with halogenated compounds.
- **Conditions to avoid:**  
Excessive heat.  
Moisture.
- **Incompatible materials:** No relevant information available.
- **Hazardous decomposition products:**  
Carbon monoxide and carbon dioxide  
Sulfur oxides (SOx)  
Toxic metal oxide smoke

**11 Toxicological information**

- **Information on toxicological effects**
  - **Acute toxicity:**
- |   |      |                  |
|---|------|------------------|
| · <b>LD/LC50 values that are relevant for classification:</b> |      |                  |
| <b>Trade Secret</b>   |      |                  |
| Oral  | LD50 | 802 mg/kg (rat)  |
| <b>Trade Secret</b>   |      |                  |
| Oral  | LD50 | 1700 mg/kg (rat) |
- **Primary irritant effect:**
  - **On the skin:** Irritant to skin and mucous membranes.
  - **On the eye:** Strong irritant with the danger of severe eye injury.
  - **Sensitization:** May cause sensitisation by inhalation and skin contact.
  - **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.

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- **Probable route(s) of exposure:**
  - Ingestion.
  - Inhalation.
  - Eye contact.
  - Skin contact.
- **Acute effects (acute toxicity, irritation and corrosivity):** Harmful if swallowed.
- **Repeated dose toxicity:** Repeated exposures may result in skin and/or respiratory sensitivity.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
  - Repr. 1B
- **Germ cell mutagenicity:** Based on available data, the classification criteria are not met.
- **Carcinogenicity:** Based on available data, the classification criteria are not met.
- **Reproductive toxicity:** May damage fertility or the unborn child.
- **STOT-single exposure:** May cause respiratory irritation.
- **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** The product contains materials that are harmful to the environment.
- **Persistence and degradability** Biodegradable.
- **Bioaccumulative potential:** No relevant information available.
- **Mobility in soil:** No relevant information available.
- **Ecotoxicological effects:**
- **Remark:**
  - Harmful to fish
  - After neutralization a reduction of the harming action may be recognized
  - Inhibition of the development of the biomass
- **Additional ecological information**
- **General notes:**
  - Harmful to aquatic organisms
  - This statement was deduced from the properties of the single components.
  - Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **Other adverse effects:** No relevant information available.

### 13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**
  - Small amounts may be diluted with plenty of water and washed away. Dispose of bigger amounts in accordance with Local Authority requirements.
  - 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.

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- **Uncleaned packagings**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

**14 Transport information**

- **UN-Number**
- **DOT, ADR, IMDG, IATA** Not regulated.

- **UN proper shipping name**
- **DOT, ADR, IMDG, IATA** Not regulated.

- **Transport hazard class(es)**
- **DOT, ADR, IMDG, IATA**
- **Class** Not regulated.

- **Packing group**
- **DOT, ADR, IMDG, IATA** Not regulated.

- **Environmental hazards**
- **Marine pollutant:** No

- **Special precautions for user** Not applicable.

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

**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 304 (emergency release notification):**
- None of the ingredients are listed.

- **Sections 311/312 (hazardous chemical threshold planning quantity in pounds):**
- None of the ingredients are listed.

- **Section 355 (extremely hazardous substances):**
- None of the ingredients are listed.

- **Section 313 (Specific toxic chemical listings):**
- None of the ingredients are listed.

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· **TSCA (Toxic Substances Control Act)**

All ingredients are listed.

· **Proposition 65 (California)**

· **Chemicals known to cause cancer:**

None of the ingredients are listed.

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients are listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients are listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients are listed.

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency):**

None of the ingredients are listed.

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

None of the ingredients are listed.

· **NIOSH-Ca (National Institute for Occupational Safety and Health):**

None of the ingredients are listed.

· **Canadian substance listings**

· **Canadian Domestic Substances List (DSL):**

All ingredients are listed.

· **Canadian Ingredient Disclosure list (limit 0.1%):**

None of the ingredients are listed.

· **Canadian Ingredient Disclosure list (limit 1%):**

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## 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.

· **Date of preparation / last revision** 03/08/2016 / -

· **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)
- NFPA: National Fire Protection Association (USA)
- HMS: Hazardous Materials Identification System (USA)
- LC50: Lethal concentration, 50 percent
- LD50: Lethal dose, 50 percent
- NIOSH: National Institute for Occupational Safety
- OSHA: Occupational Safety & Health
- TLV: Threshold Limit Value

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PEL: Permissible Exposure Limit  
REL: Recommended Exposure Limit  
Ox. Sol. 3: Oxidising Solids, Hazard Category 3  
Met. Corr. 1: Corrosive to metals, Hazard Category 1  
Acute Tox. 4: Acute toxicity, Hazard Category 4  
Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2  
Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1  
Eye Irrit. 2A: Serious eye damage/eye irritation, Hazard Category 2A  
Resp. Sens. 1: Sensitisation - Respirat., Hazard Category 1  
Skin Sens. 1: Sensitisation - Skin, Hazard Category 1  
Repr. 1B: Reproductive toxicity, Hazard Category 1B  
STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

**Sources**

Website, European Chemicals Agency ([echa.europa.eu](http://echa.europa.eu))  
Website, US EPA Substance Registry Services ([ofmpub.epa.gov/sorinternet/registry/substreg/home/overview/home.do](http://ofmpub.epa.gov/sorinternet/registry/substreg/home/overview/home.do))  
Website, Chemical Abstracts Registry, American Chemical Society ([www.cas.org](http://www.cas.org))  
Patty's Industrial Hygiene, 6th ed., Rose, Vernon, ed. ISBN: 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

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