# SAFETY DATA SHEET



## 1. IDENTIFICATION

**Product identifier**
**Product Name** Volatile Acids Ampule 62500 mg/l as Acetic Acid

**Other means of identification**
**Product Code(s)** 1427010

**Safety data sheet number** M01193

**Recommended use of the chemical and restrictions on use**
**Recommended Use** Standard solution.
**Uses advised against** None.
**Restrictions on use** For Research and Development Only.

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

**Manufacturer Address**
Hach Company P.O.Box 389 Loveland,
CO 80539 USA +1(970) 669-3050***

**Emergency telephone number**
+1(303) 623-5716 - 24 Hour Service +1(515)232-2533 - 8am - 4pm CST***

## 2. HAZARDS IDENTIFICATION

**Classification**

**Regulatory Status**
This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)***

Not a dangerous substance or mixture according to the Globally Harmonized System (GHS)***

**Hazards not otherwise classified (HNOC)**
Not applicable

**Label elements**

**Hazard statements**

The product contains no substances which at their given concentration, are considered to be hazardous to health***

**Other Information**
Not applicable

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Substance**
Not applicable***

**Mixture**
***

## 4. FIRST AID MEASURES

**Description of first aid measures**

| | |
|---|---|
| **General advice** | No hazards which require special first aid measures. Use first aid treatment according to the nature of the injury. |
| **Inhalation** | Remove to fresh air. |
| **Eye contact** | Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician. |
| **Skin contact** | Wash skin with soap and water. |
| **Ingestion** | Clean mouth with water and drink afterwards plenty of water. |

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

| | |
|---|---|
| **Symptoms** | See Section 11 for additional Toxicological Information. |

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

| | |
|---|---|
| **Note to physicians** | Treat symptomatically. |

## 5. FIRE-FIGHTING MEASURES

| | |
|---|---|
| **Suitable Extinguishing Media** | Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. |
| **Unsuitable Extinguishing Media** | Caution: Use of water spray when fighting fire may be inefficient. |
| **Specific hazards arising from the chemical** | No information available. |
| **Hazardous combustion products** | This material will not burn. |
| **Special protective equipment for fire-fighters** | Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. |

## 6. ACCIDENTAL RELEASE MEASURES

| | |
|---|---|
| **U.S. Notice** | Only persons properly qualified to respond to an emergency involving hazardous substances may respond to a spill according to federal regulations (OSHA 29 CFR 1910.120(a)(v)) and per your company's emergency response plan and guidelines/procedures. See Section 13, Special Instructions for disposal assistance. Outside of the US, only persons properly qualified according to state or local regulations should respond to a spill involving chemicals. |

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

| | |
|---|---|
| **Personal precautions** | Ensure adequate ventilation. |

**Environmental precautions**

| | |
|---|---|
| **Environmental precautions** | See Section 12 for additional ecological information. |

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

| | |
|---|---|
| **Methods for containment** | Prevent further leakage or spillage if safe to do so. |
| **Methods for cleaning up** | Pick up and transfer to properly labeled containers. |
| **Prevention of secondary hazards** | Clean contaminated objects and areas thoroughly observing environmental regulations. |
| **Reference to other sections** | See section 8 for more information. See section 13 for more information. |

## 7. HANDLING AND STORAGE

**Precautions for safe handling**

| | |
|---|---|
| **Advice on safe handling** | Handle in accordance with good industrial hygiene and safety practice. |

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

| | |
|---|---|
| **Storage Conditions** | Keep containers tightly closed in a dry, cool and well-ventilated place. |
| **Flammability class** | Not applicable |

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Control parameters**

| | |
|---|---|
| **Exposure Guidelines** | This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies |

**Appropriate engineering controls**

| | |
|---|---|
| **Engineering Controls** | Showers<br>Eyewash stations<br>Ventilation systems. |

**Individual protection measures, such as personal protective equipment**

| | |
|---|---|
| **Respiratory protection** | No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required. |
| **Hand Protection** | Wear suitable gloves. |
| **Eye/face protection** | Wear safety glasses with side shields (or goggles). |
| **Skin and body protection** | No special protective equipment required. |
| **General Hygiene Considerations** | Handle in accordance with good industrial hygiene and safety practice. |
| **Environmental exposure controls** | Local authorities should be advised if significant spillages cannot be contained. Do not allow into any sewer, on the ground or into any body of water. |
| **Thermal hazards** | None under normal processing. |

# 9. PHYSICAL AND CHEMICAL PROPERTIES

**Information on basic physical and chemical properties**

| | | | |
|---|---|---|---|
| **Physical state** | Liquid | | |
| **Appearance** | aqueous solution | **Color** | colorless |
| **Odor** | None | **Odor threshold** | No data available |

| Property | Values | Remarks • Method |
|---|---|---|
| **Molecular weight** | No data available | |
| **pH** | 8.8 | *** |
| **Melting point/freezing point** | ~ -2*** °C*** /*** 28*** °F*** | Estimation based on theoretical calculation *** |
| **Boiling point / boiling range** | 101*** °C*** /*** 214*** °F*** | *** |
| **Evaporation rate** | 0.74 (water = 1) | |
| **Vapor pressure** | 23.327 mm Hg*** /*** 3.11 kPa*** at*** 25 °C*** /*** 77 °F*** | Estimation based on theoretical calculation *** |
| **Vapor density (air = 1)** | 0.62 (air = 1) | *** |
| **Specific gravity (water = 1 / air = 1)** | 1.037 | *** |
| **Partition Coefficient (n-octanol/water)** | Not applicable*** | |
| **Soil Organic Carbon-Water Partition Coefficient** | Not applicable*** | |
| **Autoignition temperature** | No data available | |
| **Decomposition temperature** | No data available | |
| **Dynamic viscosity** | No data available | |
| **Kinematic viscosity** | No data available | |

**Solubility(ies)**

**Water solubility**

| Water solubility classification | Water solubility | Water Solubility Temperature |
|---|---|---|
| Soluble | > 1000 mg/L*** | 25 °C*** /*** 77 °F*** |

**Solubility in other solvents**

| Chemical Name | Solubility classification | Solubility | Solubility Temperature |
|---|---|---|---|
| None reported | No information available | No data available | No information available |

**Other Information**

**Metal Corrosivity**

| | |
|---|---|
| **Steel Corrosion Rate** | No data available |
| **Aluminum Corrosion Rate** | No data available |

**Volatile Organic Compounds (VOC) Content**

**Explosive properties**

| | |
|---|---|
| **Upper explosion limit** | No data available |
| **Lower explosion limit** | No data available |

**Flammable properties**

| | |
|---|---|
| **Flash point** | No data available |
| **Method** | No information available |

**Flammability Limit in Air**
**Upper flammability limit:** No data available
**Lower flammability limit:** No data available

**Oxidizing properties** No data available.

**Bulk density** Not applicable***

**Particle Size** No information available

**Particle Size Distribution** No information available

## 10. STABILITY AND REACTIVITY

**Reactivity**
Not applicable.

**Chemical stability**
**Stability** Stable under normal conditions.

**Explosion data**
**Sensitivity to Mechanical Impact** None
**Sensitivity to Static Discharge** None.

**Possibility of Hazardous Reactions**
**Possibility of Hazardous Reactions** None under normal processing.

**Hazardous polymerization**
None under normal processing.

**Conditions to avoid**
**Conditions to avoid** None known based on information supplied.

**Incompatible materials**
**Incompatible materials** Strong oxidizing agents, strong acids, and strong bases.

**Hazardous Decomposition Products**
None known based on information supplied.

## 11. TOXICOLOGICAL INFORMATION

**Information on Likely Routes of Exposure**
**Product Information**

**Inhalation** No known effect based on information supplied.

**Eye contact** No known effect based on information supplied.

**Skin contact** No known effect based on information supplied.

**Ingestion** No known effect based on information supplied.

**Symptoms** No information available.

**Aggravated Medical Conditions** None known.
**Toxicologically synergistic products** None known.
**Toxicokinetics, metabolism and distribution** No information available.

**Product Acute Toxicity Data**

| | |
|---|---|
| **Oral Exposure Route** | No data available |
| **Dermal Exposure Route** | No data available |
| **Inhalation (Dust/Mist) Exposure Route** | No data available |
| **Inhalation (Vapor) Exposure Route** | No data available |
| **Inhalation (Gas) Exposure Route** | No data available |

**Unknown Acute Toxicity**
0% of the mixture consists of ingredient(s) of unknown toxicity.***

**Acute Toxicity Estimations (ATE)**

**The following values are calculated based on chapter 3.1 of the GHS document**
***

| | |
|---|---|
| **ATEmix (oral)** | 42,892.00*** mg/kg*** |
| **ATEmix (dermal)** | No information available |
| **ATEmix (inhalation-dust/mist)** | 91.10*** mg/L*** |
| **ATEmix (inhalation-vapor)** | No information available |
| **ATEmix (inhalation-gas)** | No information available |

**Ingredient Acute Toxicity Data**

| | |
|---|---|
| **Oral Exposure Route** | If available, see data below*** |
| **Dermal Exposure Route** | If available, see data below |
| **Inhalation (Dust/Mist) Exposure Route** | If available, see data below*** |
| **Inhalation (Vapor) Exposure Route** | If available, see data below*** |
| **Inhalation (Gas) Exposure Route** | If available, see data below |

**Product Specific Target Organ Toxicity Single Exposure Data**

| | |
|---|---|
| **Oral Exposure Route** | No data available |
| **Dermal Exposure Route** | No data available |
| **Inhalation (Dust/Mist) Exposure Route** | No data available |
| **Inhalation (Vapor) Exposure Route** | No data available |
| **Inhalation (Gas) Exposure Route** | No data available |

**Ingredient Specific Target Organ Toxicity Single Exposure Data**

| | |
|---|---|
| **Oral Exposure Route** | If available, see data below*** |
| **Dermal Exposure Route** | If available, see data below |
| **Inhalation (Dust/Mist) Exposure Route** | If available, see data below*** |
| **Inhalation (Vapor) Exposure Route** | If available, see data below*** |
| **Inhalation (Gas) Exposure Route** | If available, see data below |

**Aspiration toxicity**
No data available

**Product Skin Corrosion/Irritation Data**
No data available.

**Ingredient Skin Corrosion/Irritation Data**
If available, see data below***

**Product Serious Eye Damage/Eye Irritation Data**
No data available.

**Ingredient Eye Damage/Eye Irritation Data**
If available, see data below***

**Sensitization Information**

**Product Sensitization Data**

| | |
|---|---|
| **Skin Sensitization Exposure Route** | No data available. |
| **Respiratory Sensitization Exposure Route** | No data available. |

**Ingredient Sensitization Data**

| | |
|---|---|
| **Skin Sensitization Exposure Route** | If available, see data below. |
| **Respiratory Sensitization Exposure Route** | If available, see data below. |

**Chronic Toxicity Information**

**Product Specific Target Organ Toxicity Repeat Dose Data**

| | |
|---|---|
| **Oral Exposure Route** | No data available. |
| **Dermal Exposure Route** | No data available. |
| **Inhalation (Dust/Mist) Exposure Route** | No data available. |
| **Inhalation (Vapor) Exposure Route** | No data available. |
| **Inhalation (Gas) Exposure Route** | No data available. |

**Ingredient Specific Target Organ Toxicity Repeat Exposure Data**

| | |
|---|---|
| **Oral Exposure Route** | If available, see data below |
| **Dermal Exposure Route** | If available, see data below |
| **Inhalation (Dust/Mist) Exposure Route** | If available, see data below |
| **Inhalation (Vapor) Exposure Route** | If available, see data below |
| **Inhalation (Gas) Exposure Route** | If available, see data below |

**Product Carcinogenicity Data**

| | |
|---|---|
| **Oral Exposure Route** | No data available |
| **Dermal Exposure Route** | No data available |
| **Inhalation (Dust/Mist) Exposure Route** | No data available |
| **Inhalation (Vapor) Exposure Route** | No data available |
| **Inhalation (Gas) Exposure Route** | No data available |

**Ingredient Carcinogenicity Data**

**Legend**

| | |
|---|---|
| **ACGIH (American Conference of Governmental Industrial Hygienists)** | Does not apply |
| **IARC (International Agency for Research on Cancer)** | Does not apply |
| **NTP (National Toxicology Program)** | Does not apply |
| **OSHA (Occupational Safety and Health Administration of the US Department of Labor)** | Does not apply |

| | |
|---|---|
| **Oral Exposure Route** | If available, see data below |
| **Dermal Exposure Route** | If available, see data below |
| **Inhalation (Dust/Mist) Exposure Route** | If available, see data below |
| **Inhalation (Vapor) Exposure Route** | If available, see data below |
| **Inhalation (Gas) Exposure Route** | If available, see data below |

**Product Germ Cell Mutagenicity** *invitro* **Data**
No data available.

**Ingredient Germ Cell Mutagenicity** *invitro* **Data**
No data available

**Product Germ Cell Mutagenicity** *invivo* **Data**

| | |
|---|---|
| **Oral Exposure Route** | No data available |
| **Dermal Exposure Route** | No data available |
| **Inhalation (Dust/Mist) Exposure Route** | No data available |
| **Inhalation (Vapor) Exposure Route** | No data available |
| **Inhalation (Gas) Exposure Route** | No data available |

**Ingredient Germ Cell Mutagenicity** *invivo* **Data**

| | |
|---|---|
| **Oral Exposure Route** | If available, see data below |

| | |
|---|---|
| **Dermal Exposure Route** | If available, see data below |
| **Inhalation (Dust/Mist) Exposure Route** | If available, see data below |
| **Inhalation (Vapor) Exposure Route** | If available, see data below |
| **Inhalation (Gas) Exposure Route** | If available, see data below |

**Product Reproductive Toxicity Data**

| | |
|---|---|
| **Oral Exposure Route** | No data available |
| **Dermal Exposure Route** | No data available |
| **Inhalation (Dust/Mist) Exposure Route** | No data available |
| **Inhalation (Vapor) Exposure Route** | No data available |
| **Inhalation (Gas) Exposure Route** | No data available |

**Ingredient Reproductive Toxicity Data**

| | |
|---|---|
| **Oral Exposure Route** | If available, see data below |
| **Inhalation (Dust/Mist) Exposure Route** | If available, see data below |
| **Inhalation (Vapor) Exposure Route** | If available, see data below |
| **Inhalation (Gas) Exposure Route** | If available, see data below |

## 12. ECOLOGICAL INFORMATION

**Ecotoxicity** ***

**Product Ecological Data**

**Aquatic toxicity**

| | |
|---|---|
| **Fish** | No data available |
| **Crustacea** | No data available |
| **Algae** | No data available |

**Ingredient Ecological Data**

**Aquatic toxicity**

| | |
|---|---|
| **Fish** | If available, see ingredient data below*** |
| **Crustacea** | If available, see ingredient data below*** |
| **Algae** | No data available |

**Other Information**

**Persistence and degradability**

**Product Biodegradability Data**
No data available.

**Ingredient Biodegradability Data**

**Bioaccumulation**

**Product Bioaccumulation Data**
No data available.

**Partition Coefficient (n-octanol/water)** Not applicable***

**Ingredient Bioaccumulation Data**

**Mobility**

**Soil Organic Carbon-Water Partition Coefficient** Not applicable***

**Water solubility**

| Water solubility classification | Water solubility | Water Solubility Temperature |
|---|---|---|
| Soluble | > 1000 mg/L*** | 25 °C*** /*** 77 °F*** |

**Other adverse effects**
No information available.

## 13. DISPOSAL CONSIDERATIONS

**Waste treatment methods**

**Waste from residues/unused products** Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

**Contaminated packaging** Do not reuse empty containers.

**Special instructions for disposal** Dilute material with excess water making a weaker than 5% solution. Open cold water tap completely, slowly pour the material to the drain.

## 14. TRANSPORT INFORMATION

**U.S. DOT** Not regulated

**TDG** Not regulated***

**IATA** Not regulated***

**IMDG** Not regulated***

**Additional information**
There is a possibility that this product could be contained in a reagent set or kit composed of various compatible dangerous goods.
If the item is not in a reagent set or kit, the classification given above applies.
If the item is part of a reagent set or kit the classification would change to the following:
UN3316 Chemical Kit, Hazard Class 9, Packing Group II or III.
If the item is not regulated, the Chemical Kit classification does not apply.

## 15. REGULATORY INFORMATION

**National Inventories**

| | |
|---|---|
| **TSCA** | Complies |
| **DSL/NDSL** | Complies |

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory
**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List

**International Inventories**

| | |
|---|---|
| **EINECS/ELINCS** | Complies |
| **ENCS** | Complies |
| **IECSC** | Complies |
| **KECL** | Complies |
| **PICCS** | Complies |
| **TCSI** | Complies |
| **AICS** | Complies |

| | |
|---|---|
| **NZIoC** | Complies |

**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
**ENCS** - Japan Existing and New Chemical Substances
**IECSC** - China Inventory of Existing Chemical Substances
**KECL** - Korean Existing and Evaluated Chemical Substances
**PICCS** - Philippines Inventory of Chemicals and Chemical Substances
**TCSI** - Taiwan Chemical Substances Inventory
**AICS** - Australian Inventory of Chemical Substances
**NZIoC** - New Zealand Inventory of Chemicals

## US Federal Regulations

**SARA 313**
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

**SARA 311/312 Hazard Categories**

| | |
|---|---|
| **Acute health hazard** | No |
| **Chronic Health Hazard** | No |
| **Fire hazard** | No |
| **Sudden release of pressure hazard** | No |
| **Reactive Hazard** | No |

**CWA (Clean Water Act)**
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

**CERCLA**
This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

## US State Regulations

**California Proposition 65**
This product does not contain any Proposition 65 chemicals

**U.S. State Right-to-Know Regulations**

**U.S. EPA Label Information**

## 16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

**Special Comments**
None

**Additional information**

**Global Automotive Declarable Substance List (GADSL)**

Not applicable

**NFPA and HMIS Classifications**

| NFPA | Health hazards - 0*** | Flammability - 0 | Instability - 0 | Physical and Chemical Properties - |
|---|---|---|---|---|
| **HMIS** | **Health hazards** - 0*** | **Flammability** - 0 | **Physical Hazards** - 0 | **Personal protection** - X - See section 8 for more information |

**Key or legend to abbreviations and acronyms used in the safety data sheet**

| | |
|---|---|
| *NIOSH IDLH* | *Immediately Dangerous to Life or Health* |
| ACGIH | ACGIH (American Conference of Governmental Industrial Hygienists) |
| *NDF* | *no data* |

**Legend - Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

| | | | |
|---|---|---|---|
| TWA | TWA (time-weighted average) | STEL | STEL (Short Term Exposure Limit) |
| MAC | Maximum Allowable Concentration | Ceiling | Ceiling Limit Value |
| X | Listed | Vacated | These values have no official status. The only binding levels of contaminants are those listed in the final OSHA PEL. These lists are for reference purposes only. Please note that some reference state regulations of these "liberated" exposure limits in their state regulations. |
| SKN* | Skin designation | SKN+ | Skin sensitization |
| RSP+ | Respiratory sensitization | ** | Hazard Designation |
| C | Carcinogen | R | Reproductive toxicant |
| M | mutagen | | |

| | |
|---|---|
| **Prepared By** | Hach Product Compliance Department |
| **Issue Date** | 22-Dec-2017*** |
| **Revision Date** | 22-Dec-2017 |
| **Revision Note** | None |

**Disclaimer**

**USER RESPONSIBILITY: Each user should read and understand this information and incorporate it in individual site safety programs in accordance with applicable hazard communication standards and regulations.**

**THE INFORMATION CONTAINED HEREIN IS BASED ON DATA CONSIDERED TO BE ACCURATE. HOWEVER, NO WARRANTY IS EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THESE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF.**

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**End of Safety Data Sheet**