# Acetic Acid, 20% v/v (1+4)

Safety Data Sheet

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## SECTION 1: Identification

### 1.1. Identification

Product form : Mixture

Product name : Acetic Acid, 20% v/v (1+4)

Product code : LC10210

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

Use of the substance/mixture : For laboratory and manufacturing use only

### 1.3. Details of the supplier of the safety data sheet

LabChem Inc
Jackson's Pointe Commerce Park Building 1000, 1010 Jackson's Pointe Court
Zelienople, PA 16063 - USA
T 412-826-5230 - F 724-473-0647
info@labchem.com - www.labchem.com

### 1.4. Emergency telephone number

Emergency number : CHEMTREC: 1-800-424-9300 or 011-703-527-3887

## SECTION 2: Hazard(s) identification

### 2.1. Classification of the substance or mixture

**GHS-US classification**

Skin corrosion/irritation Category 1C H314
Serious eye damage/eye irritation Category 1 H318

Full text of H statements : see section 16

### 2.2. Label elements

**GHS-US labeling**

Hazard pictograms (GHS-US) :



GHS05

Signal word (GHS-US) : Danger

Hazard statements (GHS-US) : H314 - Causes severe skin burns and eye damage

Precautionary statements (GHS-US) : P260 - Do not breathe mist, vapors, spray
P264 - Wash exposed skin thoroughly after handling
P280 - Wear protective gloves, eye protection
P301 + P330 + P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting
P303 + P361 + P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
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
P363 - Wash contaminated clothing before reuse
P405 - Store locked up
P501 - Dispose of contents/container to comply with local, state and federal regulations
If inhaled: Remove person to fresh air and keep comfortable for breathing

### 2.3. Other hazards

Other hazards not contributing to the classification : None.

### 2.4. Unknown acute toxicity (GHS US)

Not applicable

## SECTION 3: Composition/Information on ingredients

### 3.1. Substance

Not applicable

### 3.2. Mixture

| Name | Product identifier | % | GHS-US classification |
|---|---|---|---|
| Water | (CAS No) 7732-18-5 | 79.57 | Not classified |
| Acetic Acid | (CAS No) 64-19-7 | 20.43 | Flam. Liq. 3, H226<br>Skin Corr. 1B, H314<br>Eye Dam. 1, H318<br>Aquatic Acute 3, H402 |

Full text of hazard classes and H-statements : see section 16

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

First-aid measures after inhalation : Allow victim to breathe fresh air. Allow the victim to rest. Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a poison center or doctor/physician.

First-aid measures after skin contact : Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately call a poison center or doctor/physician.

First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center or doctor/physician.

First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Immediately call a poison center or doctor/physician.

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

Symptoms/injuries : Causes severe skin burns and eye damage.

Symptoms/injuries after eye contact : Causes serious eye damage.

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

Obtain medical assistance.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water spray. Sand.

Unsuitable extinguishing media : Do not use a heavy water stream.

### 5.2. Special hazards arising from the substance or mixture

Reactivity : Thermal decomposition generates : Corrosive vapors.

### 5.3. Advice for firefighters

Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

#### 6.1.1. For non-emergency personnel

Protective equipment : Safety glasses. Gloves. Protective clothing.

Emergency procedures : Evacuate unnecessary personnel.

#### 6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection.

Emergency procedures : Ventilate area.

### 6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

### 6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

### 6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor. Do not breathe mist, vapors, spray.

Hygiene measures : Wash exposed skin thoroughly after handling. Wash contaminated clothing before reuse.

### 7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Comply with applicable regulations.

Storage conditions : Keep container closed when not in use.

Incompatible products : Strong oxidizers. metals. Strong bases.

Incompatible materials : Sources of ignition. Direct sunlight.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

| **Acetic Acid (64-19-7)** | | |
|---|---|---|
| ACGIH | ACGIH TWA (ppm) | 10 ppm (Acetic acid; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value) |
| ACGIH | ACGIH STEL (ppm) | 15 ppm (Acetic acid; USA; Short time value; TLV - Adopted Value) |
| OSHA | OSHA PEL (TWA) (mg/m³) | 25 mg/m³ |
| OSHA | OSHA PEL (TWA) (ppm) | 10 ppm |
| IDLH | US IDLH (ppm) | 50 ppm |
| NIOSH | NIOSH REL (TWA) (mg/m³) | 25 mg/m³ |
| NIOSH | NIOSH REL (TWA) (ppm) | 10 ppm |
| NIOSH | NIOSH REL (STEL) (mg/m³) | 37 mg/m³ |
| NIOSH | NIOSH REL (STEL) (ppm) | 15 ppm |

| **Water (7732-18-5)** |
|---|
| Not applicable |

### 8.2. Exposure controls

Appropriate engineering controls : Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

Personal protective equipment : Protective goggles. Gloves. Protective clothing.



Hand protection : Wear protective gloves.

Eye protection : Chemical goggles or face shield.

Skin and body protection : Wear suitable protective clothing.

Respiratory protection : Where exposure through inhalation may occur from use, respiratory protection equipment is recommended.

Other information : Do not eat, drink or smoke during use.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state : Liquid

Color : Colorless

Odor : Vinegar odour

Odor threshold : No data available

pH : No data available

| | | |
|---|---|---|
| Melting point | : | No data available |
| Freezing point | : | No data available |
| Boiling point | : | No data available |
| Flash point | : | No data available |
| Relative evaporation rate (butyl acetate=1) | : | No data available |
| Flammability (solid, gas) | : | Non flammable. |
| Vapor pressure | : | No data available |
| Relative vapor density at 20 °C | : | No data available |
| Relative density | : | No data available |
| Specific gravity / density | : | 1.03 g/ml |
| Solubility | : | Soluble in water. |
| Log Pow | : | No data available |
| Auto-ignition temperature | : | No data available |
| Decomposition temperature | : | No data available |
| Viscosity, kinematic | : | 1.4 cSt |
| Viscosity, dynamic | : | No data available |
| Explosion limits | : | No data available |
| Explosive properties | : | No data available |
| Oxidizing properties | : | No data available |

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Thermal decomposition generates : Corrosive vapors.

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

Reacts violently with (some) bases: release of heat.

### 10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

### 10.5. Incompatible materials

Strong oxidizers. metals. Strong bases.

### 10.6. Hazardous decomposition products

Carbon monoxide. Carbon dioxide. Thermal decomposition generates : Corrosive vapors.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

| | | |
|---|---|---|
| Likely routes of exposure | : | Inhalation; Skin and eye contact |
| Acute toxicity | : | Not classified |

| **Acetic Acid (64-19-7)** | |
|---|---|
| LD50 oral rat | 3310 mg/kg body weight (Rat; Other; Read-across) |
| ATE US (oral) | 3310.000 mg/kg body weight |

| **Water (7732-18-5)** | |
|---|---|
| LD50 oral rat | ≥ 90000 mg/kg |
| ATE US (oral) | 90000.000 mg/kg body weight |

| | | |
|---|---|---|
| Skin corrosion/irritation | : | Causes severe skin burns and eye damage. |
| Serious eye damage/irritation | : | Causes serious eye damage. |
| Respiratory or skin sensitization | : | Not classified |
| Germ cell mutagenicity | : | Not classified |

| | | |
|---|---|---|
| Carcinogenicity | : | Not classified |
| Reproductive toxicity | : | Not classified |
| Specific target organ toxicity (single exposure) | : | Not classified |
| Specific target organ toxicity (repeated exposure) | : | Not classified |
| Aspiration hazard | : | Not classified |
| Potential Adverse human health effects and symptoms | : | Based on available data, the classification criteria are not met. |
| Symptoms/injuries after eye contact | : | Causes serious eye damage. |

## SECTION 12: Ecological information

### 12.1. Toxicity

No additional information available

### 12.2. Persistence and degradability

| Acetic Acid, 20% v/v (1+4) | |
|---|---|
| Persistence and degradability | Not established. |

| Acetic Acid (64-19-7) | |
|---|---|
| Persistence and degradability | Readily biodegradable in water. Biodegradable in the soil. Highly mobile in soil. |
| Biochemical oxygen demand (BOD) | 0.6 - 0.74 g $O_2$/g substance |
| Chemical oxygen demand (COD) | 1.03 g $O_2$/g substance |
| ThOD | 1.07 g $O_2$/g substance |

| Water (7732-18-5) | |
|---|---|
| Persistence and degradability | Not established. |

### 12.3. Bioaccumulative potential

| Acetic Acid, 20% v/v (1+4) | |
|---|---|
| Bioaccumulative potential | Not established. |

| Acetic Acid (64-19-7) | |
|---|---|
| BCF fish 1 | 3.16 (BCF; Pisces) |
| Log Pow | -0.17 (Experimental value; 25 °C) |
| Bioaccumulative potential | Low potential for bioaccumulation (Log Kow < 4). |

| Water (7732-18-5) | |
|---|---|
| Bioaccumulative potential | Not established. |

### 12.4. Mobility in soil

| Acetic Acid (64-19-7) | |
|---|---|
| Surface tension | 0.028 N/m (20 °C) |
| Log Koc | log Koc,0.06; QSAR |
| Ecology - soil | May be harmful to plant growth, blooming and fruit formation. |

### 12.5. Other adverse effects

| | | |
|---|---|---|
| Effect on the global warming | : | No known effects from this product. |
| GWPmix comment | : | No known effects from this product. |
| Other information | : | Avoid release to the environment. |

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

| | | |
|---|---|---|
| Waste disposal recommendations | : | Dispose in a safe manner in accordance with local/national regulations. |
| Ecology - waste materials | : | Avoid release to the environment. |

## SECTION 14: Transport information

### Department of Transportation (DOT)

In accordance with DOT

| | | |
|---|---|---|
| Transport document description | : | UN2790 Acetic acid solution (with more than 10 percent and less than 50 percent acid, by mass), 8, III |
| UN-No.(DOT) | : | UN2790 |
| Proper Shipping Name (DOT) | : | Acetic acid solution<br>with more than 10 percent and less than 50 percent acid, by mass |
| Transport hazard class(es) (DOT) | : | 8 - Class 8 - Corrosive material 49 CFR 173.136 |
| Packing group (DOT) | : | III - Minor Danger |
| Hazard labels (DOT) | : | 8 - Corrosive |




| | | |
|---|---|---|
| DOT Packaging Non Bulk (49 CFR 173.xxx) | : | 203 |
| DOT Packaging Bulk (49 CFR 173.xxx) | : | 242 |
| DOT Special Provisions (49 CFR 172.102) | : | IB3 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1 and 31HA2, 31HB2, 31HN2, 31HD2 and 31HH2). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized, except for UN2672 (also see Special Provision IP8 in Table 2 for UN2672)<br>T4 - 2.65 178.274(d)(2) Normal..... 178.275(d)(3)<br>TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling = 97 / 1 + a (tr - tf) Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling |
| DOT Packaging Exceptions (49 CFR 173.xxx) | : | 154 |
| DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) | : | 5 L |
| DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) | : | 60 L |
| DOT Vessel Stowage Location | : | A - The material may be stowed ‘‘on deck’’ or ‘‘under deck’’ on a cargo vessel and on a passenger vessel |
| Other information | : | No supplementary information available. |

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

| **Acetic Acid, 20% v/v (1+4)** | |
|---|---|
| SARA Section 311/312 Hazard Classes | Immediate (acute) health hazard |

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

This product or mixture does not contain a toxic chemical or chemicals in excess of the applicable de minimis concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

| **Acetic Acid (64-19-7)** | |
|---|---|
| RQ (Reportable quantity, section 304 of EPA's List of Lists) | 5000 lb |

### 15.2. International regulations

**CANADA**

| **Acetic Acid, 20% v/v (1+4)** | |
|---|---|
| WHMIS Classification | Class E - Corrosive Material |

| Acetic Acid (64-19-7) | |
|---|---|
| Listed on the Canadian DSL (Domestic Substances List) | |
| WHMIS Classification | Class B Division 3 - Combustible Liquid<br>Class E - Corrosive Material |

| Water (7732-18-5) | |
|---|---|
| WHMIS Classification | Uncontrolled product according to WHMIS classification criteria |

### EU-Regulations
No additional information available

### National regulations

| Acetic Acid (64-19-7) |
|---|
| Listed on the Canadian IDL (Ingredient Disclosure List) |

### 15.3. US State regulations
California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

## SECTION 16: Other information

Revision date : 09/06/2016

Other information : None.

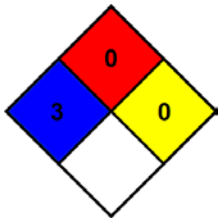
Full text of H-phrases: see section 16:

| | |
|---|---|
| H226 | Flammable liquid and vapor |
| H314 | Causes severe skin burns and eye damage |
| H318 | Causes serious eye damage |
| H402 | Harmful to aquatic life |

NFPA health hazard : 3 - Short exposure could cause serious temporary or residual injury even though prompt medical attention was given.

NFPA fire hazard : 0 - Materials that will not burn.

NFPA reactivity : 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.




HMIS III Rating

Health : 3 Serious Hazard - Major injury likely unless prompt action is taken and medical treatment is given

Flammability : 0 Minimal Hazard - Materials that will not burn

Physical : 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.

Personal protection : H

H - Splash goggles, Gloves, Synthetic apron, Vapor respirator

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