Acetic Acid, 10% v/v (1+9)
Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Issue date: 12/09/2013 Revision date: 07/30/2020 Supersedes: 09/06/2016 Version: 1.2

SECTION 1: Identification

1.1. Identification
Product form : Mixtures
Product name : Acetic Acid, 10% v/v (1+9)
Product code : LC10190

1.2. Recommended use and restrictions on use
Use of the substance/mixture : For laboratory and manufacturing use only.
Recommended use : Laboratory chemicals
Restrictions on use : Not for food, drug or household use

1.3. Supplier
LabChem, Inc.
1010 Jackson's Pointe Ct.
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 +1-703-741-5970

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture
GHS US classification
Skin corrosion/irritation Category 1C H314 - Causes severe skin burns and eye damage
Serious eye damage/eye irritation Category 1 H318 - Causes serious eye damage
Full text of H statements : see section 16

2.2. GHS Label elements, including precautionary statements
GHS US labeling
Hazard pictograms (GHS US) : 

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.
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.
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.

2.3. Other hazards which do not result in classification
Other hazards not contributing to the classification : None.

2.4. Unknown acute toxicity (GHS US)
Not applicable
**Acetic Acid, 10% v/v (1+9)**

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

<table>
<thead>
<tr>
<th>SECTION 3: Composition/Information on ingredients</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>3.1. Substances</strong></td>
</tr>
<tr>
<td>Not applicable</td>
</tr>
<tr>
<td><strong>3.2. Mixtures</strong></td>
</tr>
<tr>
<td><strong>Name</strong></td>
</tr>
<tr>
<td>Water</td>
</tr>
<tr>
<td>Acetic Acid</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

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 affected person 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 (acute and delayed)

Potential Adverse human health effects and symptoms : Based on available data, the classification criteria are not met.

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

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

4.3. Immediate medical attention and special treatment, if necessary

Obtain medical assistance.

**SECTION 5: Fire-fighting measures**

5.1. Suitable (and unsuitable) extinguishing media


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

5.2. Specific hazards arising from the chemical

5.3. Special protective equipment and precautions for fire-fighters

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


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 materials: Sources of ignition. Direct sunlight.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

<table>
<thead>
<tr>
<th>Acetic Acid, 10% v/v (1+9)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No additional information available</td>
</tr>
</tbody>
</table>

**Acetic Acid (64-19-7)**

**USA - ACGIH - Occupational Exposure Limits**

<table>
<thead>
<tr>
<th>ACGIH TWA (ppm)</th>
<th>10 ppm</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACGIH STEL (ppm)</td>
<td>15 ppm</td>
</tr>
</tbody>
</table>

**USA - OSHA - Occupational Exposure Limits**

<table>
<thead>
<tr>
<th>OSHA PEL (TWA) (mg/m³)</th>
<th>25 mg/m³</th>
</tr>
</thead>
<tbody>
<tr>
<td>OSHA PEL (TWA) (ppm)</td>
<td>10 ppm</td>
</tr>
</tbody>
</table>

**USA - IDLH - Occupational Exposure Limits**

<table>
<thead>
<tr>
<th>US IDLH (ppm)</th>
<th>50 ppm</th>
</tr>
</thead>
</table>

**USA - NIOSH - Occupational Exposure Limits**

<table>
<thead>
<tr>
<th>NIOSH REL (TWA) (mg/m³)</th>
<th>25 mg/m³</th>
</tr>
</thead>
<tbody>
<tr>
<td>NIOSH REL (TWA) (ppm)</td>
<td>10 ppm</td>
</tr>
<tr>
<td>NIOSH REL (STEL) (mg/m³)</td>
<td>37 mg/m³</td>
</tr>
<tr>
<td>NIOSH REL (STEL) (ppm)</td>
<td>15 ppm</td>
</tr>
</tbody>
</table>

**Water (7732-18-5)**

No additional information available

8.2. Appropriate engineering controls

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

8.3. Individual protection measures/Personal protective equipment

**Personal protective equipment:**


**Hand protection:**

Wear protective gloves.

**Eye protection:**

Chemical goggles or face shield

**Skin and body protection:**
Acetic Acid, 10% v/v (1+9)
Safety Data Sheet

Wear suitable protective clothing

Respiratory protection:

Respiratory protection not required in normal conditions

Personal protective equipment symbol(s):

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

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Liquid</td>
</tr>
<tr>
<td>Color</td>
<td>Colorless</td>
</tr>
<tr>
<td>Odor</td>
<td>Vinegar odour</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting point</td>
<td>No data available</td>
</tr>
<tr>
<td>Freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling point</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash point</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative evaporation rate (butyl acetate=1)</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Non flammable.</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative vapor density at 20 °C</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative density</td>
<td>No data available</td>
</tr>
<tr>
<td>Specific gravity / density</td>
<td>1.01 g/ml</td>
</tr>
<tr>
<td>Solubility</td>
<td>Soluble in water.</td>
</tr>
<tr>
<td>Log Pow</td>
<td>No data available</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>1.2 mm²/s</td>
</tr>
<tr>
<td>Viscosity, dynamic</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosion limits</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>No data available</td>
</tr>
</tbody>
</table>

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

Not established.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.
## Acetic Acid, 10% v/v (1+9)

### Safety Data Sheet

**10.5. Incompatible materials**


### 10.6. Hazardous decomposition products


## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

**Acute toxicity (oral)**: Not classified  
**Acute toxicity (dermal)**: Not classified  
**Acute toxicity (inhalation)**: Not classified

### Acetic Acid, 10% v/v (1+9)

| LD50 oral rat | 10251 mg/kg |
| ATE US (oral) | 10251 mg/kg body weight |

### Acetic Acid (64-19-7)

| LD50 oral rat | 3310 mg/kg body weight (Rat, Male / female, Experimental value, Oral, 6 day(s)) |
| LC50 inhalation rat (mg/l) | 11.4 mg/l (Equivalent or similar to OECD 403, 4 h, Rat, Female, Experimental value, Inhalation (vapours), 14 day(s)) |
| ATE US (oral) | 3310 mg/kg body weight |
| ATE US (vapors) | 11.4 mg/l/4h |
| ATE US (dust, mist) | 11.4 mg/l/4h |

### Water (7732-18-5)

| LD50 oral rat | ≥ 90000 mg/kg |
| ATE US (oral) | 90000 mg/kg body weight |

### Skin corrosion/irritation

| Causes severe skin burns. |

### 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 |

### STOT-single exposure

| Not classified |

### STOT-repeated exposure

| Not classified |

### Aspiration hazard

| Not classified |

### Viscosity, kinematic

| 1.2 mm²/s |

### Likely routes of exposure

| Inhalation. Skin and eye contact. |

### Potential Adverse human health effects and symptoms

| Based on available data, the classification criteria are not met. |

### Symptoms/effects

| Causes severe skin burns and eye damage. |

### Symptoms/effects after eye contact

| Causes serious eye damage. |

## SECTION 12: Ecological information

### 12.1. Toxicity

**Acetic Acid (64-19-7)**

| LC50 fish 1 | > 1000 mg/l (Equivalent or similar to OECD 203, 96 h, Oncorhynchus mykiss, Semi-static system, Fresh water, Experimental value, GLP) |
| EC50 Daphnia 1 | > 1000 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, GLP) |

### 12.2. Persistence and degradability

**Acetic Acid, 10% v/v (1+9)**

| Persistence and degradability | Not established. |
# Acetic Acid, 10% v/v (1+9)

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

<table>
<thead>
<tr>
<th>Acetic Acid (64-19-7)</th>
<th>Persistence and degradability</th>
<th>Readily biodegradable in the soil. Readily biodegradable in water.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biochemical oxygen demand (BOD)</td>
<td>0.6 – 0.74 g O₂/g substance</td>
<td></td>
</tr>
<tr>
<td>Chemical oxygen demand (COD)</td>
<td>1.03 g O₂/g substance</td>
<td></td>
</tr>
<tr>
<td>ThOD</td>
<td>1.07 g O₂/g substance</td>
<td></td>
</tr>
</tbody>
</table>

**Water (7732-18-5)**

| Persistence and degradability | Not established. |

### 12.3. Bioaccumulative potential

#### Acetic Acid, 10% v/v (1+9)

| Bioaccumulative potential | Not established. |

#### Acetic Acid (64-19-7)

| BCF fish 1 | 3.16 (Pisces, Fresh water, QSAR) |
| Log Pow | -0.17 (Experimental value, 25 °C) |

| Bioaccumulative potential | Not bioaccumulative. |

#### Water (7732-18-5)

| Bioaccumulative potential | Not established. |

### 12.4. Mobility in soil

#### Acetic Acid (64-19-7)

| Surface tension | 26.3 mN/m (30 °C) |

| Ecology - soil | Highly mobile in soil. May be harmful to plant growth, blooming and fruit formation. |

### 12.5. Other adverse effects

Other information : Avoid release to the environment.

### SECTION 13: Disposal considerations

#### 13.1. Disposal 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

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
Acetic Acid, 10% v/v (1+9)
Safety Data Sheet
according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

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).
T4 - 2.65 178.274(d)(2) Normal............... 178.275(d)(3)
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.xxxx) : 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.

Transport by sea
Transport document description (IMDG) : UN 2790 ACETIC ACID SOLUTION, 8, III
UN-No. (IMDG) : 2790
Proper Shipping Name (IMDG) : ACETIC ACID SOLUTION
Class (IMDG) : 8 - Corrosive substances
Packing group (IMDG) : III - substances presenting low danger
Limited quantities (IMDG) : 5 L

Air transport
Transport document description (IATA) : UN 2790 Acetic acid solution, 8, III
UN-No. (IATA) : 2790
Proper Shipping Name (IATA) : Acetic acid solution
Class (IATA) : 8 - Corrosives
Packing group (IATA) : III - Minor Danger

SECTION 15: Regulatory information
15.1. US Federal regulations
Acetic Acid, 10% v/v (1+9)

<table>
<thead>
<tr>
<th>SARA Section 311/312 Hazard Classes</th>
<th>Health hazard - Skin corrosion or Irritation</th>
<th>Health hazard - Serious eye damage or eye irritation</th>
</tr>
</thead>
</table>

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

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

SARA Section 311/312 Hazard Classes : Physical hazard - Flammable (gases, aerosols, liquids, or solids)
Health hazard - Skin corrosion or Irritation
Health hazard - Serious eye damage or eye irritation

15.2. International regulations
CANADA

Acetic Acid (64-19-7)
Listed on the Canadian DSL (Domestic Substances List)

Water (7732-18-5)
Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations
No additional information available
National regulations
No additional information available

15.3. US State regulations
Acetic Acid, 10% v/v (1+9)
Safety Data Sheet
according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and 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
according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Revision date : 07/30/2020
Other information : None.

Full text of H-phrases: see section 16:

<table>
<thead>
<tr>
<th>H226</th>
<th>Flammable liquid and vapor</th>
</tr>
</thead>
<tbody>
<tr>
<td>H314</td>
<td>Causes severe skin burns and eye damage</td>
</tr>
<tr>
<td>H318</td>
<td>Causes serious eye damage</td>
</tr>
<tr>
<td>H332</td>
<td>Harmful if inhaled</td>
</tr>
<tr>
<td>H402</td>
<td>Harmful to aquatic life</td>
</tr>
</tbody>
</table>

NFPA health hazard : 3 - Materials that, under emergency conditions, can cause serious or permanent injury.
NFPA fire hazard : 0 - Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand.
NFPA reactivity : 0 - Material that in themselves are normally stable, even under fire conditions.

Hazard 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

SDS US LabChem

Information in this SDS is from available published sources and is believed to be accurate. No warranty, express or implied, is made and LabChem Inc assumes no liability resulting from the use of this SDS. The user must determine suitability of this information for his application.