SAFETY DATA SHEET

1. Identification

Product identifier: Acetic Acid, 92%
Other means of identification: None.
Recommended use: Industrial applications
Recommended restrictions: None known.
Manufacturer/Importer/Supplier/Distributor information
Manufacturer
Company name: PVS Benson
Address: 1012 Gore Road
Freelton, ON L0R1K0
Canada
Telephone: 1-800-265-0014
bensoncs@pvschemicals.com
Emergency phone number: 24 hours/7 days: 1-313-921-1200
Supplier: See above.

2. Hazard identification

Physical hazards
- Flammable liquids
- Corrosive to metals

Health hazards
- Acute toxicity, oral
- Acute toxicity, dermal
- Acute toxicity, inhalation
- Skin corrosion/irritation
- Serious eye damage/eye irritation

Environmental hazards
- Not classified.

Label elements
- Signal word: Danger
- Hazard statement: Flammable liquid and vapour. May be corrosive to metals. Harmful if swallowed. Harmful in contact with skin. Causes severe skin burns and eye damage. Toxic if inhaled.
- Precautionary statement
  Prevention: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep container tightly closed. Ground and bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use non-sparking tools. Take action to prevent static discharges. Wear protective gloves, protective clothing, eye protection and face protection. Keep only in original packaging. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Do not breathe mist or vapour. Use only outdoors or in a well-ventilated area.
  Response: Absorb spillage to prevent material-damage. In case of fire: Use appropriate media to extinguish. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. Specific treatment (see information on this label). IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF INHALED: remove person to fresh air and keep comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Take off contaminated clothing and wash it before reuse. Immediately call a POISON CENTER or doctor.
  Storage: Store in a well-ventilated place. Keep cool. Store in a corrosion resistant container with a resistant inner liner. Store locked up.
  Disposal: Dispose of container in accordance with local, regional, national and international regulations.
- Other hazards: None known.
3. Composition/information on ingredients

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Common name and synonyms</th>
<th>CAS number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetic acid</td>
<td></td>
<td>64-19-7</td>
<td>92</td>
</tr>
</tbody>
</table>

All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First-aid measures

Inhalation: IF INHALED: remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTRE or doctor.

Skin contact: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. Immediately call a POISON CENTRE or doctor. Wash contaminated clothing before reuse. Specific treatment (see information on this label).

Eye contact: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTRE or doctor.

Ingestion: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTRE or doctor.

Most important symptoms/effects, acute and delayed: Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.

Indication of immediate medical attention and special treatment needed: Provide general supportive measures and treat symptomatically. Symptoms may be delayed.

General information: Take off all contaminated clothing immediately. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before reuse. Keep away from sources of ignition. No smoking. Avoid contact with eyes and skin. Wear rubber gloves and chemical splash goggles. Keep out of reach of children.

5. Fire-fighting measures


Unsuitable extinguishing media: Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical: Vapours may form explosive mixtures with air. Vapours may travel considerable distance to a source of ignition and flash back. During fire, gases hazardous to health may be formed. Firefighters should wear a self-contained breathing apparatus. Vapours are heavier than air and may travel along the ground to some distant source of ignition and flash back.

Hazardous combustion products: May include and are not limited to: Oxides of carbon.

Special protective equipment and precautions for firefighters: Self-contained breathing apparatus and full protective clothing must be worn in case of fire. Firefighters should wear full protective clothing including self-contained breathing apparatus.

Fire fighting equipment/instructions: In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk. Cool containers with flooding quantities of water until well after fire is out.

Specific methods: Use standard firefighting procedures and consider the hazards of other involved materials.

General fire hazards: Flammable liquid and vapour.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures: Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist or vapour. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
Stop leak if you can do so without risk. Use water spray to reduce vapours or divert vapour cloud drift. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil etc) away from spilled material. Take precautionary measures against static discharge. Use only non-sparking tools. Prevent entry into waterways, sewer, basements or confined areas.

Large Spills: Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb spillage to prevent material damage. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water.

Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. Never return spills to original containers for re-use.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS. Prevent entry into waterways, sewers, basements or confined areas.

Avoid discharge into drains, water courses or onto the ground. Do not discharge into lakes, streams, ponds or public waters.

Methods and materials for containment and cleaning up

Environmental precautions

7. Handling and storage

Precautions for safe handling

DANGER -- CORROSIVE

Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Explosion-proof general and local exhaust ventilation. All equipment used when handling the product must be grounded. Take precautionary measures against static discharges. Use non-sparking tools and explosion-proof equipment.

Do not breathe mist or vapour. Do not get in eyes, on skin, or on clothing. Do not taste or swallow. When using, do not eat, drink or smoke. Use only outdoors or in a well-ventilated area. Avoid prolonged exposure. Wear appropriate personal protective equipment. Wash thoroughly after handling. Wash contaminated clothing before reuse. Use good industrial hygiene practices in handling this material.

Precautions for safe handling

Conditions for safe storage, including any incompatibilities

Store locked up. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Store in a cool, dry place out of direct sunlight. Store in a corrosion resistant container with a resistant inner liner. Keep only in the original container. Store in a well-ventilated place. Keep in an area equipped with sprinklers. Keep out of reach of children. Keep away from heat, open flames or other sources of ignition. Do not store at temperatures above 120°F (49°C).

8. Exposure controls/Personal protection

Occupational exposure limits

US. ACGIH Threshold Limit Values

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetic acid (CAS 64-19-7)</td>
<td>STEL</td>
<td>15 ppm</td>
</tr>
<tr>
<td>Acetic acid (CAS 64-19-7)</td>
<td>TWA</td>
<td>10 ppm</td>
</tr>
</tbody>
</table>

Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetic acid (CAS 64-19-7)</td>
<td>STEL</td>
<td>37 mg/m3</td>
</tr>
<tr>
<td>Acetic acid (CAS 64-19-7)</td>
<td>TWA</td>
<td>25 mg/m3</td>
</tr>
</tbody>
</table>

Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetic acid (CAS 64-19-7)</td>
<td>STEL</td>
<td>15 ppm</td>
</tr>
<tr>
<td>Acetic acid (CAS 64-19-7)</td>
<td>TWA</td>
<td>10 ppm</td>
</tr>
</tbody>
</table>

Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act)

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetic acid (CAS 64-19-7)</td>
<td>STEL</td>
<td>15 ppm</td>
</tr>
<tr>
<td>Acetic acid (CAS 64-19-7)</td>
<td>TWA</td>
<td>10 ppm</td>
</tr>
</tbody>
</table>

Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents)

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetic acid (CAS 64-19-7)</td>
<td>STEL</td>
<td>15 ppm</td>
</tr>
<tr>
<td>Acetic acid (CAS 64-19-7)</td>
<td>TWA</td>
<td>10 ppm</td>
</tr>
</tbody>
</table>
### Components

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetic acid (CAS 64-19-7)</td>
<td>STEL</td>
<td>37 mg/m^3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>15 ppm</td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>25 mg/m^3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10 ppm</td>
</tr>
</tbody>
</table>

### Biological limit values

No biological exposure limits noted for the ingredient(s).

### Appropriate engineering controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

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

#### Eye/face protection

Wear safety glasses with side shields (or goggles) and a face shield.

#### Skin protection

**Hand protection**

Rubber gloves. Confirm with a reputable supplier first.

**Other**

Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended. As required by employer code.

#### Respiratory protection

Where exposure guideline levels may be exceeded, use an approved NIOSH respirator. Respirator should be selected by and used under the direction of a trained health and safety professional following requirements found in OSHA’s respirator standard (29 CFR 1910.134), CAN/CSA-Z94.4 and ANSI's standard for respiratory protection (Z88.2).

#### Thermal hazards

Not applicable.

### General hygiene considerations

When using do not smoke. Keep away from food and drink. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Use good industrial hygiene practices in handling this material. When using do not eat or drink.

### 9. Physical and chemical properties

<table>
<thead>
<tr>
<th>Appearance</th>
<th>Clear</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Liquid</td>
</tr>
<tr>
<td>Form</td>
<td>Liquid</td>
</tr>
<tr>
<td>Colour</td>
<td>Colourless</td>
</tr>
<tr>
<td>Odour</td>
<td>Pungent vinegar</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>Not available.</td>
</tr>
<tr>
<td>pH</td>
<td>2.4</td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>16.66 - 16.75 °C (61.99 - 62.15 °F) (100%)</td>
</tr>
<tr>
<td>Initial boiling point and boiling range</td>
<td>117.9 °C (244.22 °F) (100%)</td>
</tr>
<tr>
<td>Flash point</td>
<td>43.0 °C (109.4 °F)</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>1 (BuAc=1) (100%)</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Flammability limit - lower (%)</td>
<td>Not available.</td>
</tr>
<tr>
<td>Flammability limit - upper (%)</td>
<td>Not available.</td>
</tr>
<tr>
<td>Explosive limit - lower (%)</td>
<td>Not available.</td>
</tr>
<tr>
<td>Explosive limit – upper (%)</td>
<td>Not available.</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>Not available.</td>
</tr>
<tr>
<td>Vapour density</td>
<td>Not available.</td>
</tr>
<tr>
<td>Relative density</td>
<td>Not available.</td>
</tr>
<tr>
<td>Solubility(ies)</td>
<td>Soluble</td>
</tr>
<tr>
<td>Solubility (Water)</td>
<td>Soluble</td>
</tr>
<tr>
<td>Partition coefficient (n-octanol/water)</td>
<td>Not available.</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>Not available.</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

#23996  Page: 4 of 7  
Issue date 17-April-2019
Viscosity: 1.16 cSt (100%)

**Other information**

**Explosive properties**
Not explosive.

**Oxidising properties**
Not oxidising.

## 10. Stability and reactivity

**Reactivity**
May be corrosive to metals. Reacts vigorously with alkaline material. This product may react with strong oxidising agents.

**Chemical stability**
Stable under recommended storage conditions.

**Possibility of hazardous reactions**
Hazardous polymerisation does not occur.

**Conditions to avoid**
Do not mix with other chemicals. Heat, open flames, static discharge, sparks and other ignition sources.

**Incompatible materials**

**Hazardous decomposition products**
May include and are not limited to: Oxides of carbon.

## 11. Toxicological information

### Information on likely routes of exposure

**Inhalation**
Toxic if inhaled.

**Skin contact**
Causes severe skin burns. Harmful in contact with skin.

**Eye contact**
Causes serious eye damage.

**Ingestion**
Causes digestive tract burns. Harmful if swallowed. May cause stomach distress, nausea or vomiting.

**Symptoms related to the physical, chemical and toxicological characteristics**
Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.

### Information on toxicological effects

**Acute toxicity**
Toxic if inhaled. Harmful in contact with skin. Harmful if swallowed.

**Components**

<table>
<thead>
<tr>
<th><strong>Species</strong></th>
<th><strong>Test results</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetic acid (CAS 64-19-7)</td>
<td></td>
</tr>
<tr>
<td><strong>Acute</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Dermal</strong></td>
<td></td>
</tr>
<tr>
<td>LD50</td>
<td>Guinea pig, 3300 mg/kg, CHEMINFO</td>
</tr>
<tr>
<td></td>
<td>Rabbit, 1112 mg/kg, SIGMA-ALDRICH</td>
</tr>
<tr>
<td></td>
<td>1060 mg/kg</td>
</tr>
<tr>
<td>Inhalation</td>
<td></td>
</tr>
<tr>
<td>LC50</td>
<td>Rat, &gt; 40 mg/l/4h, ECHA</td>
</tr>
<tr>
<td>Oral</td>
<td></td>
</tr>
<tr>
<td>LD50</td>
<td>Mouse, 4960 mg/kg, ECHA</td>
</tr>
<tr>
<td></td>
<td>Rat, 3530 mg/kg, CCOHS</td>
</tr>
<tr>
<td></td>
<td>3310 mg/kg, ECHA</td>
</tr>
</tbody>
</table>

**Skin corrosion/irritation**
Causes severe skin burns and eye damage.

**Exposure minutes**
Not available.

**Erythema value**
Not available.

**Oedema value**
Not available.

**Serious eye damage/eye irritation**
Causes serious eye damage.

**Corneal opacity value**
Not available.

**Iris lesion value**
Not available.

**Conjunctival reddening value**
Not available.

**Conjunctival oedema value**
Not available.

**Recover days**
Not available.

**Respiratory or skin sensitisation**
Not a respiratory sensitizer.
### 12. Ecological information

#### Ecotoxicity
See below

#### Ecotoxicological data

<table>
<thead>
<tr>
<th>Components</th>
<th>Species</th>
<th>Test results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetic acid (CAS 64-19-7)</td>
<td>Crustacea</td>
<td>EC50 Daphnia 47 mg/L, 48 Hours</td>
</tr>
<tr>
<td></td>
<td>Aquatic Fish</td>
<td>LC50 Bluegill (Lepomis macrochirus) 75 mg/L, 96 hours</td>
</tr>
</tbody>
</table>

#### Persistence and degradability
No data is available on the degradability of this product.

#### Bioaccumulative potential
No data available.

#### Mobility in soil
Not available.

#### Mobility in general
Not available.

#### Other adverse effects
No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

### 13. Disposal considerations

- **Disposal instructions**: Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.
- **Local disposal regulations**: Dispose in accordance with all applicable regulations.
- **Hazardous waste code**: The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
- **Waste from residues / unused products**: Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
- **Contaminated packaging**: Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

### 14. Transport information

- **General**: Canada: TDG Proof of Classification: Classification Method: Classified as per Part 2, Sections 2.1 – 2.8 of the Transportation of Dangerous Goods Regulations. If applicable, the technical name and the classification of the product will appear below.

**Transportation of Dangerous Goods (TDG - Canada)**

- **Basic shipping requirements**
  - **UN number**: UN2789
  - **Proper shipping name**: ACETIC ACID SOLUTION, more than 80 per cent acid, by mass
  - **Hazard class**: 8
  - **Subsidiary hazard class**: 3
  - **Packing group**: II
15. Regulatory information

Canadian federal regulations
This product has been classified in accordance with the hazard criteria of the HPR and the SDS contains all the information required by the HPR.

Export Control List (CEPA 1999, Schedule 3)
Not listed.

Greenhouse Gases
Not listed.

Precursor Control Regulations
Not regulated.

WHMIS status
Controlled

International regulations

Inventory status

<table>
<thead>
<tr>
<th>Country(s) or region</th>
<th>Inventory Name</th>
<th>On Inventory (Yes/No)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canada</td>
<td>Domestic Substances List (DSL)</td>
<td>Yes</td>
</tr>
<tr>
<td>Canada</td>
<td>Non-Domestic Substances List (NDSL)</td>
<td>No</td>
</tr>
</tbody>
</table>

*A “Yes” indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

16. Other information

<table>
<thead>
<tr>
<th>LEGEND</th>
</tr>
</thead>
<tbody>
<tr>
<td>Severe</td>
</tr>
<tr>
<td>Serious</td>
</tr>
<tr>
<td>Moderate</td>
</tr>
<tr>
<td>Slight</td>
</tr>
<tr>
<td>Minimal</td>
</tr>
</tbody>
</table>

issue date 17-April-2019
Revision date 17-April-2019
Effective date 15-July-2016
Version No. 02

Other information
For an updated SDS, please contact the supplier/manufacturer listed on the first page of the document.

Disclaimer
Information contained herein was obtained from sources considered technically accurate and reliable. While every effort has been made to ensure full disclosure of product hazards, in some cases data is not available and is so stated. Since conditions of actual product use are beyond control of the supplier, it is assumed that users of this material have been fully trained according to the requirements of all applicable legislation and regulatory instruments. No warranty, expressed or implied, is made and supplier will not be liable for any losses, injuries or consequential damages which may result from the use of or reliance on any information contained in this document.

Prepared by
Dell Tech Laboratories Ltd. Phone: (519) 858-5021