

SAFETY DATA SHEET

Preparation Date: 8/5/2015

Revision Date: 8/5/2015

Revision Number: G1

1. IDENTIFICATION

Product identifier

Product code: A-101
Product Name: ACETIC ACID, 5 PERCENT (W/V) AQUEOUS SOLUTION

Other means of identification

Synonyms: Acetic Acid, 5% (w/v)
CAS #: Mixture
RTECS # Not available
CI#: Not available

Recommended use of the chemical and restrictions on use

Recommended use: No information available.
Uses advised against No information available

Supplier: Spectrum Chemical Mfg. Corp
 14422 South San Pedro St.
 Gardena, CA 90248
 (310) 516-8000

Order Online At: <https://www.spectrumchemical.com>

Emergency telephone number Chemtrec 1-800-424-9300
Contact Person: Martin LaBenz (West Coast)
Contact Person: Ibad Tirmiz (East Coast)

2. HAZARDS IDENTIFICATION

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2A

Label elements

Warning**Hazard statements**

Causes skin irritation
Causes serious eye irritation

**Hazards not otherwise classified (HNOC)**

Not Applicable

Other hazards

Not available

Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling
Wear protective gloves

Precautionary Statements - Response

Specific treatment (see .? on this label)

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

IF ON SKIN: Wash with plenty of soap and water

If skin irritation occurs: Get medical advice/attention

Take off contaminated clothing and wash before reuse

3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS-No.	Weight %	Trade Secret
Water 7732-18-5	7732-18-5	95	*
Acetic Acid, glacial 64-19-7	64-19-7	5	*

4. FIRST AID MEASURES**First aid measures****General Advice:**

Poison information centers in each State capital city can provide additional assistance for scheduled poisons (13 1126)

Skin Contact:

Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. Get medical attention. If skin irritation persists, call a physician.

Eye Contact:

Flush eye with water for 15 minutes. Get medical attention.

Inhalation:

Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

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Ingestion: Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Consult a physician if necessary.

Most important symptoms and effects, both acute and delayed

Symptoms Causes serious eye irritation. Causes skin irritation. May cause respiratory irritation .

Indication of any immediate medical attention and special treatment needed

Notes to Physician: Treat symptomatically

Protection of first-aiders

First-Aid Providers: Avoid exposure to blood or body fluids. Wear gloves and other necessary protective clothing. Dispose of contaminated clothing and equipment as bio-hazardous waste

5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media:

The product is not flammable. If it is involved in a fire, extinguish the fire using an agent suitable for the type of surrounding fire.

Unsuitable Extinguishing Media:

No information available.

Specific hazards arising from the chemical

Hazardous Combustion Products:

No information available.

Specific hazards:

Acetic acid vapors may form explosive mixtures with air. Reactions between acetic acid and the following materials are potentially explosive: 5-azidotetrazole, bromine pentafluoride, chromium trioxide, hydrogen peroxide, potassium permanganate, sodium peroxide, and phosphorus trichloride.
Dilute acetic acid and dilute hydrogen can undergo an exothermic reaction if heated, forming peracetic acid which is explosive at 110 degrees C.
Reaction between chlorine trifluoride and acetic acid is very violent, sometimes explosive. (Acetic acid)

Special Protective Actions for Firefighters

Specific Methods:

Water mist may be used to cool closed containers. For larger fires, use water spray or fog. Cool containers with flooding quantities of water until well after fire is out.

Special Protective Equipment for Firefighters:

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions: Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Use personal protective equipment. Avoid contact with skin, eyes and clothing. Evacuate personnel to safe areas. Remove all sources of ignition.

Environmental precautions Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Prevent entry into waterways, sewers, basements or confined areas.

Methods and material for containment and cleaning up

Methods for containment Stop leak if you can do it without risk.

Methods for cleaning up Neutralize with Sodium carbonate or Sodium bicarbonate. Absorb spill with inert material (e.g. vermiculite, dry sand or earth), then place in a suitable chemical waste container. Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE

Precautions for safe handling

Technical Measures/Precautions:

Provide sufficient air exchange and/or exhaust in work rooms. Keep away from incompatible materials.

Safe Handling Advice

Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Do not breathe vapors or spray mist. Do not ingest. Do not smoke. Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Technical Measures/Storage Conditions:

Keep container tightly closed in a dry and well-ventilated place. Store at room temperature in the original container. Store away from incompatible materials.

Incompatible Materials:

Oxidizing agents. Reducing agents. Metals. Acids. Bases.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

National occupational exposure limits

United States

Components	OSHA	NIOSH	ACGIH	AIHA WHEEL
Water 7732-18-5	None	None	None	None
Acetic Acid, glacial 64-19-7	10 ppm TWA 25 mg/m ³ TWA	10 ppm TWA 25 mg/m ³ TWA 15 ppm STEL 37 mg/m ³ STEL	15 ppm STEL 10 ppm TWA	None

Canada

Components	Alberta	British Columbia	Ontario	Quebec
Water 7732-18-5	None	None	None	None

Acetic Acid, glacial 64-19-7	10 ppm TWA 25 mg/m ³ TWA 15 ppm STEL 37 mg/m ³ STEL	10 ppm TWA 15 ppm STEL	10 ppm TWA 15 ppm STEL	10 ppm TWAEV 25 mg/m ³ TWAEV 15 ppm STEV 37 mg/m ³ STEV
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Australia and Mexico

Components	Australia	Mexico
Water 7732-18-5	None	None
Acetic Acid, glacial 64-19-7	15 ppm STEL 37 mg/m ³ STEL 10 ppm TWA 25 mg/m ³ TWA	10 ppm TWA 25 mg/m ³ TWA 15 ppm STEL 37 mg/m ³ STEL

Appropriate engineering controls

Engineering measures to reduce exposure:

Ensure adequate ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Individual protection measures, such as personal protective equipment

Personal Protective Equipment

- Eye protection:** Goggles
- Skin and body protection:** Long sleeved clothing. Chemical resistant apron. Gloves.
- Respiratory protection:** Vapor respirator. Be sure to use an approved/certified respirator or equivalent.
- Hygiene measures:** Avoid contact with skin, eyes and clothing. When using, do not eat, drink or smoke. Wash hands and face before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

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Physical state: Liquid.	Appearance: No information available	Color: Clear. Colorless.
Odor: Acetic acid (vinegar) -like. Strong.	Taste Acid. Strong.	Molecular/Formula weight: No information available
Formula: No information available	Flammability: No information available	Flash point (°C): No data available
Flashpoint (°C/°F): No information available.	Flash Point Tested according to: Not available	Autoignition Temperature (°C/°F): No information available
Lower Explosion Limit (%): No information available	Upper Explosion Limit (%): No information available	pH: Acidic
Melting point/range(°C/°F): 16.6°C/61.9°F (Acetic acid)	Boiling point/range(°C/°F): 100.91°C/213.6°F (weighted average)	Decomposition temperature(°C/°F): No information available
Bulk density: No information available	Density (g/cm3): 1.01	Specific gravity: No information available
Vapor pressure @ 20°C (kPa): 2.26 (weighted average)	Evaporation rate: No information available	Vapor density: 0.69 (weighted average)
VOC content (g/L): No information available	Odor threshold (ppm): 0.48 (Acetic acid)	Partition coefficient (n-octanol/water): No information available
Viscosity: No information available	Miscibility: No information available	Solubility: Easily soluble in cold water Easily soluble in hot water Partially soluble in methanol Partially soluble in diethyl ether Partially soluble in n-octanol Partially soluble in acetone

10. STABILITY AND REACTIVITY

Reactivity

Reacts violently with strong oxidizing agents, acetaldehyde, and acetic anhydride. It can react with metals, strong bases, amines, carbonates, hydroxides, phosphates, many oxides, cyanides, sulfides, chromic acid, nitric acid, hydrogen peroxide, carbonates, ammonium nitrate, ammonium thiosulfate, chlorine trifluoride, chlorosulfonic acid, perchloric acid, permanganates, xylene, oleum, potassium hydroxide, sodium hydroxide, phosphorus isocyanate, ethylenediamine, ethylene imine.

Acetic acid vapors may form explosive mixtures with air.

Reactions between acetic acid and the following materials are potentially explosive: 5-azidotetrazole, bromine pentafluoride, chromium trioxide, hydrogen peroxide, potassium permanganate, sodium peroxide, and phosphorus trichloride. Dilute acetic acid and dilute hydrogen can undergo an exothermic reaction if heated, forming peracetic acid which is explosive at 110 degrees C.

Reaction between chlorine trifluoride and acetic acid is very violent, sometimes explosive.

Chemical stability

Stability: Stable under recommended storage conditions

Possibility of Hazardous Reactions: Hazardous polymerization does not occur

Conditions to avoid: Incompatible materials.

Incompatible Materials: Oxidizing agents. Reducing agents. Metals. Acids. Bases.

Hazardous decomposition products: No information available

Other Information

Corrosivity:

Corrosive in presence of zinc
Slightly corrosive in the presence of aluminum, of copper
Non-corrosive in presence of stainless steel (316)
Non-corrosive in presence of stainless steel (304)

Special Remarks on Corrosivity: No corrosion data on brass

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Principal Routes of Exposure:

Skin. Eyes. Inhalation.

Acute Toxicity

Component Information

Water - 7732-18-5

LD50/oral/rat = > 90 mL/kg Oral LD50 Rat
LD50/oral/mouse = No information available
LD50/dermal/rat = No information available
LD50/dermal/rabbit = No information available
LC50/inhalation/rat = No information available
LC50/inhalation/mouse = No information available
Other LD50 or LC50 information = No information available

Acetic Acid, glacial - 64-19-7

LD50/oral/rat = 3310 mg/kg Oral LD50 Rat
LD50/oral/mouse = 3530 mg/kg
LD50/dermal/rat = No information available
LD50/dermal/rabbit = 1060 µL/kg Dermal LD50Rabbit
LC50/inhalation/rat = 11.4 mg/L Inhalation LC50 Rat 4 h
LC50/inhalation/mouse = 5620 ppm 1 h
Other LD50 or LC50 information = No information available

Product Information

LD50/oral/rat =
VALUE- Acute Tox Oral = No information available

LD50/oral/mouse =
Value - Acute Tox Oral = No information available

LD50/dermal/rabbit
VALUE-Acute Tox Dermal = No information available

LD50/dermal/rat
VALUE -Acute Tox Dermal = No information available

LC50/inhalation/rat
VALUE-Vapor = No information available

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VALUE-Gas = No information available
VALUE-Dust/Mist = No information available

LC50/Inhalation/mouse
VALUE-Vapor = No information available
VALUE - Gas = No information available

VALUE - Dust/Mist = No information available
Symptoms

Skin Contact: Causes skin irritation. Can cause redness and pain.

Eye Contact: Causes serious eye irritation. Eye contact may result in redness or pain.

Inhalation Causes respiratory tract and mucous membrane irritation. Symptoms may including coughing. May cause dyspnea (difficulty breathing or shortness of breath). May cause a thoracic pain. May affect behavior/central nervous system. May cause central nervous system effects, central nervous system depression. May cause headache, nausea, vomiting.

Ingestion Ingestion of large doses may cause gastrointestinal tract irritation with abdominal pain, nausea, vomiting. May affect kidneys (anuria, uremia, nephoria, dysuria, albuminuria, hemoglobinuria, hematuria, acute tubular necrosis). May affect the liver (liver function tests are abnormal). May affect behavior/central nervous system (muscle weakness, convulsions).

Aspiration hazard No information available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Chronic Toxicity Prolonged or repeated inhalation may affect metabolism (weight loss). Prolonged or repeated inhalation may affect the liver. Prolonged or repeated inhalation may cause pharyngitis, chronic bronchitis, and may affect blood (changes in leukocyte count), and urinary system (kidney damage). Prolonged or repeated ingestion or inhalation of Acetic acid may also cause erosion of teeth.
Skin: Prolonged or repeated skin contact may cause irritation or dermatitis, hyperkeratosis.
Eyes: Prolonged or repeated eye contact may cause conjunctivitis.

Sensitization: No information available

Mutagenic Effects: May affect genetic material
Experiments with bacteria and/or yeast have shown mutagenic effects

Carcinogenic effects: Not considered carcinogenic

Components	IARC	ACGIH - Carcinogens	NTP	OSHA HCS - Carcinogens	Australia - Prohibited Carcinogenic Substances	Australia - Notifiable Carcinogenic Substances
Water	Not listed	Not listed	Not listed	Not listed	Not listed	Not listed
Acetic Acid, glacial	Not listed	Not listed	Not listed	Not listed	Not listed	Not listed

Reproductive toxicity No data is available

Reproductive Effects: May cause adverse reproductive effects based on animal data
Developmental Effects: No information available

Teratogenic Effects: No information available

Specific Target Organ Toxicity

STOT - single exposure No information available

STOT - repeated exposure No information available

Target Organs: Kidneys. Lungs. Mucous membrane. Respiratory system. Teeth. Eyes.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Ecotoxicity effects: May be harmful to the aquatic environment.

Acetic Acid, glacial - 64-19-7

Freshwater Fish Species Data: 75 mg/L LC50 Lepomis macrochirus 96 h static 1

79 mg/L LC50 Pimephales promelas 96 h static 1

Water Flea Data: 65 mg/L EC50 Daphnia magna 48 h

Persistence and degradability: Readily biodegradable

Bioaccumulative potential: No information available

Mobility: No information available

13. DISPOSAL CONSIDERATIONS

Disposal Methods

Waste from residues / unused products:

Waste must be disposed of in accordance with Federal, State and Local regulation.

Contaminated packaging:

Empty containers should be taken for local recycling, recovery or waste disposal Do not re-use empty containers Dispose of as unused product.

Components	RCRA - F Series Wastes	RCRA - K Series Wastes	RCRA - P Series Wastes	RCRA - U Series Wastes
Water	None	None	None	None
Acetic Acid, glacial	None	None	None	None

14. TRANSPORT INFORMATION

DOT

UN-No: Not Regulated

Proper Shipping Name: No information available

Hazard Class: No information available

Subsidiary Risk: No information available

Packing Group: None

ERG No: No information available

Marine Pollutant No data available

DOT RQ (lbs): No information available

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TDG (Canada)

UN-No:	Not Regulated
Proper Shipping Name:	No information available
Hazard Class:	No information available
Subsidiary Risk:	No information available
Packing Group:	No information available
Description:	No information available

ADR

UN-No:	Not Regulated
Proper Shipping Name:	No information available
Hazard Class:	No information available
Packing Group:	No information available
Subsidiary Risk:	No information available
Classification Code:	No information available
Description:	No information available
CEFIC Tremcard No:	No information available

IMO / IMDG

UN-No:	Not Regulated
Proper Shipping Name:	No information available
Hazard Class:	No information available
Subsidiary Risk:	No information available
Packing Group:	No information available
Description:	No information available
IMDG Page:	No information available
Marine Pollutant	No information available
MFAG:	No information available
Maximum Quantity:	No information available

RID

UN-No:	Not Regulated
Proper Shipping Name:	No information available
Hazard Class:	No information available
Subsidiary Risk:	No information available
Packing Group:	No information available
Classification Code:	No information available
Description:	No information available

ICAO

UN-No:	Not Regulated
Proper Shipping Name:	No information available
Hazard Class:	No information available
Subsidiary Risk:	No information available
Packing Group:	No information available
Description:	No information available

IATA

UN-No:	Not Regulated
Proper Shipping Name:	No information available
Hazard Class:	No information available
Subsidiary Risk:	No information available
Packing Group:	No information available
Description:	No information available

15. REGULATORY INFORMATION

International Inventories

Components	U.S. TSCA	KOREA KECL	Philippines (PICCS)	Japan ENCS	CHINA	Australia (AICS)	EINECS-No.
Water	Present	Present KE-35400	Present	Not present	Present	Present	Present 231-791-2
Acetic Acid, glacial	Present	Present KE-00013	Present	Present (2)-688	Present	Present	Present 200-580-7

U.S. Regulations

Acetic Acid, glacial

Massachusetts RTK: Present

New Jersey RTK Hazardous Substance List: 0004

New Jersey - Discharge Prevention - List of Hazardous Substances: Present

Pennsylvania RTK: Environmental hazard

Pennsylvania RTK - Environmental Hazard List Present

Minnesota - Hazardous Substance List: Present

New York Release Reporting - List of Hazardous Substances:

5000 lb RQ

100 lb RQ

Louisiana Reportable Quantity List for Pollutants: 5000lbfinal RQ

2270kgfinal RQ

California Directors List of Hazardous Substances: Present

FDA - Food Additives Generally Recognized as Safe (GRAS): 21 CFR 184.1005

FDA - 21 CFR - Total Food Additives 133.123 133.124 133.169 133.173 133.178 133.179 172.814 173.370 184.1005 73.85

California Prop. 65: Safe Drinking Water and Toxic Enforcement Act of 1986.

Chemicals Known to the State of California to Cause Cancer:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Chemicals Known to the State of California to Cause Reproductive Toxicity:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Components	Carcinogen	Developmental Toxicity	Male Reproductive Toxicity	Female Reproductive Toxicity:
Water	Not Listed	Not Listed	Not Listed	Not Listed
Acetic Acid, glacial	Not Listed	Not Listed	Not Listed	Not Listed

CERCLA/SARA

Components	CERCLA - Hazardous Substances and their Reportable Quantities	Section 302 Extremely Hazardous Substances and TPQs	Section 302 Extremely Hazardous Substances and RQs	Section 313 - Chemical Category	Section 313 - Reporting <i>de minimis</i>
Water	None	None	None	None	None
Acetic Acid, glacial	5000 lb final RQ 2270 kg final RQ	None	None	None	None

U.S. TSCA

Components	TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS)	TSCA 8(d) -Health and Safety Reporting
Water	Not Applicable	Not Applicable
Acetic Acid, glacial	Not Applicable	Not Applicable

Canada

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WHMIS hazard class:
D2B Toxic materials

Water
Uncontrolled product according to WHMIS classification criteria

Acetic Acid, glacial
B3 E including 10-80% [Available data does not allow a precise evaluation of the threshold concentration from which solutions meet the B3 criterion], >80%
D2B 3-10%

Canada Controlled Products Regulation:

This product has been classified according to the hazard criteria of the CPR (Controlled Products Regulation) and the MSDS contains all of the information required by the CPR.

Components	WHMIS Ingredient Disclosure List -
Acetic Acid, glacial	1 %

Inventory

Components	Canada (DSL)	Canada (NDSL)
Water	Present	Not Listed
Acetic Acid, glacial	Present	Not Listed

Components	CEPA Schedule I - Toxic Substances	CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting
Water	Not listed	Not listed
Acetic Acid, glacial	Not listed	Not listed

EU Classification

R-phrases(s)

R36/38 - Irritating to eyes and skin.

S -phrase(s)

S23 - Do not breathe gas/fumes/vapor/spray.

S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S45 - In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

S 1/2 - Keep locked up and out of the reach of children.

Components	Classification	Concentration Limits:	Safety Phrases
Water		No information	
Acetic Acid, glacial	R10 C; R35	10%≤C<25%: Xi; R:36/38 90%≤C: C; R:35 25%≤C<90%: C; R:34	S1/2 S23 S26 S45

The product is classified in accordance with Annex VI to Directive 67/548/EEC

Indication of danger:

Xi - Irritant.



16. OTHER INFORMATION

Preparation Date: 8/5/2015
Revision Date: 8/5/2015
Prepared by: Sonia Owen

Disclaimer:

All chemicals may pose unknown hazards and should be used with caution. This Safety Data Sheet (SDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. The physical properties reported in this SDS are obtained from the literature and do not constitute product specifications. Information contained herein does not constitute a warranty, whether expressed or implied, as to the safety, merchantability or fitness of the goods for a particular purpose. Spectrum Chemicals & Laboratory Products, Inc. assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Spectrum assumes no responsibility for the completeness or accuracy of the information contained herein.

End of Safety Data Sheet