Acetic Acid, Reagent Grade

SECTION 1: Identification

Product identifier

Product name: Acetic Acid, Reagent Grade
Synonyms: Acetic oxide
Product code: AA1080

Recommended use of the product and restriction on use

Relevant identified uses: Laboratory Chemicals
Uses advised against: Not determined or not applicable.
Reasons why uses advised against: Not determined or not applicable.

Manufacturer or supplier details

Manufacturer:	**Supplier:**
United States	**United States**
AquaPhoenix Scientific, Inc. 860 Gitts Run Road Hanover, PA 17331 1-717-632-1291	N/A

Emergency telephone number:

United States
ChemTel: (24-hour) (US and Canada)
1-(800)-255-3924

SECTION 2: Hazard(s) identification

GHS classification:

Flammable liquids, category 3
Corrosive to metals, category 1
Acute toxicity (oral), category 4
Acute toxicity (inhalation), category 4
Skin corrosion, category 1B
Serious eye damage, category 1

Label elements

Hazard pictograms:

Signal word: Danger

Hazard statements:

H226 Flammable liquid and vapor
H290 May be corrosive to metals
H302 Harmful if swallowed
H332 Harmful if inhaled
H314 Causes severe skin burns and eye damage
H318 Causes serious eye damage

Precautionary statements:

P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking

P233 Keep container tightly closed
P240 Ground/bond container and receiving equipment
P241 Use explosion-proof electrical/ventilating/light/equipment
P242 Use only non-sparking tools
P243 Take precautionary measures against static discharge
P280 Wear protective gloves/protective clothing/eye protection/face protection
P234 Keep only in original container
P264 Wash skin thoroughly after handling
P270 Do not eat, drink or smoke when using this product
P271 Use only outdoors or in a well-ventilated area
P260 Do not breathe dust/fume/gas/mist/vapors/spray
P370+P378 In case of fire: Use agents recommended in section 5 for extinction
P390 Absorb spillage to prevent material damage
P321 Specific treatment (see supplemental first aid instructions on this label).
P363 Wash contaminated clothing before reuse
P304+P340+P310 If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a poison center or doctor/physician
P301+P330+P331+P310 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor/physician.
P303+P361+P353+P310 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately call a POISON CENTER or doctor/physician.
P305+P351+P338+P310 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 CENTER or doctor/physician.
P403+P235 Store in a well ventilated place. Keep cool
P406 Store in corrosive resistant stainless steel container with a resistant inner liner
P405 Store locked up
P501 Dispose of contents and container as instructed in Section 13

Hazards not otherwise classified: None

SECTION 3: Composition/information on ingredients

Identification	Name	Weight %
CAS number: 108-24-7	Acetic Anhydride, Reagent Grade	>97

Additional Information: None

SECTION 4: First aid measures

Description of first aid measures

General notes:

Not determined or not applicable.

After inhalation:

Loosen clothing as necessary and position individual in a comfortable position
Maintain an unobstructed airway
Get medical advice/attention if you feel unwell
Move to fresh air
Call a POISON CONTROL CENTER or seek medical attention if you feel unwell
Move exposed individual to fresh air
Immediately call a POISON CONTROL CENTER or seek medical attention

After skin contact:

Rinse affected area with soap and water
If symptoms develop or persist, seek medical attention
Immediately remove all contaminated clothing
Wash affected area with soap and water
Immediately call a POISON CONTROL CENTER or seek medical attention

After eye contact:

Rinse/flush exposed eye(s) gently using water for 15-20 minutes
If symptoms develop or persist, seek medical attention
Remove contact lens(es) if able to do so during rinsing
Immediately call a POISON CONTROL CENTER or seek medical attention

After swallowing:

Rinse mouth thoroughly
Seek medical attention if irritation, discomfort, or vomiting persists
Call a POISON CONTROL CENTER or seek medical attention if you feel unwell
Do not induce vomiting
Rinse mouth and then drink plenty of water
Immediately call a POISON CONTROL CENTER or seek medical attention

Most important symptoms and effects, both acute and delayed

Acute symptoms and effects:

Not determined or not applicable.

Delayed symptoms and effects:

Not determined or not applicable.

Immediate medical attention and special treatment

Specific treatment:

Not determined or not applicable.

Notes for the doctor:

Not determined or not applicable.

SECTION 5: Firefighting measures

Extinguishing media

Suitable extinguishing media:

Use Water (fog only), dry chemical, chemical foam, carbon dioxide, or alcohol-resistant foam

Unsuitable extinguishing media:

Do not use a water stream as an extinguisher

Specific hazards during fire-fighting:

Thermal decomposition can lead to release of irritating gases and vapors
Vapors can flow to distant ignition sources and flashback
Liquid is volatile and may generate an explosive atmosphere

Special protective equipment for firefighters:

Use typical firefighting equipment, self-contained breathing apparatus, special tightly sealed suit

Special precautions:

Shut off sources of ignition
Carbon monoxide and carbon dioxide may form upon combustion
Heating causes a rise in pressure, risk of bursting and combustion

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures:

Ensure adequate ventilation
Ensure air handling systems are operational
Wear protective eye wear, gloves and clothing
Beware of vapors accumulating to form explosive concentrations
Vapors can accumulate in low areas

Environmental precautions:

Should not be released into the environment
Prevent from reaching drains, sewer or waterway

Methods and material for containment and cleaning up:

Wear protective eye wear, gloves and clothing
Use spark-proof tools and explosion-proof equipment
Absorb with non-combustible liquid-binding material (sand, diatomaceus earth (clay), acid binders, universal binders)
Dispose of contents / container in accordance with local regulations

Reference to other sections:

Not determined or not applicable.

SECTION 7: Handling and storage

Precautions for safe handling:

Use only with adequate ventilation.
Avoid breathing mist or vapor.
Do not eat, drink, smoke or use personal products when handling chemical substances.
Take precautionary measures against electrostatic discharges.
Use only non-sparking tools.

Conditions for safe storage, including any incompatibilities:

Keep container tightly sealed.
Protect from freezing and physical damage.
Store in a cool, well-ventilated area.
Store away from all ignition sources (open flames, hot surfaces, direct sunlight, spark sources).

SECTION 8: Exposure controls/personal protection

Only those substances with limit values have been included below.

Occupational Exposure limit values:

Country (Legal Basis)	Substance	Identifier	Permissible concentration
United States (OSHA)	Acetic Anhydride, Reagent Grade	108-24-7	PEL : 8 hr Time-Weighted avg: 5 ppm
	Acetic Anhydride, Reagent Grade	108-24-7	DFG : 8 hr Time-Weighted Avg: 5 ppm
ACGIH	Acetic Anhydride, Reagent Grade	108-24-7	TLV : 8 hr Time-Weighted Avg: 1 ppm
	Acetic Anhydride, Reagent Grade	108-24-7	Ceiling : 8 hr Time-Weighted Avg: 3 ppm
Australia	Acetic Anhydride, Reagent Grade	108-24-7	8 hr Time-Weighted Avg: 5 ppm
Belgium	Acetic Anhydride, Reagent Grade	108-24-7	8 hr Time-Weighted Avg: 5 ppm
Canada	Acetic Anhydride, Reagent Grade	108-24-7	8 hr Time-Weighted Avg: 1 ppm (Ontario) 5 ppm (Quebec)
Denmark	Acetic Anhydride, Reagent Grade	108-24-7	8 hr Time-Weighted Avg: 5 ppm

Acetic Acid, Reagent Grade

Country (Legal Basis)	Substance	Identifier	Permissible concentration
Germany	Acetic Anhydride, Reagent Grade	108-24-7	AGS : 8 hr Time-Weighted Avg: 5 ppm
Japan	Acetic Anhydride, Reagent Grade	108-24-7	JSOH : 8 hr Time-Weighted Avg: 5 ppm

Biological limit values:

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

Information on monitoring procedures:

Monitoring of the concentration of substances in the breathing zone of workers or in the general workplace may be required to confirm compliance with an OEL and adequacy of exposure controls.
Biological monitoring may also be appropriate for some substances.

Appropriate engineering controls:

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use or handling.
Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor and mists below the applicable workplace exposure limits (Occupational Exposure Limits-OELs) indicated above.
Use explosion-proof ventilation equipment.

Personal protection equipment

Eye and face protection:

Safety goggles or glasses, or appropriate eye protection.

Skin and body protection:

Select glove material impermeable and resistant to the substance.
Wear appropriate clothing to prevent any possibility of skin contact.

Respiratory protection:

If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.

General hygienic measures:

Avoid contact with skin, eyes and clothing.
Wash hands before breaks and at the end of work.
Wash contaminated clothing before reuse.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Appearance	Clear, colorless liquid
Odor	Vinegar-like
Odor threshold	Not determined or not available.
pH	Not determined or not available.
Melting point/freezing point	Not determined or not available.
Initial boiling point/range	Not determined or not available.
Flash point (closed cup)	52°C
Evaporation rate	0.46
Flammability (solid, gas)	Extremely flammable
Upper flammability/explosive limit	10.3 Vol %
Lower flammability/explosive limit	2.9 Vol %

Acetic Acid, Reagent Grade

Vapor pressure	Not determined or not available.
Vapor density	3.5 mm Hg at 20°C
Density	Not determined or not available.
Relative density	1.0820 g/cm3
Solubilities	Soluble in water.
Partition coefficient (n-octanol/water)	Not determined or not available.
Auto/Self-ignition temperature	332°C
Decomposition temperature	Not determined or not available.
Dynamic viscosity	Not determined or not available.
Kinematic viscosity	Not determined or not available.
Explosive properties	Not determined or not available.
Oxidizing properties	Not determined or not available.

Other information

SECTION 10: Stability and reactivity

Reactivity:
Does not react under normal conditions of use and storage.

Chemical stability:
Stable. However, substance may decompose if exposed to moist air or water. Substance is readily hydrolyzed. Reacts with water to form corresponding acid.

Possibility of hazardous reactions:
None under normal conditions of use and storage.

Conditions to avoid:
Ignition sources, contact with water, excess heat, exposure to moist or water.

Incompatible materials:
Strong oxidizing agents, strong reducing agents, bases, alcohols, metal powders , and moisture.

Hazardous decomposition products:
Carbon monoxide, irritating and toxic fumes and gases, carbon dioxide.

SECTION 11: Toxicological information

Acute toxicity

Assessment: Harmful if swallowed Harmful if inhaled

Product data: No data available.

Substance data:

Name	Route	Result
Acetic Anhydride, Reagent Grade	oral	LD50 (Rat) : 1780 mg/kg
	inhalation	LC50 (Rat) : 4.18 mg/l - 4 H

Skin corrosion/irritation

Assessment: Causes severe skin burns and eye damage

Product data: No data available.

Substance data:

Name	Result
Acetic Anhydride, Reagent Grade	Causes severe skin burns and eye damage.

Acetic Acid, Reagent Grade

Serious eye damage/irritation

Assessment: Causes serious eye damage

Product data: No data available.

Substance data:

Name	Result
Acetic Anhydride, Reagent Grade	Causes serious eye damage.

Respiratory or skin sensitization

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

Product data: No data available.

Substance data: No data available.

Carcinogenicity

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

Product data: No data available.

Substance data: No data available.

International Agency for Research on Cancer (IARC): None of the ingredients are listed.

National Toxicology Program (NTP): None of the ingredients are listed.

Germ cell mutagenicity

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

Product data: No data available.

Substance data: No data available.

Reproductive toxicity

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

Product data: No data available.

Substance data: No data available.

Specific target organ toxicity (single exposure)

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

Product data: No data available.

Substance data:

Name	Result
Acetic Anhydride, Reagent Grade	May cause respiratory irritation.

Specific target organ toxicity (repeated exposure)

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

Product data: No data available.

Substance data: No data available.

Aspiration toxicity

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

Product data: No data available.

Substance data: No data available.

Information on likely routes of exposure: No data available.

Symptoms related to the physical, chemical and toxicological characteristics: No data available.

Other information: No data available.

SECTION 12: Ecological information

Acute (short-term) toxicity

Acetic Acid, Reagent Grade

Assessment: Based on available data, the classification criteria are not met.
Product data:

Fish	Acetic Anhydride Reagent Grade has high biochemical oxygen demand, and a potential to cause oxygen depletion in aquatic systems.

Substance data: No data available.

Chronic (long-term) toxicity

Product data: No data available.

Substance data: No data available.

Persistence and degradability

Product data:
Expected to be biodegradable.

Substance data: No data available.

Bioaccumulative potential

Product data: No data available.

Substance data: No data available.

Mobility in soil

Product data: No data available.

Substance data: No data available.

Other adverse effects: No data available.

SECTION 13: Disposal considerations

Disposal methods:
It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities

SECTION 14: Transport information

United States Transportation of dangerous goods (49 CFR DOT)

UN number	UN 1715
UN proper shipping name	Acetic Anhydride, Glacial
UN transport hazard class(es)	8 (3) 
Packing group	II
Environmental hazards	None
Special precautions for user	None

International Maritime Dangerous Goods (IMDG)

UN number	Not regulated
UN proper shipping name	Not regulated
UN transport hazard class(es)	None
Packing group	None
Environmental hazards	None
Special precautions for user	None

International Air Transport Association Dangerous Goods Regulations (IATA-DGR)

UN number	Not regulated

Acetic Acid, Reagent Grade

UN proper shipping name	Not regulated
UN transport hazard class(es)	None
Packing group	None
Environmental hazards	None
Special precautions for user	None

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	
Bulk Name	None
Ship type	None
Pollution category	None

SECTION 15: Regulatory information

United States regulations

Inventory listing (TSCA):

108-24-7	Acetic Anhydride, Reagent Grade	Listed

Significant New Use Rule (TSCA Section 5): Not determined.

Export notification under TSCA Section 12(b): Not determined.

SARA Section 311/312 hazards:

Acute	Chronic	Fire	Pressure	Reactive
No	No	No	No	No

SARA Section 302 extremely hazardous substances: Not determined.

SARA Section 313 toxic chemicals:

108-24-7	Acetic Anhydride, Reagent Grade	Not Listed

CERCLA:

108-24-7	Acetic Anhydride, Reagent Grade	Listed	5000

RCRA: Not determined.

Section 112(r) of the Clean Air Act (CAA): Not determined.

Massachusetts Right to Know:

108-24-7	Acetic Anhydride, Reagent Grade	Listed

New Jersey Right to Know:

108-24-7	Acetic Anhydride, Reagent Grade	Listed

New York Right to Know:

108-24-7	Acetic Anhydride, Reagent Grade	Listed

Pennsylvania Right to Know:

108-24-7	Acetic Anhydride, Reagent Grade	Listed

California Proposition 65: None of the ingredients are listed.

SECTION 16: Other information

Abbreviations and Acronyms: None

Disclaimer:

This product has been classified in accordance with OSHA HCS 2012 guidelines. The information provided in this SDS is correct, to the best of our knowledge, based on information available. The information given is designed only as a guidance for safe handling, use, storage, transportation and disposal and is not to be

considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials, unless specified in the text. The responsibility to provide a safe workplace remains with the user.

NFPA: 3-2-1
HMIS: 3-2-1
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End of Safety Data Sheet