

Safety Data Sheet

according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 12.22.2014

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Acetic Anhydride

SECTION 1: Identification of the substance/mixture and of the supplier

Product name: Acetic Anhydride

Manufacturer/Supplier Trade name:

Manufacturer/Supplier Article number: S25119A

Recommended uses of the product and restrictions on use:

Manufacturer Details:

AquaPhoenix Scientific, Inc
9 Barnhart Drive, Hanover, PA 17331
(717) 632-1291

Supplier Details:

Fisher Science Education
6771 Silver Crest Road, Nazareth, PA 18064
(724)517-1954

Emergency telephone number:

Fisher Science Education
Emergency Telephone No.: 800-535-5053

SECTION 2: Hazards identification

Classification of the substance or mixture:



Flammable

Flammable liquids, category 3



Irritant

Acute toxicity (oral, dermal, inhalation), category 4
Acute toxicity (oral, dermal, inhalation), category 3



Corrosive

Skin corrosion, category 1B
Serious eye damage, category 1

Flam Liq. 3.

AcTox Oral 4.

AcTox Inhaln 4.

Skin corr. 1B.

Eye. Damage 1.

Signal word: Danger

Hazard statements:

Flammable liquid and vapour.

Harmful if swallowed.

Causes severe skin burns and eye damage.

Causes serious eye damage.

Toxic if inhaled.

Precautionary statements:

If medical advice is needed, have product container or label at hand.

Keep out of reach of children.

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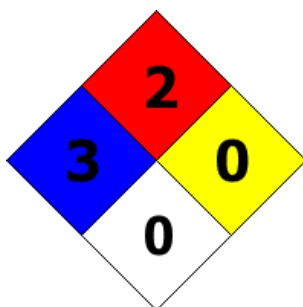
Read label before use.
Keep container tightly closed.
Do not eat, drink or smoke when using this product.
Wash skin thoroughly after handling.
Avoid breathing dust/fume/gas/mist/vapours/spray.
Keep away from heat/sparks/open flames/hot surfaces. No smoking.
Ground/bond container and receiving equipment.
Use explosion-proof electrical/ventilating/light/.../equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Use only outdoors or in a well-ventilated area.
Wear protective gloves/protective clothing/eye protection/face protection.
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
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.
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.
Wash contaminated clothing before reuse.
In case of fire: Use agents recommended in section 5 for extinction.
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
Rinse mouth.
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
Store in a well ventilated place. Keep cool.
Store locked up.
Store in a well ventilated place. Keep container tightly closed.
Dispose of contents and container as instructed in Section 13.

Other Non-GHS Classification:

WHMIS



NFPA/HMIS



Health	3
Flammability	2
Physical Hazard	3
Personal Protection	X

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NFPA SCALE (0-4)

HMIS RATINGS (0-4)

SECTION 3: Composition/information on ingredients

Ingredients:

CAS 108-24-7

Acetic Anhydride

100 %

Percentages are by weight

SECTION 4: First aid measures

Description of first aid measures

After inhalation:

Move exposed individual to fresh air. Loosen clothing as necessary and position individual in a comfortable position. Seek medical advice if discomfort or irritation persists. Give artificial respiration if necessary. If breathing is difficult, give oxygen.

After skin contact:

Rinse exposed skin with water for 20 minutes. Immediately enter emergency shower rinsing while removing contaminated clothing and shoes. Transport victim to the hospital.

After eye contact:

Protect unexposed eye. Flush exposed eye gently using water for 15-20 minutes. Remove contact lenses while rinsing. Immediately seek medical attention.

After swallowing:

Rinse mouth thoroughly. Do not induce vomiting. Dilute with water or milk. Immediately seek medical attention.

Most important symptoms and effects, both acute and delayed:

Irritation. Nausea. Headache. Shortness of breath.

Indication of any immediate medical attention and special treatment needed:

If seeking medical attention, provide SDS document to physician. Physician should treat symptomatically.

SECTION 5: Firefighting measures

Extinguishing media

Suitable extinguishing agents:

Use water, dry chemical, chemical foam, carbon dioxide, or alcohol-resistant foam. Use water spray to cool unopened containers.

Unsuitable extinguishing agents: None

Special hazards arising from the substance or mixture:

Thermal decomposition may lead to release of irritating gases and vapor.

Advice for firefighters:

Protective equipment:

Wear protective eyewear, gloves, and clothing. Refer to Section 8.

Additional information (precautions): None

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures:

Ensure adequate ventilation. Ensure that air-handling systems are operational. Use explosion - proof

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equipment.

Environmental precautions:

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

Methods and material for containment and cleaning up:

Wear protective eyewear, gloves, and clothing. Refer to Section 8. Always obey local regulations. If necessary use trained response staff or contractor. Evacuate personnel to safe areas. Containerize for disposal. Refer to Section 13. Keep in suitable closed containers for disposal.

Reference to other sections: None

SECTION 7: Handling and storage

Precautions for safe handling:

Wear protective eyewear, gloves, and clothing. Refer to Section 8. Always obey local regulations. If necessary use trained response staff or contractor. Evacuate personnel to safe areas. Containerize for disposal. Refer to Section 13. Keep in suitable closed containers for disposal. Keep away from open flames, hot surfaces and sources of ignition.

Conditions for safe storage, including any incompatibilities:

Avoid contact with skin, eyes, and clothing. Follow good hygiene procedures when handling chemical materials. Refer to Section 8. Follow proper disposal methods. Refer to Section 13. Do not eat, drink, smoke, or use personal products when handling chemical substances.

SECTION 8: Exposure controls/personal protection



Control Parameters:

108-24-7, Acetic Anhydride , NIOSH 5 ppm Ceiling; 20 mg/m³ Ceiling.
108-24-7, Acetic Anhydride , NIOSH 200 ppm IDLH.
108-24-7, Acetic Anhydride , ACGIH 3 ppm STEL; 1 ppm TWA.

Appropriate Engineering controls:

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use/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.

Respiratory protection:

Not required under normal conditions of use. Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. When necessary use NIOSH approved breathing equipment.

Protection of skin:

Select glove material impermeable and resistant to the substance. Select glove material based on rates of diffusion and degradation. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Use proper glove removal technique without touching outer surface. Avoid skin contact with used gloves. Wear protective clothing.

Eye protection:

Safety glasses with side shields or goggles. Wear equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

General hygienic measures:

Perform routine housekeeping. Wash hands before breaks and immediately after handling the product. Avoid contact with skin, eyes, and clothing. Before re-wearing wash contaminated clothing.

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SECTION 9: Physical and chemical properties

Appearance (physical state, color):	Clear, colorless liquid.	Explosion limit lower:	2.7 %(V)
		Explosion limit upper:	10.3 %(V)
Odor:	Vinegar-like	Vapor pressure at 20°C:	3.9 mm Hg @68F
Odor threshold:	Not Determined	Vapor density:	3.52 - (Air = 1.0)
pH-value:	Not Determined	Relative density:	1.08 g/cm3
Melting/Freezing point:	-73 °C	Solubilities:	Soluble in water.
Boiling point/Boiling range:	137 °C	Partition coefficient (n-octanol/water):	log Pow : ca. - 0.27
Flash point (closed cup):	52 °C	Auto/Self-ignition temperature:	316 °C
Evaporation rate:	0.46	Decomposition temperature:	Not Determined
Flammability (solid, gaseous):	Flammable	Viscosity:	a. Kinematic: Not Determined b. Dynamic: Not Determined
Density at 20°C:	Not Determined		

SECTION 10: Stability and reactivity

Reactivity:

Reacts violently with water.

Chemical stability:

May decompose if exposed to moist air or water. Substance is readily hydrolyzed. Reacts with water to form corresponding acid.

Possible hazardous reactions: None

Conditions to avoid:

Ignition sources, contact with water, excess heat, exposure to moist air or water.

Incompatible materials:

Strong oxidizing agents, strong reducing agents, acids, 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:

Oral:

108-24-7 LD50 Oral - Rat - 630 mg/kg

Dermal:

108-24-7 LD50 Dermal - Rabbit - 4,320 mg/kg

Inhalation:

108-24-7 LC50 Inhalation - Rat - 4 h - 4,200 mg/m3

Chronic Toxicity: No additional information.

Corrosion Irritation:

Dermal:

108-24-7 Skin - in vitro assay Result : Causes burns.

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Ocular:

108-24-7 Eyes - rabbit Result : Severe eye irritation

Sensitization:

Irritation: Causes severe burns by all routes of exposure.

Numerical Measures: No additional information.

Carcinogenicity: No additional information.

Mutagenicity: No additional information.

Reproductive Toxicity:

Experiments have shown reproductive toxicity effects on laboratory animals.

SECTION 12: Ecological information

Ecotoxicity:

108-24-7: LC50 - Leuciscus idus melanotus - 265 mg/l - 48 h

108-24-7: EC50 - Daphnia (water flea) - 55 mg/l - 96 h

108-24-7: EC10 - Desmodemus subspicatus (green algae) - 3,400 mg/l - 192 h

Persistence and degradability:

108-24-7: Zahn - Wellens Test - Exposure time 5 d Result : - Readily biodegradable.

Bioaccumulative potential: No additional information.

Mobility in soil: No additional information.

Other adverse effects: No additional information.

SECTION 13: Disposal considerations

Waste disposal recommendations:

Do not allow product to reach sewage system or open water. It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities (US 40CFR262.11). Contact a licensed professional waste disposal service to dispose of this material. Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Product or containers must not be disposed together with household garbage.

SECTION 14: Transport information

US DOT

UN Number:

ADR, ADN, DOT, IMDG, IATA

1715

Limited Quantity Exception:

None

Bulk:

RQ (if applicable): None

Proper shipping Name: Glacial Acetic anhydride.

Hazard Class: 8

Non Bulk:

RQ (if applicable): None

Proper shipping Name: Glacial Acetic anhydride.

Hazard Class: 8

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Packing Group: II.

Marine Pollutant (if applicable): No additional information.

Comments: None

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Marine Pollutant (if applicable): No additional information.

Comments: None



SECTION 15: Regulatory information

United States (USA)

SARA Section 311/312 (Specific toxic chemical listings):

Acute, Fire

SARA Section 313 (Specific toxic chemical listings):

None of the ingredients are listed.

RCRA (hazardous waste code):

None of the ingredients are listed.

TSCA (Toxic Substances Control Act):

All ingredients are listed.

CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act):

108-24-7 Acetic Anhydride 5000 lb.

Proposition 65 (California):

Chemicals known to cause cancer:

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for females:

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for males:

None of the ingredients are listed.

Chemicals known to cause developmental toxicity:

None of the ingredients are listed.

Canada

Canadian Domestic Substances List (DSL):

All ingredients are listed.

Canadian NPRI Ingredient Disclosure list (limit 0.1%):

None of the ingredients are listed.

Canadian NPRI Ingredient Disclosure list (limit 1%):

108-24-7 Acetic Anhydride.

SECTION 16: Other information

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations. Note. The responsibility to

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provide a safe workplace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and regulations applicable to this material.

GHS Full Text Phrases: None

Abbreviations and Acronyms:

IMDG International Maritime Code for Dangerous Goods.
PNEC Predicted No-Effect Concentration (REACH).
CFR Code of Federal Regulations (USA).
SARA Superfund Amendments and Reauthorization Act (USA).
RCRA Resource Conservation and Recovery Act (USA).
TSCA Toxic Substances Control Act (USA).
NPRI National Pollutant Release Inventory (Canada).
DOT US Department of Transportation.
IATA International Air Transport Association.
GHS Globally Harmonized System of Classification and Labelling of Chemicals.
ACGIH American Conference of Governmental Industrial Hygienists.
CAS Chemical Abstracts Service (division of the American Chemical Society).
NFPA National Fire Protection Association (USA).
HMIS Hazardous Materials Identification System (USA).
WHMIS Workplace Hazardous Materials Information System (Canada).
DNEL Derived No-Effect Level (REACH).

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