

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 uses restrictions on use:

Manufacturer Details:

AquaPhoenix Scientific
9 Barnhart Drive, Hanover, PA 17331

Supplier Details:

Fisher Science Education
15 Jet View Drive, Rochester, NY 14624

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
Read label before use

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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.

For safety reasons unsuitable extinguishing agents:

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):

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 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.

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Reference to other sections:

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.

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)

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Odor:	Vinegar-like	Vapor pressure:	5 hPa at 20 °C
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: 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:

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
Inhalation:	108-24-7	LC50 Inhalation - Rat - 4 h - 4,200 mg/m3
Dermal:	108-24-7	LD50 Dermal - Rabbit - 4,320 mg/kg
Chronic Toxicity: No additional information.		
Corrosion Irritation:		
Dermal:	108-24-7	Skin - in vitro assay Result : Causes burns.
Ocular:	108-24-7	Eyes - rabbit Result : Severe eye irritation
Sensitization:		Irritation: Causes severe burns by all routes of exposure.
Single Target Organ (STOT):		No additional information.
Numerical Measures:		No additional information.
Carcinogenicity:		No additional information.

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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 - Desmodesmus 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:

Mobility in soil:

Other adverse effects:

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

UN-Number

1715

UN proper shipping name

Glacial Acetic anhydride

Transport hazard class(es)



Class:

3 Flammable liquids

Packing group: II

Environmental hazard:

Transport in bulk:

Special precautions for user:

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 is listed

RCRA (hazardous waste code):

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None of the ingredients is 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 is listed

Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed

Chemicals known to cause reproductive toxicity for males:

None of the ingredients is listed

Chemicals known to cause developmental toxicity:

None of the ingredients is listed

Canada

Canadian Domestic Substances List (DSL):

All ingredients are listed.

Canadian NPRI Ingredient Disclosure list (limit 0.1%):

None of the ingredients is 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 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:

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

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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)

Effective date : 12.22.2014

Last updated : 03.19.2015