



# American International Chemical, Inc.

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## MATERIAL SAFETY DATA SHEET

### ACETIC ANHYDRIDE ACS

#### SECTION 1 - CHEMICAL PRODUCT AND COMPANY INFORMATION

American International Chemical, Inc. 135 Newbury Street Framingham, MA 01701	Emergency Number: Chemtrec Information Number:	800-424-9300 703-527-3887 800-238-0001
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Date: August 2007

Synonyms: Acetic Acid, Anhydride

CAS #: 108-24-7

DOT Hazard Class: Acetic Anhydride  
Corrosive  
Hazard Class 8 UN1715 PGII

Subsidiary Risk: Flammable Liquid  
Hazard Class 3 PGIII

#### SECTION 2 - COMPOSITION AND INFORMATION ON INGREDIENTS

<u>Ingredient</u>	<u>CAS#</u>	<u>% by Weight</u>
Acetic Anhydride	108-24-7	94-100%
Acetic Acid	64-19-7	0-6%

#### SECTION 3 - HAZARDS IDENTIFICATION

**EMERGENCY OVERVIEW:** A clear, colorless liquid that is flammable. Can cause irritation to any area of contact or inhalation. Harmful or fatal if swallowed, inhaled or absorbed through the skin. Vapor is harmful and flammable. Material will react with water.

**POTENTIAL HEALTH EFFECTS:**

**Skin:** Causes severe burns.

**Eyes:** Causes severe burns.

**Inhalation:** Breathing vapor will cause irritation.

**Ingestion:** May cause irritation or burning.

**CARCINOGENICITY:** Not Identifiable

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#### **SECTION 4 - FIRST AID MEASURES**

**Skin:** Immediately wash skin with soap and water for at least 15 minutes. Remove contaminated clothing.

**Eyes:** Immediately flush with plenty of water for at least 15 minutes, holding eyelids apart.

**Inhalation:** Remove to the fresh air. If not breathing, give artificial respiration. If breathing is difficult, give 100% supplemental oxygen.

**Ingestion:** If swallowed, DO NOT INDUCE VOMITING. Give large amounts of water. Never give anything by mouth to an unconscious person.

**On All Of The Above:** Call a physician and get medical attention immediately.

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#### **SECTION 5 - FIRE FIGHTING MEASURES**

Flash Point: 53 °C

Explosive Limits: Lower limit: 2.75%; Upper limit: 12.4%

Extinguishing Media: Dry chemical, alcohol foam, water fog or carbon dioxide.

Special Fire Fighting Procedures:

Use fire-fighting procedure that is appropriate to treat surrounding fire. All firefighters should use self-contained breathing apparatus and full fire-fighting turnout gear. Water spray may be used to keep fire-exposed container cool. USE WATER WITH CAUTION. MATERIAL REACTS WITH WATER.

Unusual Fire Explosion Hazard: Combustible. Material reacts violently with water.

Auto Ignition Temperature: 332 °C

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#### **SECTION 6 - ACCIDENTAL RELEASE MEASURES**

Isolate hazard area and deny entry to unnecessary or unprotected personnel. Ventilate area. Remove all sources of ignition. Neutralize with: lime, soda ash. Contain spilled liquid with sand or earth. Place in a disposal container. Do not allow runoff into storm sewers and ditches that lead to waterways

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#### **SECTION 7 - HANDLING AND STORAGE**

Avoid contact with skin, eyes and clothing. Use with adequate ventilation. Avoid breathing vapor. Use normal personal hygiene and housekeeping. Store in cool dry area away from other incompatible materials. Do not store exposed to direct light.

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#### **SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION**

RESPIRATORY PROTECTION: Use NIOSH/MSHA approved respirators.

VENTILATION REQUIREMENTS: Ventilate as necessary to eliminate vapor from the work area and maintain concentrations below the limit.

## **SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION (CONTINUED)**

SKIN AND EYE PROTECTION: Use rubber or neoprene gloves, chemical goggles and clothing sufficient to protect skin and eyes.

### WORK, HYGIENIC PRACTICES:

As required to protect skin and eyes from exposure, safety showers and/or eyewash should be available. Do not leave food or smoke in work area. Wash thoroughly and remove or clean any contaminated clothing.

### EXPOSURE LIMITS:

#### OSHA PEL

Acetic Anhydride: 5 ppm ceiling

Acetic Acid: 10 ppm TWA

#### ACGIH TLV

Acetic Anhydride: 5 ppm TWA

Acetic Acid: 10 ppm TWA, 15 ppm STEL

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## **SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES**

Boiling Point: 139 °C

Vapor Pressure (MM Hg): 3.8 mmHg @ 68 °F

Vapor Density (AIR=1): 3.5

Specific Gravity (H<sub>2</sub>O=1): 1.083 @ 68 °F

Percent Volatile by Volume (%): Not Available

Melting Point: -73 °C

Evaporation Rate: Not Available

Solubility in Water: Decomposes

pH: Not Available

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## **SECTION 10 - STABILITY AND REACTIVITY**

CHEMICAL STABILITY: Stable under normal temperatures and pressures.

HAZARDOUS POLYMERIZATION: Will not occur under normal conditions.

HAZARDOUS DECOMPOSITION PRODUCTS: May form carbon dioxide and carbon monoxide, hydrogen cyanide, nitrogen oxides.

KEEP AWAY FROM: Material can react violently with strong oxidizers, water, alcohol and bases.

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## **SECTION 11 - TOXICOLOGICAL INFORMATION**

Oral rat LD50: 1780 mg/kg  
Inhalation rat LC50: 1000-2000 ppm/4 hrs  
Dermal rabbit LD50: 4000 mg/kg  
Skin irritation rabbit: Slight  
Eye irritation rabbit: Severe

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## **SECTION 12 - ECOLOGICAL INFORMATION**

Introduction: This environmental effects summary is written to assist in addressing emergencies created by an accidental spill, which might occur during the shipment of this material, and, in general, it is not meant to address discharges to sanitary sewers or publicly owned treatment works. Data for this material and chemically similar materials have been used to estimate the environmental impact of this material. It has the following properties: a high biochemical oxygen demand and a potential to cause oxygen depletion in aqueous systems, a low potential to bioconcentrate, a high potential to biodegrade (low persistence) with unacclimated microorganisms from activated sludge, a moderate potential to affect some aquatic organisms. When diluted with a large amount of water, this material released directly or indirectly into the environment is not expected to have a significant impact.

### Oxygen Demand Data:

Data for acetic acid  
COD: 1.03 g oxygen/g  
BOD-5: 0.34-0.88 g oxygen/g  
BOD-20: 0.9 g oxygen/g

### Acute Aquatic Effects Data:

Data for acetic anhydride  
96-h EC-50 (daphnid): 55 mg/L  
48-h LC-50 (golden orfe): 265-279 mg/L

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## **SECTION 13 - DISPOSAL CONSIDERATIONS**

Dispose of in accordance with all federal, state and local regulations.

RCRA WASTE #: Not Listed

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