Acetic Anhydride/Acetic Acid Blend

Safety Data Sheet

According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations
Revision Date: 05/13/2015 Date of issue: 05/13/2015 Version: 1.0

SECTION 1: IDENTIFICATION

1.1. Product Identifier

Product Form: Mixture

Product Name: Acetic Anhydride/Acetic Acid Blend

Synonyms: Acetyl Oxide, Acetic Oxide

1.2. Intended Use of the Product Not available

1.3. Name, Address, and Telephone of the Responsible Party

Company

Osmium, LLC
16300 NE 19th Ave, Ste 213
North Miami Beach, FL 33162
(305)-947-0108

1.4. Emergency Telephone Number

Emergency Number : CHEMTREC USA (800)-424-9300 SETIQ +52-55-5559-1588

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the Substance or Mixture

Classification (GHS-US)

Flam. Liq. 3	H226
Acute Tox. 4 (Oral)	H302
Acute Tox. 4 (Inhalation:dust,mist)	H332
Skin Corr. 1B	H314
Eye Dam. 1	H318
STOT SE 3	H335
Aquatic Acute 3	H402

Full text of H-phrases: see section 16

2.2. Label Elements

GHS-US Labeling

Hazard Pictograms (GHS-US) :

GHS02 GHS05 GHS07

Signal Word (GHS-US) : Danger

Hazard Statements (GHS-US) : H226 - Flammable liquid and vapor.
H302+H332 - Harmful if swallowed or if inhaled.
H314 - Causes severe skin burns and eye damage.
H318 - Causes serious eye damage.
H335 - May cause respiratory irritation.
H402 - Harmful to aquatic life.

Precautionary Statements (GHS-US) : P210 - Keep away from extremely high or low temperatures, ignition sources, and incompatible materials. - No smoking.
P233 - Keep container tightly closed.
P240 - Ground/bond container and receiving equipment.
P241 - Use explosion-proof electrical, ventilating, and lighting equipment.
P242 - Use only non-sparking tools.
P243 - Take precautionary measures against static discharge.
P260 - Do not breathe vapors, mist, or spray.
P264 - Wash hands, forearms, and other exposed areas thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P271 - Use only outdoors or in a well-ventilated area.

P273 - Avoid release to the environment.
P280 - Wear protective gloves, protective clothing, and eye protection.
P301+P312 - If swallowed: Call a poison center or doctor if you feel unwell.
P301+P330+P331 - If swallowed: rinse mouth. Do NOT induce vomiting.
P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340 - If inhaled: Remove person to fresh air and keep at rest in a position comfortable for breathing.
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 - Immediately call a poison center or doctor.
P312 - Call a poison center or doctor if you feel unwell.
P321 - Specific treatment (see section 4 on this SDS).
P330 - Rinse mouth.
P363 - Wash contaminated clothing before reuse.
P370+P378 - In case of fire: Use appropriate media (see section 5) to extinguish.
P403+P233 - Store in a well-ventilated place. Keep container tightly closed.
P403+P235 - Store in a well-ventilated place. Keep cool.
P405 - Store locked up.
P501 - Dispose of contents/container in accordance with local, regional, national, and international regulations.

2.3. Other Hazards

Exposure may aggravate those with pre-existing eye, skin, or respiratory conditions. May be corrosive to respiratory tract.

2.4. Unknown Acute Toxicity (GHS-US) No data available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

Not applicable

3.2. Mixture

Name	Product Identifier	% (w/w)	Classification (GHS-US)
Acetic anhydride	(CAS No) 108-24-7	50 - 60	Flam. Liq. 3, H226 Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Inhalation), H332 Skin Corr. 1B, H314 Eye Dam. 1, H318 STOT SE 3, H335
Acetic acid	(CAS No) 64-19-7	40 - 50	Flam. Liq. 3, H226 Skin Corr. 1A, H314 Eye Dam. 1, H318 Aquatic Acute 3, H402

Full text of H-phrases: see section 16

SECTION 4: FIRST AID MEASURES

4.1. Description of First Aid Measures

General: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

Inhalation: When symptoms occur: go into open air and ventilate suspected area. Obtain medical attention if breathing difficulty persists.

Skin Contact: Remove contaminated clothing. Immediately flush skin with plenty of water for at least 60 minutes. Wash contaminated clothing before reuse. Immediately call a POISON CENTER or doctor.

Eye Contact: Rinse cautiously with water for at least 60 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention.

Ingestion: Rinse mouth. Do NOT induce vomiting. Obtain medical attention.

4.2. Most Important Symptoms and Effects Both Acute and Delayed

General: Causes severe skin burns and eye damage. Causes serious eye damage. Harmful if swallowed. Harmful if inhaled.

Inhalation: May be corrosive to the respiratory tract. Inhalation is likely to cause adverse health effects including but not limited to: irritation, difficulty breathing, and unconsciousness. Breathing concentrated mists can cause respiratory distress, bronchitis, chemical pneumonia, vocal chord spasms, damage to lung tissue, and loss of consciousness.

Skin Contact: Causes severe irritation which will progress to chemical burns.

Eye Contact: Causes permanent damage to the cornea, iris, or conjunctiva.

Ingestion: This material is harmful orally and can cause adverse health effects or death in significant amounts. Ingestion may cause adverse effects.

Chronic Symptoms: May cause erosion of the teeth, or chronic bronchitis.

4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed

If exposed or concerned, get medical advice and attention. If medical advice is needed, have product container or label at hand.

SECTION 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing Media

Suitable Extinguishing Media: Dry chemical powder, alcohol-resistant foam, carbon dioxide (CO_2). Water may be ineffective but water should be used to keep fire-exposed container cool.

Unsuitable Extinguishing Media: Do not use a heavy water stream. A heavy water stream may spread burning liquid.

5.2. Special Hazards Arising From the Substance or Mixture

Fire Hazard: Flammable liquid and vapor.

Explosion Hazard: May form flammable or explosive vapor-air mixture.

Reactivity: Reacts violently with strong oxidizers. Increased risk of fire or explosion. May react exothermically with water releasing heat. Adding an acid to a base or base to an acid may cause a violent reaction. May form acetic acid upon reaction with water. Contact with metals may evolve flammable hydrogen gas.

5.3. Advice for Firefighters

Precautionary Measures Fire: Exercise caution when fighting any chemical fire.

Firefighting Instructions: Use water spray or fog for cooling exposed containers. In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.

Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

Hazardous Combustion Products: Carbon oxides (CO, CO_2). Irritating or toxic vapors. acetic acid.

Other Information: Do not allow run-off from fire fighting to enter drains or water courses.

Reference to Other Sections

Refer to section 9 for flammability properties.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

General Measures: Do not get in eyes, on skin, or on clothing. Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources. No smoking. Do not breathe vapors, mist, or spray.

6.1.1. For Non-Emergency Personnel

Protective Equipment: Use appropriate personal protection equipment (PPE).

Emergency Procedures: Evacuate unnecessary personnel. Stop leak if safe to do so.

6.1.2. For Emergency Personnel

Protective Equipment: Equip cleanup crew with proper protection.

Emergency Procedures: Ventilate area. Upon arrival at the scene, a first responder is expected to recognize the presence of dangerous goods, protect oneself and the public, secure the area, and call for the assistance of trained personnel as soon as conditions permit. Eliminate ignition sources.

6.2. Environmental Precautions

Prevent entry to sewers and public waters. Avoid release to the environment.

6.3. Methods and Material for Containment and Cleaning Up

For Containment: Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. As an immediate precautionary measure, isolate spill or leak area in all directions.

Methods for Cleaning Up: Clean up spills immediately and dispose of waste safely. Contact competent authorities after a spill. Absorb and/or contain spill with inert material. Do not take up in combustible material such as: saw dust or cellulosic material. Use only non-sparking tools. Cautiously neutralize spilled liquid.

6.4. Reference to Other Sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for Safe Handling

Additional Hazards When Processed: Handle empty containers with care because residual vapors are flammable. May release corrosive vapors.

Precautions for Safe Handling: Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Avoid breathing vapors, mist, spray. Take precautionary measures against static discharge. Use only non-sparking tools. Handle empty containers with care because they may still present a hazard.

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures.

7.2. Conditions for Safe Storage, Including Any Incompatibilities

Technical Measures: Comply with applicable regulations. Take action to prevent static discharges. Ground and bond container and receiving equipment. Use explosion-proof electrical, ventilating, and lighting equipment.

Storage Conditions: Store in a well-ventilated place. Keep container tightly closed. Keep in fireproof place. Keep/Store away from direct sunlight, extremely high or low temperatures and incompatible materials. Store in original container or corrosive resistant and/or lined container.

Incompatible Materials: Strong acids, strong bases, strong oxidizers.

7.3. Specific End Use(s) Not available

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control Parameters

For substances listed in section 3 that are not listed here, there are no established Exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), NIOSH (REL), OSHA (PEL), Canadian provincial governments, or the Mexican government.

Acetic acid (64-19-7)		
Mexico	OEL TWA (mg/m³)	25 mg/m³
Mexico	OEL TWA (ppm)	10 ppm
Mexico	OEL STEL (mg/m³)	37 mg/m³
Mexico	OEL STEL (ppm)	15 ppm
USA ACGIH	ACGIH TWA (ppm)	10 ppm
USA ACGIH	ACGIH STEL (ppm)	15 ppm
USA OSHA	OSHA PEL (TWA) (mg/m³)	25 mg/m³
USA OSHA	OSHA PEL (TWA) (ppm)	10 ppm
USA NIOSH	NIOSH REL (TWA) (mg/m³)	25 mg/m³
USA NIOSH	NIOSH REL (TWA) (ppm)	10 ppm
USA NIOSH	NIOSH REL (STEL) (mg/m³)	37 mg/m³
USA NIOSH	NIOSH REL (STEL) (ppm)	15 ppm
USA IDLH	US IDLH (ppm)	50 ppm
Alberta	OEL STEL (mg/m³)	37 mg/m³
Alberta	OEL STEL (ppm)	15 ppm
Alberta	OEL TWA (mg/m³)	25 mg/m³
Alberta	OEL TWA (ppm)	10 ppm
British Columbia	OEL STEL (ppm)	15 ppm
British Columbia	OEL TWA (ppm)	10 ppm
Manitoba	OEL STEL (ppm)	15 ppm
Manitoba	OEL TWA (ppm)	10 ppm
New Brunswick	OEL STEL (mg/m³)	37 mg/m³
New Brunswick	OEL STEL (ppm)	15 ppm
New Brunswick	OEL TWA (mg/m³)	25 mg/m³

New Brunswick	OEL TWA (ppm)	10 ppm
Newfoundland & Labrador	OEL STEL (ppm)	15 ppm
Newfoundland & Labrador	OEL TWA (ppm)	10 ppm
Nova Scotia	OEL STEL (ppm)	15 ppm
Nova Scotia	OEL TWA (ppm)	10 ppm
Nunavut	OEL STEL (mg/m³)	39 mg/m³
Nunavut	OEL STEL (ppm)	15 ppm
Nunavut	OEL TWA (mg/m³)	26 mg/m³
Nunavut	OEL TWA (ppm)	10 ppm
Northwest Territories	OEL STEL (mg/m³)	39 mg/m³
Northwest Territories	OEL STEL (ppm)	15 ppm
Northwest Territories	OEL TWA (mg/m³)	26 mg/m³
Northwest Territories	OEL TWA (ppm)	10 ppm
Ontario	OEL STEL (ppm)	15 ppm
Ontario	OEL TWA (ppm)	10 ppm
Prince Edward Island	OEL STEL (ppm)	15 ppm
Prince Edward Island	OEL TWA (ppm)	10 ppm
Québec	VECD (mg/m³)	37 mg/m³
Québec	VECD (ppm)	15 ppm
Québec	VEMP (mg/m³)	25 mg/m³
Québec	VEMP (ppm)	10 ppm
Saskatchewan	OEL STEL (ppm)	15 ppm
Saskatchewan	OEL TWA (ppm)	10 ppm
Yukon	OEL STEL (mg/m³)	43 mg/m³
Yukon	OEL STEL (ppm)	25 ppm
Yukon	OEL TWA (mg/m³)	25 mg/m³
Yukon	OEL TWA (ppm)	10 ppm

Acetic anhydride (108-24-7)		
Mexico	OEL TWA (mg/m³)	20 mg/m³
Mexico	OEL TWA (ppm)	5 ppm
USA ACGIH	ACGIH TWA (ppm)	1 ppm
USA ACGIH	ACGIH STEL (ppm)	3 ppm
USA ACGIH	ACGIH chemical category	Not Classifiable as a Human Carcinogen
USA OSHA	OSHA PEL (TWA) (mg/m³)	20 mg/m³
USA OSHA	OSHA PEL (TWA) (ppm)	5 ppm
USA NIOSH	NIOSH REL (ceiling) (mg/m³)	20 mg/m³
USA NIOSH	NIOSH REL (ceiling) (ppm)	5 ppm
USA IDLH	US IDLH (ppm)	200 ppm
Alberta	OEL Ceiling (mg/m³)	21 mg/m³
Alberta	OEL Ceiling (ppm)	5 ppm
British Columbia	OEL STEL (ppm)	3 ppm
British Columbia	OEL TWA (ppm)	1 ppm
Manitoba	OEL STEL (ppm)	3 ppm
Manitoba	OEL TWA (ppm)	1 ppm
New Brunswick	OEL TWA (mg/m³)	21 mg/m³
New Brunswick	OEL TWA (ppm)	5 ppm
Newfoundland & Labrador	OEL STEL (ppm)	3 ppm
Newfoundland & Labrador	OEL TWA (ppm)	1 ppm
Nova Scotia	OEL STEL (ppm)	3 ppm
Nova Scotia	OEL TWA (ppm)	1 ppm
Nunavut	OEL Ceiling (mg/m³)	21 mg/m³

Nunavut	OEL Ceiling (ppm)	5 ppm
Northwest Territories	OEL Ceiling (mg/m³)	21 mg/m³
Northwest Territories	OEL Ceiling (ppm)	5 ppm
Ontario	OEL STEL (ppm)	3 ppm
Ontario	OEL TWA (ppm)	1 ppm
Prince Edward Island	OEL STEL (ppm)	3 ppm
Prince Edward Island	OEL TWA (ppm)	1 ppm
Québec	VEMP (mg/m³)	21 mg/m³
Québec	VEMP (ppm)	5 ppm
Saskatchewan	OEL STEL (ppm)	10 ppm
Saskatchewan	OEL TWA (ppm)	5 ppm
Yukon	OEL Ceiling (mg/m³)	20 mg/m³
Yukon	OEL Ceiling (ppm)	5 ppm

8.2. Exposure Controls

Appropriate Engineering Controls: Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure adequate ventilation, especially in confined areas. Ensure all national/local regulations are observed. Gas detectors should be used when flammable gases or vapors may be released. Proper grounding procedures to avoid static electricity should be followed. Use explosion-proof equipment.

Personal Protective Equipment: Gloves. Protective clothing. Protective goggles. Insufficient ventilation: wear respiratory protection. Face shield.

Materials for Protective Clothing: Chemically resistant materials and fabrics. Wear fire/flame resistant/retardant clothing. Corrosion-proof clothing.

Hand Protection: Wear protective gloves.

Eye Protection: Chemical goggles or face shield.

Skin and Body Protection: Wear suitable protective clothing.

Respiratory Protection: If exposure limits are exceeded or irritation is experienced, approved respiratory protection should be worn. In case of inadequate ventilation, oxygen deficient atmosphere, or where exposure levels are not known wear approved respiratory protection.

Other Information: When using, do not eat, drink or smoke.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on Basic Physical and Chemical Properties

Physical State	:	Liquid
Appearance	:	Clear, colorless liquid
Odor	:	pungent, acrid
Odor Threshold	:	Not available
pH	:	Not available
Evaporation Rate	:	0.97 (for acetic acid), butyl acetate = 1
Melting Point	:	17 °C (62.6 °F) (for acetic acid)
Freezing Point	:	Not available
Boiling Point	:	115 °C (239 °F) (for acetic acid)
Flash Point	:	39 °C (102.2 °F) (for acetic acid)
Auto-ignition Temperature	:	332 °C (629.6 °F) (for acetic anhydride)
Decomposition Temperature	:	Not available
Flammability (solid, gas)	:	Not available
Lower Flammable Limit	:	3 %
Upper Flammable Limit	:	19 %

Vapor Pressure	:	11.7 mm Hg (for acetic acid)
Relative Vapor Density at 20 °C	:	3.5 (for acetic anhydride)
Relative Density	:	Not available
Specific Gravity	:	1.05 - 1.08
Solubility	:	Water: Decomposes
Partition Coefficient: N-Octanol/Water	:	Not available
Viscosity	:	Not available
Explosion Data – Sensitivity to Mechanical Impact	:	Not expected to present an explosion hazard due to mechanical impact.
Explosion Data – Sensitivity to Static Discharge	:	Static discharge could act as an ignition source.

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity: Reacts violently with strong oxidizers. Increased risk of fire or explosion. May react exothermically with water releasing heat. Adding an acid to a base or base to an acid may cause a violent reaction. May form acetic acid upon reaction with water. Contact with metals may evolve flammable hydrogen gas.

10.2. Chemical Stability: Stable under recommended handling and storage conditions (see section 7).

10.3. Possibility of Hazardous Reactions: Hazardous polymerization will not occur.

10.4. Conditions to Avoid: Direct sunlight, extremely high or low temperatures, heat, hot surfaces, sparks, open flames, incompatible materials, and other ignition sources.

10.5. Incompatible Materials: Strong acids, strong bases, strong oxidizers, alcohols.

10.6. Hazardous Decomposition Products: Carbon oxides (CO, CO_2). Irritating or toxic vapors.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on Toxicological Effects - Product

Acute Toxicity: Oral: Harmful if swallowed. Inhalation:dust,mist: Harmful if inhaled.

LD50 and LC50 Data:

Acetic Anhydride/Acetic Acid Blend	
ATE US (oral)	1,050.00 mg/kg body weight
ATE US (dust, mist)	2.50 mg/l/4h

Skin Corrosion/Irritation: Causes severe skin burns and eye damage.

Serious Eye Damage/Irritation: Causes serious eye damage.

Respiratory or Skin Sensitization: Not classified

Germ Cell Mutagenicity: Not classified

Teratogenicity: Not available

Carcinogenicity: Not classified

Specific Target Organ Toxicity (Repeated Exposure): Not classified

Reproductive Toxicity: Not classified

Specific Target Organ Toxicity (Single Exposure): May cause respiratory irritation.

Aspiration Hazard: Not classified

Symptoms/Injuries After Inhalation: May be corrosive to the respiratory tract. Inhalation is likely to cause adverse health effects including but not limited to: irritation, difficulty breathing, and unconsciousness. Breathing concentrated mists can cause respiratory distress, bronchitis, chemical pneumonia, vocal chord spasms, damage to lung tissue, and loss of consciousness.

Symptoms/Injuries After Skin Contact: Causes severe irritation which will progress to chemical burns.

Symptoms/Injuries After Eye Contact: Causes permanent damage to the cornea, iris, or conjunctiva.

Symptoms/Injuries After Ingestion: This material is harmful orally and can cause adverse health effects or death in significant amounts. Ingestion may cause adverse effects.

Chronic Symptoms: May cause erosion of the teeth, or chronic bronchitis.

11.2. Information on Toxicological Effects - Ingredient(s)

LD50 and LC50 Data:

Acetic acid (64-19-7)	
LD50 Oral Rat	3310 mg/kg
Acetic anhydride (108-24-7)	
LD50 Oral Rat	630 mg/kg

LD50 Dermal Rabbit	4000 mg/kg
LC50 Inhalation Rat	1000 ppm/4h

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Ecology - General: Harmful to aquatic life.

Acetic acid (64-19-7)	
LC50 Fish 1	79 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])
EC50 Daphnia 1	65 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])
LC 50 Fish 2	75 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])
Acetic anhydride (108-24-7)	
LC50 Fish 1	> 1000 mg/l (Exposure time: 96hr - Species: Oncorhynchus mykiss [semi-static])

12.2. Persistence and Degradability

Acetic Anhydride/Acetic Acid Blend	
Persistence and Degradability	Not established.

12.3. Bioaccumulative Potential

Acetic Anhydride/Acetic Acid Blend	
Bioaccumulative Potential	Not established.
Acetic acid (64-19-7)	
Log Pow	-0.31 (at 20 °C)
Acetic anhydride (108-24-7)	
Log Pow	-0.27

12.4. Mobility in Soil

Not available

12.5. Other Adverse Effects

Other Information: Avoid release to the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste Disposal Recommendations: Dispose of contents/container in accordance with local, regional, national, and international regulations

Additional Information: Container may remain hazardous when empty. Continue to observe all precautions. Handle empty containers with care because residual vapors are flammable.

Ecology – Waste Materials: This material is hazardous to the aquatic environment. Keep out of sewers and waterways.

SECTION 14: TRANSPORT INFORMATION

14.1. In Accordance with DOT

Proper Shipping Name : CORROSIVE LIQUIDS, FLAMMABLE, N.O.S.(acetic acid, glacial, and acetic anhydride)

Hazard Class : 8

Identification Number : UN2920

Label Codes : 8,3

Packing Group : II

ERG Number : 132

14.2. In Accordance with IMDG

Proper Shipping Name : CORROSIVE LIQUID, FLAMMABLE, N.O.S.(acetic acid, glacial, and acetic anhydride)

Hazard Class : 8

Identification Number : UN2920

Packing Group : II

Label Codes : 8,3

EmS-No. (Fire) : F-E

EmS-No. (Spillage) : S-C

14.3. In Accordance with IATA

Proper Shipping Name : CORROSIVE LIQUID, FLAMMABLE, N.O.S. (acetic acid, glacial, and acetic anhydride)

Packing Group : II
Identification Number : UN2920
Hazard Class : 8
Label Codes : 8,3

ERG Code (IATA) : 8F

14.4. In Accordance with TDG

Proper Shipping Name : CORROSIVE LIQUID, FLAMMABLE, N.O.S.(acetic acid, glacial, and acetic anhydride)
Packing Group : II
Hazard Class : 8
Identification Number : UN2920
Label Codes : 8,3

SECTION 15: REGULATORY INFORMATION

15.1. US Federal Regulations

Acetic Anhydride/Acetic Acid Blend	
SARA Section 311/312 Hazard Classes	Fire hazard Immediate (acute) health hazard

Acetic acid (64-19-7)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
SARA Section 311/312 Hazard Classes	Fire hazard Immediate (acute) health hazard

Acetic anhydride (108-24-7)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. US State Regulations

Acetic acid (64-19-7)
U.S. - Connecticut - Hazardous Air Pollutants - HLVs (30 min)
U.S. - Connecticut - Hazardous Air Pollutants - HLVs (8 hr)
U.S. - Delaware - Pollutant Discharge Requirements - Reportable Quantities
U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Acceptable Ambient Concentrations
U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Emission Levels (ELs)
U.S. - Idaho - Occupational Exposure Limits - TWAs
U.S. - Louisiana - Reportable Quantity List for Pollutants
U.S. - Massachusetts - Oil & Hazardous Material List - Groundwater Reportable Concentration - Reporting Category 1
U.S. - Massachusetts - Oil & Hazardous Material List - Groundwater Reportable Concentration - Reporting Category 2
U.S. - Massachusetts - Oil & Hazardous Material List - Reportable Quantity
U.S. - Massachusetts - Oil & Hazardous Material List - Soil Reportable Concentration - Reporting Category 1
U.S. - Massachusetts - Oil & Hazardous Material List - Soil Reportable Concentration - Reporting Category 2
RTK - U.S. - Massachusetts - Right To Know List
U.S. - Massachusetts - Toxics Use Reduction Act
U.S. - Michigan - Occupational Exposure Limits - TWAs
U.S. - Michigan - Polluting Materials List
U.S. - Minnesota - Hazardous Substance List
U.S. - Minnesota - Permissible Exposure Limits - TWAs
U.S. - New Hampshire - Regulated Toxic Air Pollutants - Ambient Air Levels (AALs) - 24-Hour
U.S. - New Hampshire - Regulated Toxic Air Pollutants - Ambient Air Levels (AALs) - Annual
U.S. - New Jersey - Discharge Prevention - List of Hazardous Substances
RTK - U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - New Jersey - Special Health Hazards Substances List
U.S. - New York - Occupational Exposure Limits - TWAs
U.S. - New York - Reporting of Releases Part 597 - List of Hazardous Substances
U.S. - North Carolina - Control of Toxic Air Pollutants
U.S. - North Dakota - Air Pollutants - Guideline Concentrations - 1-Hour

U.S. - North Dakota - Air Pollutants - Guideline Concentrations - 8-Hour
U.S. - Oregon - Permissible Exposure Limits - TWAs
RTK - U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List
RTK - U.S. - Pennsylvania - RTK (Right to Know) List
U.S. - Tennessee - Occupational Exposure Limits - TWAs
U.S. - Texas - Effects Screening Levels - Long Term
U.S. - Texas - Effects Screening Levels - Short Term
U.S. - Washington - Permissible Exposure Limits - STELs
U.S. - Washington - Permissible Exposure Limits - TWAs
U.S. - Wisconsin - Hazardous Air Contaminants - All Sources - Emissions From Stack Heights 25 Feet to Less Than 40 Feet
U.S. - Wisconsin - Hazardous Air Contaminants - All Sources - Emissions From Stack Heights 40 Feet to Less Than 75 Feet
U.S. - Wisconsin - Hazardous Air Contaminants - All Sources - Emissions From Stack Heights 75 Feet or Greater
U.S. - Wisconsin - Hazardous Air Contaminants - All Sources - Emissions From Stack Heights Less Than 25 Feet

Acetic anhydride (108-24-7)

U.S. - Connecticut - Hazardous Air Pollutants - HLVs (30 min)
U.S. - Connecticut - Hazardous Air Pollutants - HLVs (8 hr)
U.S. - Delaware - Pollutant Discharge Requirements - Reportable Quantities
U.S. - Florida - Essential Chemicals List
U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Acceptable Ambient Concentrations
U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Emission Levels (ELs)
U.S. - Idaho - Occupational Exposure Limits - TWAs
U.S. - Louisiana - Precursor Chemicals
U.S. - Louisiana - Reportable Quantity List for Pollutants
U.S. - Massachusetts - Oil & Hazardous Material List - Groundwater Reportable Concentration - Reporting Category 1
U.S. - Massachusetts - Oil & Hazardous Material List - Groundwater Reportable Concentration - Reporting Category 2
U.S. - Massachusetts - Oil & Hazardous Material List - Reportable Quantity
U.S. - Massachusetts - Oil & Hazardous Material List - Soil Reportable Concentration - Reporting Category 1
U.S. - Massachusetts - Oil & Hazardous Material List - Soil Reportable Concentration - Reporting Category 2
RTK - U.S. - Massachusetts - Right To Know List
U.S. - Massachusetts - Toxics Use Reduction Act
U.S. - Michigan - Occupational Exposure Limits - Ceilings
U.S. - Michigan - Polluting Materials List
U.S. - Minnesota - Hazardous Substance List
U.S. - Minnesota - Permissible Exposure Limits - Ceilings
U.S. - New Hampshire - Regulated Toxic Air Pollutants - Ambient Air Levels (AALs) - 24-Hour
U.S. - New Hampshire - Regulated Toxic Air Pollutants - Ambient Air Levels (AALs) - Annual
U.S. - New Jersey - Discharge Prevention - List of Hazardous Substances
RTK - U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - New Jersey - Special Health Hazards Substances List
U.S. - New York - Occupational Exposure Limits - Ceilings
U.S. - New York - Reporting of Releases Part 597 - List of Hazardous Substances
U.S. - North Dakota - Air Pollutants - Guideline Concentrations - 8-Hour
U.S. - Oregon - Permissible Exposure Limits - TWAs
RTK - U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List
RTK - U.S. - Pennsylvania - RTK (Right to Know) List
U.S. - South Carolina - Toxic Air Pollutants - Maximum Allowable Concentrations
U.S. - South Carolina - Toxic Air Pollutants - Pollutant Categories
U.S. - Tennessee - Occupational Exposure Limits - Ceilings
U.S. - Texas - Effects Screening Levels - Long Term
U.S. - Texas - Effects Screening Levels - Short Term
U.S. - Vermont - Permissible Exposure Limits - Ceilings
U.S. - Washington - Permissible Exposure Limits - Ceilings
U.S. - Wisconsin - Hazardous Air Contaminants - All Sources - Emissions From Stack Heights 25 Feet to Less Than 40 Feet

U.S. - Wisconsin - Hazardous Air Contaminants - All Sources - Emissions From Stack Heights 40 Feet to Less Than 75 Feet
U.S. - Wisconsin - Hazardous Air Contaminants - All Sources - Emissions From Stack Heights 75 Feet or Greater
U.S. - Wisconsin - Hazardous Air Contaminants - All Sources - Emissions From Stack Heights Less Than 25 Feet

15.3. Canadian Regulations

Acetic Anhydride/Acetic Acid Blend	
WHMIS Classification	Class B Division 3 - Combustible Liquid Class E - Corrosive Material

Acetic acid (64-19-7)	
Listed on the Canadian DSL (Domestic Substances List)	
Listed on the Canadian IDL (Ingredient Disclosure List)	
IDL Concentration 1 %	
WHMIS Classification	Class B Division 3 - Combustible Liquid Class E - Corrosive Material

Acetic anhydride (108-24-7)	
Listed on the Canadian DSL (Domestic Substances List)	
Listed on the Canadian IDL (Ingredient Disclosure List)	
IDL Concentration 1 %	
WHMIS Classification	Class B Division 3 - Combustible Liquid Class D Division 1 Subdivision A - Very toxic material causing immediate and serious toxic effects Class E - Corrosive Material

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all of the information required by CPR.

SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

Revision Date : 05/13/2015

Other Information : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

GHS Full Text Phrases:

Acute Tox. 4 (Inhalation)	Acute toxicity (inhalation) Category 4
Acute Tox. 4 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Aquatic Acute 3	Hazardous to the aquatic environment - Acute Hazard Category 3
Eye Dam. 1	Serious eye damage/eye irritation Category 1
Flam. Liq. 3	Flammable liquids Category 3
Skin Corr. 1A	Skin corrosion/irritation Category 1A
Skin Corr. 1B	Skin corrosion/irritation Category 1B
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
H226	Flammable liquid and vapor
H302	Harmful if swallowed
H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage
H332	Harmful if inhaled
H335	May cause respiratory irritation
H402	Harmful to aquatic life

Party Responsible for the Preparation of This Document

Osmium, LLC
16300 NE 19th Ave, Ste 213
North Miami Beach, FL 33162
(305)-947-0108

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

The information contained herein is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use and disposal of these materials, the safety and health of employees, and the protection of the environment.

Seller and manufacturer disclaim any implied or expressed warranties, including warranties of merchantability or fitness of this product for any particular purpose. In no event shall seller be liable for any claim for incidental or consequential damages arising out of or in connection with the sale, delivery, transportation or use of this product.

North America GHS US 2012 & WHMIS 2