

 Safety Data Sheet

 According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations

 Revision Date: 05/24/2016
 Date of Issue: 05/24/2016

Version: 1.0

SECTION 1: IDENTIFICATION

1.1. Product Identifier Product Form: Mixture Product Name: Sulfuric Acid - Spent Synonyms Oil of Vitriol

1.2. Intended Use of the Product

Use of the Substance/Mixture: Chemical Feedstock; Recycling.

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

Company

United Refining Company 15 Bradley Street, P.O.Box 780 Warren, PA 16365 Phone: (814) 723-1500

www.urc.com

1.4. Emergency Telephone Number

Emergency Number

: CHEMTREC: (800) 424-9300

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the Substance or Mixture

GHS-US Classification		
Skin Corr. 1A	H314	
Eye Dam. 1	H318	
Skin Sens. 1	H317	
Muta. 1B	H340	
Carc. 1B	H350	
Aquatic Acute 3	H402	
Full text of hazard classes	and H-stateme	nts : see section 16
2.2. Label Elements		
GHS-US Labelling		
Hazard Pictograms (GHS-U	ns)	
Signal Word (GHS-US)		: Danger
Hazard Statements (GHS-	US)	: H314 - Causes severe skin burns and eye damage.
		H318 - Causes serious eye damage.
		H317 - May cause an allergic skin reaction.
		H340 - May cause genetic defects.
		H350 - May cause cancer.
		H402 - Harmful to aquatic life.
Precautionary Statements	s (GHS-US)	: P201 - Obtain special instructions before use.
		P202 - Do not handle until all safety precautions have been read and understood. P260 - Do not breathe vapors, mist, or spray.
		P264 - Wash hands, forearms, and other exposed areas thoroughly after handling. P272 - Contaminated work clothing must not be allowed out of the workplace. P273 - Avoid release to the environment.
		P280 - Wear protective gloves, protective clothing, and eye protection. P301+P330+P331 - If swallowed: rinse mouth. Do NOT induce vomiting. P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated
		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. P321 - Specific treatment (see section 4 on this SDS).

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P333+P313 - If skin irritation or rash occurs: Get medical advice/attention. P363 - Wash contaminated clothing before reuse.

P405 - Store locked up.

P501 - Dispose of contents/container in accordance with local, regional, national, and international regulations.

P308+310+313 - If exposed or concerned: Get medical advice/attention. Immediately call a poison center or doctor.

2.3. Other Hazards

Exposure may aggravate pre-existing eye, skin, or respiratory conditions. May be corrosive to respiratory tract. Attention! - Contains lead.

2.4. Unknown Acute Toxicity (GHS-US)

No data available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2.	Mixture

Name	Product Identifier	%	GHS-US classification
Sulfuric acid	(CAS No) 7664-93-9	92	Skin Corr. 1A, H314 Eye Dam. 1, H318 Aquatic Acute 3, H402
Water	(CAS No) 7732-18-5	1 - 10	Not classified
Diethyl sulfate	(CAS No) 64-67-5	0 - 0.3	Acute Tox. 4 (Oral), H302 Acute Tox. 3 (Dermal), H311 Acute Tox. 4 (Inhalation:dust,mist), H332 Skin Corr. 1B, H314 Muta. 1B, H340 Carc. 1B, H350 Aquatic Acute 3, H402
Dimethyl sulfate	(CAS No) 77-78-1	0 - 0.3	Flam. Liq. 4, H227 Acute Tox. 3 (Oral), H301 Acute Tox. 2 (Inhalation:dust,mist), H330 Skin Corr. 1B, H314 Skin Sens. 1, H317 Muta. 2, H341 Carc. 1B, H350 Aquatic Acute 2, H401
Iron	(CAS No) 7439-89-6	0 - 0.015	Comb. Dust
Zinc	(CAS No) 7440-66-6	0 - 0.005	Comb. Dust
Chromium	(CAS No) 7440-47-3	0 - 0.0015	Comb. Dust
Lead	(CAS No) 7439-92-1	0 - 0.0005	Carc. 1B, H350 Repr. 1A, H360 STOT RE 1, H372 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

Full text of H-phrases: see section 16

SECTION 4: FIRST AID MEASURES

4.1. Description of First-aid Measures

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).

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

First-aid Measures After Skin Contact: Remove contaminated clothing. Immediately flush skin with plenty of water for at least 60 minutes. Wash contaminated clothing before reuse. Get immediate medical advice/attention.

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First-aid Measures After Eye Contact: Rinse cautiously with water for at least 60 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get immediate medical advice/attention.

First-aid Measures After Ingestion: Rinse mouth. Do NOT induce vomiting. Obtain medical attention.

4.2. Most Important Symptoms and Effects Both Acute and Delayed

Symptoms/Injuries: Causes severe skin burns and eye damage. Causes serious eye damage. Skin sensitization. May cause genetic defects. May cause cancer.

Symptoms/Injuries After Inhalation: May be corrosive to the respiratory tract.

Symptoms/Injuries After Skin Contact: Causes severe irritation which will progress to chemical burns. May cause an allergic skin reaction.

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

Symptoms/Injuries After Ingestion: May cause burns or irritation of the linings of the mouth, throat, and gastrointestinal tract. Chronic Symptoms: May cause genetic defects. May cause cancer. Strong inorganic acid mists containing sulfuric acid are carcinogenic to humans.

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: Water spray, dry chemical, foam, carbon dioxide.

Unsuitable Extinguishing Media: Do not use a heavy water stream. Use of heavy stream of water may spread fire.

5.2. Special Hazards Arising From the Substance or Mixture

Fire Hazard: Not considered flammable but may burn at high temperatures.

Explosion Hazard: Product is not explosive.

Reactivity: May react exothermically with water releasing heat. Adding an acid to a base or base to an acid may cause a violent reaction.

5.3. Advice for Firefighters

Precautionary Measures Fire: Exercise caution when fighting any chemical fire. Under fire conditions, hazardous fumes will be present.

Firefighting Instructions: Use water spray or fog for cooling exposed containers.

Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection. **Hazardous Combustion Products:** Explosive hydrogen gas is generated by the action of acid on most metals and may

accumulate in metal containers. Releases sulfur dioxide at extremely high temperatures.

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

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. Do not breathe vapor, mist or spray.

6.1.1. For Non-Emergency Personnel

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

Emergency Procedures: Evacuate unnecessary personnel.

6.1.2. For Emergency Responders

Protective Equipment: Equip cleanup crew with proper protection.

Emergency Procedures: 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. Ventilate area.

6.2. Environmental Precautions

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

6.3. Methods and Materials 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. Transfer spilled material to a suitable container for disposal. Contact competent authorities after a spill. Cautiously neutralize spilled liquid.

6.4. Reference to Other Sections

See Section 8 for exposure controls and personal protection and Section 13 for disposal considerations.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for Safe Handling

Additional Hazards When Processed: May release corrosive vapors.

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Other information: Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Handle empty containers with care because they may still present a hazard. Do not get in eyes, on skin, or on clothing. Do not breathe mist/vapors/spray. Obtain special instructions before use.

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.

Storage Conditions: Keep container closed when not in use. Store in a dry, cool 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 Products: Strong acids, strong bases, strong oxidizers, metals, metal oxides, hydroxides, nitrates, amines, carbonates and other alkaline materials.

7.3. Specific End Use(s)

Chemical Feedstock; Recycling.

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), AIHA (WEEL), NIOSH (REL), or OSHA (PEL).

Sulfuric aciu	(7664-93-9)	
USA ACGIH	ACGIH TWA (mg/m³)	0.2 mg/m ³ (thoracic fraction)
USA ACGIH	ACGIH chemical category	Suspected Human Carcinogen contained in strong inorganic acid
		mists
USA NIOSH	NIOSH REL (TWA) (mg/m³)	1 mg/m ³
USA IDLH	US IDLH (mg/m ³)	15 mg/m ³
USA OSHA	OSHA PEL (TWA) (mg/m³)	1 mg/m ³
Chromium (7	440-47-3)	
USA ACGIH	ACGIH TWA (mg/m ³)	0.5 mg/m ³
USA ACGIH	ACGIH chemical category	Not Classifiable as a Human Carcinogen
USA NIOSH	NIOSH REL (TWA) (mg/m³)	0.5 mg/m ³
USA IDLH	US IDLH (mg/m ³)	250 mg/m ³
USA OSHA	OSHA PEL (TWA) (mg/m³)	1 mg/m ³
Lead (7439-9	2-1)	
USA ACGIH	ACGIH TWA (mg/m ³)	0.05 mg/m ³
USA ACGIH	ACGIH chemical category	Confirmed Animal Carcinogen with Unknown Relevance to Humans
USA ACGIH	Biological Exposure Indices (BEI)	30 μg/100ml (Medium: blood - Time: not critical - Parameter: Lead
		(Note: Women of child bearing potential, whose blood Pb exceeds
		10 μg/dL, are at risk of delivering a child with a blood Pb over the
		current Centers for Disease Control guideline of 10 μ g/dL. If the
		blood Pb of such children remains elevated, they may be at
		increased risk of cognitive deficits. The blood Pb of these children
		should be closely monitored and appropriate steps should be taken
		to minimize the child's exposure to environmental lead.)
USA NIOSH	NIOSH REL (TWA) (mg/m ³)	0.050 mg/m ³
USA IDLH	US IDLH (mg/m ³)	100 mg/m ³
USA OSHA	OSHA PEL (TWA) (mg/m³)	50 μg/m³
Dimethyl sulf	fate (77-78-1)	
USA ACGIH	ACGIH TWA (ppm)	0.1 ppm
USA ACGIH	ACGIH chemical category	Skin - potential significant contribution to overall exposure by the
		cutaneous route,Confirmed Animal Carcinogen with Unknown
		Relevance to Humans
USA NIOSH	NIOSH REL (TWA) (mg/m ³)	0.5 mg/m ³
USA NIOSH	NIOSH REL (TWA) (ppm)	0.1 ppm
USA IDLH	US IDLH (ppm)	7 ppm
USA OSHA	OSHA PEL (TWA) (mg/m³)	5 mg/m ³
USA OSHA	OSHA PEL (TWA) (ppm)	1 ppm
USA OSHA	Limit value category (OSHA)	prevent or reduce skin absorption

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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.
Personal Protective Equipment	: Insufficient ventilation: wear respiratory protection.
Materials for Protective Clothing	: Chemically resistant materials and fabrics. Corrosion-proof clothing.
Hand Protection	: Wear protective gloves.
Eye Protection	: Chemical safety goggles and 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 CHEMICA	AL PROPERTIES
9.1. Information on Basic Physical	and Chemical Properties
Physical State	: Liquid

r nysical State	· Liquid
Appearance	: Brown / Amber Liquid
Odor	: Pungent / Slightly Petroleum
Odor Threshold	: No data available
рН	: <1
Evaporation Rate	: No data available
Melting Point	: ≈ 10 °C (50 °F)
Freezing Point	: No data available
Boiling Point	: ≈ 310 °C (590 °F)
Flash Point	: No data available
Auto-ignition Temperature	: No data available
Decomposition Temperature	: No data available
Flammability (solid, gas)	: No data available
Vapor Pressure	: No data available
Relative Vapor Density at 20°C	: No data available
Relative Density	: No data available
Specific Gravity	: 1.84
Solubility	: Water: Completely Miscible
Partition Coefficient: N-Octanol/Water	: No data available
Viscosity	: No data available
9.2. Other Information	

No additional information available

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity: May react exothermically with water releasing heat. Adding an acid to a base or base to an acid may cause a violent reaction.

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, and incompatible materials.

10.5. Incompatible Materials: Strong acids, strong bases, strong oxidizers, metals, metal oxides, hydroxides, nitrates, amines, carbonates and other alkaline materials.

10.6. Hazardous Decomposition Products: Thermal decomposition generates: Corrosive vapors.

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SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on Toxicological Effects

Acute Toxicity: Not classified

Sulfuric acid (7664-93-9)		
LD50 Oral Rat	2140 mg/kg	
LC50 Inhalation Rat	510 mg/m ³ (Exposure time: 2 h)	
Diethyl sulfate (64-67-5)		
LD50 Oral Rat	350 mg/kg	
LD50 Dermal Rabbit	600 mg/kg	
LC50 Inhalation Rat	> 250 ppm/4h	
ATE (Dust/Mist)	1.50 mg/l/4h	
Chromium (7440-47-3)		
LD50 Oral Rat	> 5000 mg/kg	
LC50 Inhalation Rat	> 5.41 mg/l/4h	
Dimethyl sulfate (77-78-1)		
LD50 Oral Rat	106 mg/kg	
LC50 Inhalation Rat	45 mg/m ³ (Exposure time: 4 h)	
LC50 Inhalation Rat	0.0748 mg/l/4h	
ATE (Dust/Mist)	0.05 mg/l/4h	

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

pH: < 1

Serious Eye Damage/Irritation: Causes serious eye damage.

pH: < 1

Respiratory or Skin Sensitization: May cause an allergic skin reaction.

Germ Cell Mutagenicity: May cause genetic defects.

Carcinogenicity: May cause cancer.

Sulfuric acid (7664-93-9)		
IARC group	1	
OSHA Hazard Communication Carcinogen List	In OSHA Hazard Communication Carcinogen list.	
Diethyl sulfate (64-67-5)		
IARC group	2A	
National Toxicology Program (NTP) Status	Reasonably anticipated to be Human Carcinogen.	
OSHA Hazard Communication Carcinogen List	In OSHA Hazard Communication Carcinogen list.	
Chromium (7440-47-3)		
IARC group	3	
Lead (7439-92-1)		
IARC group	2A	
National Toxicology Program (NTP) Status	Reasonably anticipated to be Human Carcinogen.	
OSHA Hazard Communication Carcinogen List	In OSHA Hazard Communication Carcinogen list.	
Dimethyl sulfate (77-78-1)		
IARC group	2A	
National Toxicology Program (NTP) Status	Reasonably anticipated to be Human Carcinogen.	
OSHA Hazard Communication Carcinogen List	In OSHA Hazard Communication Carcinogen list.	

Reproductive Toxicity: Not classified

Specific Target Organ Toxicity (Single Exposure): Not classified

Specific Target Organ Toxicity (Repeated Exposure): Not classified

Aspiration Hazard: Not classified

Symptoms/Injuries After Inhalation: May be corrosive to the respiratory tract.

Symptoms/Injuries After Skin Contact: Causes severe irritation which will progress to chemical burns. May cause an allergic skin reaction.

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

Symptoms/Injuries After Ingestion: May cause burns or irritation of the linings of the mouth, throat, and gastrointestinal tract.

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Chronic Symptoms: May cause genetic defects. May cause cancer. Strong inorganic acid mists containing sulfuric acid are carcinogenic to humans.

SECTION 12: ECOLOGICAL INFORMA	TION	
12.1. Toxicity		
Ecology - General	: Harmful to aquatic life.	
Sulfuric acid (7664-93-9)		
LC50 Fish 1	500 mg/l (Exposure time: 96 h - Species: Brachydanio rerio [static])	
LC50 Fish 2	42 mg/l (Exposure time: 96 h - Species: Gambusia affinis [static])	
Diethyl sulfate (64-67-5)		
LC50 Fish 1	95 mg/l (Exposure time: 96 h - Species: Pimephales promelas)	
Lead (7439-92-1)		
LC50 Fish 1	0.44 mg/l (Exposure time: 96 h - Species: Cyprinus carpio [semi-static])	
EC50 Daphnia 1	600 μg/l (Exposure time: 48 h - Species: water flea)	
LC50 Fish 2	1.17 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [flow-through])	
Zinc (7440-66-6)		
LC50 Fish 1	2.16 - 3.05 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])	
EC50 Daphnia 1	0.139 - 0.908 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])	
LC50 Fish 2	0.211 - 0.269 mg/l (Exposure time: 96 h - Species: Pimephales promelas [semi-static])	
ErC50 (Algae)	0.15 mg/l	
Dimethyl sulfate (77-78-1)		
LC50 Fish 1	7.5 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])	
12.2. Persistence and Degradability		
Sulfuric Acid - Spent		
Persistence and Degradability	Not established.	
12.3. Bioaccumulative Potential		
Sulfuric Acid - Spent		
Bioaccumulative Potential Not established.		
Sulfuric acid (7664-93-9)		
BCF Fish 1 (no bioaccumulation)		
Diethyl sulfate (64-67-5)		
Log Pow	1.14	
12.4. Mobility in Soil		
No odditional information quallele		

No additional information 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.

Ecology - Waste Materials: Avoid release to the environment. 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	: SULFURIC ACID, SPENT		
Hazard Class	: 8		
Identification Number	: UN1832		
Label Codes	: 8		
Packing Group	: 11		
ERG Number	: 137		
14.2. In Accordance with IMDG			
Proper Shipping Name	: SULPHURIC ACID, SPENT		

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Hazard Class	:	8
Identification Number	:	UN1832
Packing Group	:	П
Label Codes	:	8
EmS-No. (Fire)	:	F-A
EmS-No. (Spillage)	:	S-B



Proper Shipping Name	: SULPHURIC ACID, SPENT
Packing Group	: 11
Identification Number	: UN1832
Hazard Class	: 8
Label Codes	: 8
ERG Code (IATA)	: 8L



SECTION 15: REGULATORY INFORMATION 15.1 **US Federal Regulations** Sulfuric Acid - Spent SARA Section 311/312 Hazard Classes Immediate (acute) health hazard Delayed (chronic) health hazard Sulfuric acid (7664-93-9) Listed on the United States TSCA (Toxic Substances Control Act) inventory Listed on the United States SARA Section 302 Subject to reporting requirements of United States SARA Section 313 SARA Section 302 Threshold Planning Quantity (TPQ) 1000 SARA Section 313 - Emission Reporting 1.0 % (acid aerosols including mists, vapors, gas, fog, and other airborne forms of any particle size) Water (7732-18-5) Listed on the United States TSCA (Toxic Substances Control Act) inventory Diethyl sulfate (64-67-5) Listed on the United States TSCA (Toxic Substances Control Act) inventory Subject to reporting requirements of United States SARA Section 313 SARA Section 313 - Emission Reporting 0.1 % Iron (7439-89-6) Listed on the United States TSCA (Toxic Substances Control Act) inventory Chromium (7440-47-3) Listed on the United States TSCA (Toxic Substances Control Act) inventory Subject to reporting requirements of United States SARA Section 313 SARA Section 313 - Emission Reporting 1.0 % Lead (7439-92-1) Listed on the United States TSCA (Toxic Substances Control Act) inventory Subject to reporting requirements of United States SARA Section 313 SARA Section 313 - Emission Reporting 0.1 % Zinc (7440-66-6) Listed on the United States TSCA (Toxic Substances Control Act) inventory Subject to reporting requirements of United States SARA Section 313 SARA Section 313 - Emission Reporting 1.0 % (dust or fume only) Dimethyl sulfate (77-78-1) Listed on the United States TSCA (Toxic Substances Control Act) inventory Listed on the United States SARA Section 302 Subject to reporting requirements of United States SARA Section 313 **EPA TSCA Regulatory Flag** T - T - indicates a substance that is the subject of a Section 4 test rule under TSCA SARA Section 302 Threshold Planning Quantity (TPQ) 500 0.1 % SARA Section 313 - Emission Reporting

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15.2 US State Regulations

Sulfuric acid (7664-93-9)			
U.S California - Proposition 65 - Carcinogens List	WARNING: This product contains chemicals known to the State of		
	California to cause cancer.		
Diethyl sulfate (64-67-5)			
U.S California - Proposition 65 - Carcinogens List	WARNING: This product contains chemicals known to the State of		
	California to cause cancer.		
Lead (7439-92-1)	WADNING, This product contains of anti-tails for some to the Curtor for		
U.S California - Proposition 65 - Carcinogens List	California to cause cancer		
U.S. California Dranasitian (C. Developments)	California to cause cancer.		
U.S Camornia - Proposition 65 - Developmental	California to cause birth defects		
IIS - California - Pronosition 65 - Ponroductivo	WARNING: This product contains chemicals known to the State of		
Toxicity - Female	California to cause (Female) reproductive barm		
U.S California - Proposition 65 - Reproductive	WARNING: This product contains chemicals known to the State of		
Toxicity - Male	California to cause (Male) reproductive harm		
Dimethyl sulfate (77-78-1)			
U.S California - Proposition 65 - Carcinogens List	WARNING: This product contains chemicals known to the State of		
	California to cause cancer.		
Sulfuric acid (7664-93-9)	1		
U.S Massachusetts - Right To Know List			
U.S New Jersey - Right to Know Hazardous Substance Lis	st		
U.S Pennsylvania - RTK (Right to Know) - Environmental Hazard List			
U.S Pennsylvania - RTK (Right to Know) List			
Diethyl sulfate (64-67-5)			
U.S Massachusetts - Right To Know List			
U.S New Jersey - Right to Know Hazardous Substance Lis	st		
U.S Pennsylvania - RTK (Right to Know) - Environmental	Hazard List		
U.S Pennsylvania - RTK (Right to Know) - Special Hazardo	ous Substances		
U.S Pennsylvania - RTK (Right to Know) List			
Chromium (7440-47-3)			
U.S Massachusetts - Right To Know List			
U.S New Jersey - Right to Know Hazardous Substance List			
U.S Pennsylvania - RTK (Right to Know) - Environmental	Hazard List		
U.S Pennsylvania - RTK (Right to Know) - Special Hazardous Substances			
U.S Pennsylvania - RTK (Right to Know) List			
Lead (7439-92-1)			
U.S Massachusetts - Right To Know List			
U.S New Jersey - Right to Know Hazardous Substance List			
U.S Pennsylvania - KTK (Right to Know) - Environmental Hazard List			
ZINC (/44U-bb-b)			
U.S IVIdSSdCHUSELLS - KIGHT TO KHOW LIST	U.S Massachusetts - Right To Know List		
U.S New Jersey - Kight to Know Hazardous Substance List			
U.S Fernisyivania - KTK (Right to Know) - Environmental Eddata List 11 S Pennsylvania - RTK (Right to Know) List			
Dimethyl sulfate (77-78-1)			
LIS - Massachusetts - Right To Know List			
U.S New Jersey - Right to Know Hazardous Substance List			
U.S Pennsylvania - RTK (Right to Know) - Environmental Hazard List			
U.S Pennsylvania - RTK (Right to Know) - Special Hazardous Substances			
U.S Pennsylvania - RTK (Right to Know) List			
SECTION 10: OTHER INFORMATION, INCLUDING			
Kevision Date	: 05/24/2016		

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Other Information :	: T r	This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR
	1	1910.1200

GHS Full Text Phrases:

		decomposit react violen	tion but do not detonate. Also: may htly with water or may form potentially
NFPA	IFPA Fire Hazard : 1 - Must be IFPA Reactivity Hazard : 2 - Normally		y unstable and readily undergo violent
	Eiro Hozord	attention w	vas given.
		or residual	injury even though prompt medical
NFPA	PA Health Hazard : 3 - Short exp		posure could cause serious temporary
	H410		Very toxic to aquatic life with long lasting effects
	H402		Harmful to aquatic life
	H401		Toxic to aquatic life
	H400		Very toxic to aquatic life
	H372		Causes damage to organs through prolonged or repeated exposure
	H360		May damage fertility or the unborn child
	H350		May cause cancer
	H341		Suspected of causing genetic defects
	H340		May cause genetic defects
	H332		Harmful if inhaled
	H330		Fatal if inhaled
	H318		Causes serious eye damage
	H317		May cause an allergic skin reaction
	H314		Causes severe skin burns and eye damage
	H311		Toxic in contact with skin
	H302		Harmful if swallowed
	H301		Toxic if swallowed
			May form combustible dust concentrations in air
	H227		Combustible liquid
	STOT RE 1		Specific target organ toxicity (repeated exposure) Category 1
	Skin Sens. 1		Skin sensitization Category 1
	Skin Corr. 1B		Skin corrosion/irritation Category 1B
	Skin Corr. 1A		Skin corrosion/irritation Category 1A
	Repr. 1A		Reproductive toxicity Category 1A
	Muta. 2		Germ cell mutagenicity Category 2
	Muta. 1B		Germ cell mutagenicity Category 1B
	Flam. Liq. 4		Flammable liquids Category 4
	Eye Dam. 1		Serious eye damage/eye irritation Category 1
	Comb. Dust		Combustible Dust
	Carc. 1B		Carcinogenicity Category 1B
	Aquatic Chronic 1		Hazardous to the aquatic environment - Chronic Hazard Category 1
	Aquatic Acute 3		Hazardous to the aquatic environment - Acute Hazard Category 3
	Aquatic Acute 2		Hazardous to the aquatic environment - Acute Hazard Category 2
	Aquatic Acute 1		Hazardous to the aquatic environment - Acute Hazard Category 1
	Acute Tox. 4 (Initialation.dust, inist	-)	Acute toxicity (miniation.dds), mist) category 4
	Acute Tox. 3 (Unhalation:dust mist	-)	Acute toxicity (inhalation:dust mist) Category A
	Acute Tox. 3 (Definal)		Acute toxicity (definal) Category 3
	Acute Tox. 2 (Innalation:dust,mist	.)	Acute toxicity (Innalation:oust,mist) Category 2
	Acute Tex 2 (Inhalation:dust mist	·)	Acute toxicity (inholation:dust mist) Category 2

explosive mixtures with water.

Safety Data Sheet

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

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.

SDS US (GHS HazCom)