



# MATERIAL SAFETY DATA SHEET



NFPA	HMIS	PPE	Symbol(s)
			 Regulated
Current Issue Date: March 1, 2014		Revision Number: 1	
<b>1. PRODUCT AND COMPANY IDENTIFICATION</b>			
Product Name:	<b>Sulfuric Acid, 93%, 66 Degree Baumé</b>		
Other/Generic Names:	Battery acid, sulphuric acid, oil of vitriol, hydrogen sulfate, dihydrogen sulfate		
Recommended Use:	Industrial		
Manufacturer:	Chemtrade Solutions LLC 90 East Halsey Road Parsippany, NJ 07054  Chemtrade Chemicals Canada Ltd. 90 East Halsey Road Parsippany, NJ 07054		
For More Information:	Customer Service US ONLY: 800-631-8050 (Monday – Friday 9:00AM – 4:30PM)  Customer Service CANADA ONLY: 866-543-3896 (Monday – Friday 9:00AM – 4:30PM)		
Emergency Telephone Number:	US ONLY - CALL CHEMTREC: 800-424-9300 (24 Hours/Day, 7 Days/Week) OUTSIDE THE US – CALL CHEMTREC: 703-527-3887 (24 Hours/Day, 7 Days/Week) CANADA ONLY - CALL CANUTEC: 613-996-6666 (24 Hours/Day, 7 Days/Week)		
<b>2. HAZARDS IDENTIFICATION</b>			
<b>EMERGENCY OVERVIEW:</b>	Oily, colorless to slightly yellow, clear to turbid liquid. Odorless. Causes severe skin burns. Causes severe eye burns. Causes burns of the mouth, throat, and stomach.		
<b>OSHA Status:</b>	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)		
<b>Potential Health Affects</b>			
<b>Skin:</b>	Causes severe burns.		
<b>Eyes:</b>	Liquid contact can cause irritation, corneal burns, and conjunctivitis. May result in severe or permanent injury. May cause blindness.		
<b>Inhalation:</b>	Inhalation of fumes or mist can cause irritation or corrosive burns to the upper respiratory system, including the nose, mouth and throat. May irritate the lungs. May cause pulmonary edema.		
<b>Ingestion:</b>	Causes burns of the mouth, throat and stomach. May be fatal if swallowed. Hazards are also applicable to dilute solutions.		
<b>Delayed Effects:</b>	Erosion of teeth, lesions of the skin, tracheo-bronchitis, mouth inflammation, conjunctivitis and gastritis. IARC and NTP have classified “strong inorganic acid mists containing sulfuric acid” as a known human carcinogen. This classification is for inorganic acid mists only and does not apply to sulfuric acid or sulfuric acid solutions. The basis for the classifications rests on several epidemiology studies which have several deficiencies. These studies did not account for exposure to other substances, some known to be animal or potential human carcinogens, social influences (smoking or alcohol consumption) and included small numbers of subjects. Based on the overall weight of evidence from all human and chronic animal		

## SULFURIC ACID, 93%, 66 DEGREE BAUMÉ

studies, no definitive causal relationship between sulfuric acid mist exposure and respiratory tract cancer has been shown.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS No	Weight %
Sulfuric acid	7664-93-9	93
Water	7732-18-5	Balance

### 4. FIRST AID MEASURES

<b>Eye Contact</b>	Immediately flush eyes with water for at least 15 minutes. Get medical attention immediately.
<b>Skin Contact</b>	Flush with plenty of water, removing contaminated clothing. Get medical attention immediately.
<b>Inhalation</b>	Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.
<b>Ingestion</b>	Do not induce vomiting. Immediately give large quantities of water. Get medical attention immediately.
<b>Notes to Physician</b>	Treat symptomatically

### 5. FIRE-FIGHTING MEASURES

<b>FLASH POINT:</b>	Not applicable
<b>FLASH POINT METHOD:</b>	Not applicable
<b>AUTOIGNITION TEMPERATURE:</b>	Not applicable
<b>UPPER FLAME LIMIT (VOLUME % IN AIR):</b>	Not applicable
<b>LOWER FLAME LIMIT (VOLUME % IN AIR):</b>	Not applicable
<b>FLAME PROPAGATION RATE (SOLIDS):</b>	Not applicable
<b>OSHA FLAMMABILITY CLASS:</b>	Not flammable
<b>SUITABLE EXTINGUISHING MEDIA:</b>	Water spray or fog may be used to knock down the corrosive vapor cloud. Water may be applied to the sides of the containers exposed to flames provided the water does not come in contact with the tank contents.
<b>UNSUITABLE EXTINGUISHING MEDIA:</b>	No information available

<b>HAZARDOUS COMBUSTION PRODUCTS</b>	No information available
<b>Impact sensitivity</b>	No information available
<b>Sensitivity to static discharge</b>	No information available
<b>SPECIFIC HAZARDS ARISING FROM THE CHEMICAL</b>	Contact with steel releases hydrogen gas which is highly flammable and can cause explosions. Concentrated sulfuric acid can ignite combustible materials on contact.
<b>PROTECTIVE EQUIPMENT AND PRECAUTIONS FOR FIREFIGHTERS</b>	Wear approved positive-pressure self-contained breathing apparatus (SCBA) and full protective equipment. Water may be applied to the sides of the containers exposed to flames provided the water does not come in contact with the tank contents. Acid reacts violently with water and is corrosive to most metals.

### 6. ACCIDENTAL RELEASE MEASURES

<b>IN CASE OF SPILL OR RELEASE</b>	Neutralize small spills or leaks cautiously with soda ash or other alkaline materials. Carbon dioxide may evolve if neutralized with carbonates (e.g., soda ash). Contain large spills and block storm drains. Collect liquid and/or residue and dispose of in accordance with applicable regulations.
------------------------------------	--

# SULFURIC ACID, 93%, 66 DEGREE BAUMÉ

7. HANDLING AND STORAGE					
<b>Handling</b>	Wear personal protective equipment. Use adequate ventilation. When diluting always add acid to water. Dispose contaminated clothing.				
<b>Storage</b>	Keep storage containers tightly closed. Store in a cool, dry, ventilated area or cabinet. Isolate from incompatible substances. Protect from physical damage and from freezing.				
8. EXPOSURE CONTROLS/PERSONAL PROTECTION					
Component	ACGIH TLV	OSHA PEL	Ontario TWAEV	Mexico OEL (TWA)	NIOSH IDLH
Sulfuric acid	TWA: 0.2 mg/m <sup>3</sup>	TWA: 1 mg/m <sup>3</sup>	TWA: 0.2 mg/m <sup>3</sup>	TWA: 1 mg/m <sup>3</sup>	15 mg/m <sup>3</sup>
<b>Engineering Measures</b>	Use local exhaust to keep airborne concentrations below the permissible exposure limits.				
<b>Personal Protective Equipment</b>					
<b>Eye/face Protection</b>	Wear chemical safety goggles or face shield.				
<b>Skin Protection</b>	Wear appropriate personal protective clothing to prevent skin contact. If prolonged or repeated contact is anticipated, all clothing should be impervious to liquid.				
<b>Respiratory Protection</b>	A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 or applicable federal/provincial requirements must be followed whenever workplace conditions warrant respirator use. NIOSH's "Respirator Decision Logic" may be useful in determining the suitability of various types of respirators.				
<b>General Hygiene Considerations</b>	To identify additional Personal Protective Equipment (PPE) requirements, it is recommended that a hazard assessment in accordance with the OSHA PPE Standard (29 CFR 1910.132) be conducted before using this product. Eyewash and safety showers are required.				
9. PHYSICAL AND CHEMICAL PROPERTIES					
<b>Appearance</b>	Oily, colorless to slightly yellow, clear to turbid liquid				
<b>Color</b>	Oily, colorless to slightly yellow, clear to turbid				
<b>Chemical Formula</b>	H <sub>2</sub> SO <sub>4</sub> and hydrocarbons in water				
<b>Odor</b>	Negligible				
<b>Odor Threshold</b>	No information available				
<b>Physical State</b>	Liquid				
<b>pH</b>	0.3 (1% solution) @ 25°C (75°F)				
<b>Flash Point</b>	Not applicable				
<b>Autoignition Temperature</b>	Not applicable				
<b>Boiling Point/Range</b>	~626°F (~330°C)				
<b>Melting Point/Range</b>	30°F (~-1.1°C)				
<b>Flammability Limits in Air</b>	No information available				
<b>Explosive Properties</b>	No information available				
<b>Oxidizing Properties</b>	No information available				
<b>Evaporation Rate</b>	Not applicable				
<b>Vapor Pressure</b>	0.002 mmHg - basis 98% H <sub>2</sub> SO <sub>4</sub> @ 40C (102F)				
<b>Vapor Density</b>	3.4				
<b>Specific Gravity</b>	1.84 - basis 98% H <sub>2</sub> SO <sub>4</sub> @ 15°C (60°F)				
<b>Partition Coefficient (n-octano/water)</b>	No information available				
<b>Viscosity</b>	No information available				
<b>Molecular Weight</b>	98.08 (H <sub>2</sub> SO <sub>4</sub> )				
<b>Water Solubility</b>	100				


# SULFURIC ACID, 93%, 66 DEGREE BAUMÉ

10. STABILITY AND REACTIVITY					
<b>Chemical Stability</b>	Normally stable.				
<b>Conditions to Avoid</b>	Avoid high temperatures. Elevated temperatures yield sulfur trioxide gas, which is toxic, corrosive and an oxidizer.				
<b>Incompatible Products</b>	Nitro compounds, carbides, dienes, alcohols (when heated): causes explosions. Oxidizing agents, such as chlorates and permanganates: causes fires and possible explosions. Allyl compounds and aldehydes: undergoes polymerization, possibly violent. Alkalis, amines, water, hydrated salts, carboxylic acid anhydrides, nitriles, olefinic organics, glycols, aqueous acids: causes strong exothermic reactions. Carbonates, cyanides, sulfides, sulfites, metals such as copper: yields toxic gases.				
<b>Hazardous Decomposition Products</b>	At elevated temperatures, hydrocarbon fragments and sulfur trioxide gas may be formed. Also a fire risk if in contact with organic materials.				
<b>Possibility of Hazardous Reactions</b>	Will not occur.				
11. TOXICOLOGICAL INFORMATION					
<b>Acute Toxicity</b>					
<b>Component Information</b>					
<b>Component</b>	<b>LD50 Oral</b>	<b>LD50 Dermal</b>		<b>LC50 Inhalation</b>	
Sulfuric acid	2,140 mg/kg (rat)			510 mg/m <sup>3</sup> /2 hr (rat) 320 mg/m <sup>3</sup> /2 hr (mouse)	
<b>Irritation</b>	No information available				
<b>Corrosivity</b>	No information available				
<b>Sensitization</b>	No information available				
<b>Chronic Toxicity</b>					
<b>Carcinogenicity</b>	This product contains one or more substances which are classified by IARC as carcinogenic to humans (Group 1), potentially carcinogenic to humans (Group 2A) or possibly carcinogenic to humans (Group 2B)				
<b>Component</b>	<b>ACGIH</b>	<b>IARC</b>	<b>NTP</b>	<b>OSHA</b>	<b>Mexico</b>
Sulfuric acid	A2	Group 1	Known	X	A2
<b>Mutagenic Effects</b>	No information available				
<b>Reproductive Effects</b>	No information available				
<b>Developmental Effects</b>	No information available				
<b>Teratogenicity</b>	No information available				
<b>Target Organ Effects</b>	No information available				
<b>Other Adverse Effects</b>	DELAYED (SUBCHRONIC AND CHRONIC) EFFECTS: IARC and NTP have classified "strong inorganic acid mists containing sulfuric acid" as known as human carcinogens. No definitive casual relationship between sulfuric acid mist exposure and respiratory cancer has been shown.				
<b>Endocrine Disruptor Information</b>	No information available				
12. ECOLOGICAL INFORMATION					
<b>Ecotoxicity</b>					
Contains no substances known to be hazardous to the environment or not degradable in waste water treatment plants.					
<b>Component</b>	<b>Freshwater Algae</b>	<b>Freshwater Fish</b>	<b>Microtox</b>	<b>Water Flea</b>	
Sulfuric acid		LC50>500 mg/L Brachydanio rerio 96 h		EC50 = 29 mg/L 24 h	

## SULFURIC ACID, 93%, 66 DEGREE BAUMÉ

<b>Persistence and Degradability</b>	No information available		
<b>Bioaccumulation</b>	No information available		
<b>Mobility in Environmental Media</b>	No information available		
<b>Other adverse affects</b>	<u>Sulfuric acid component:</u> 24.5 ppm 24 hr/ bluegill/lethal/fresh water; ppm/48 hr/prawn/LC50/salt water		42.5
<b>13. DISPOSAL CONSIDERATIONS</b>			
<b>Waste Disposal Methods</b>	Dispose of waste in accordance with all federal, state, and local regulations.		
<b>Contaminated Packaging</b>	Empty containers should be taken for local recycling, recovery or waste disposal.		
<b>14. TRANSPORT INFORMATION</b>			
<b>DOT</b>	Regulated		
<b>Proper Shipping Name</b>	Sulfuric acid		
<b>Hazard Class</b>	8		
<b>UN-No</b>	UN1830		
<b>Packing Group</b>	PGII		
<b>TDG</b>	Regulated		
<b>Hazard Class</b>	8		
<b>UN-No</b>	UN1830		
<b>Packing Group</b>	PGII		
<b>15. REGULATORY INFORMATION</b>			
<b><u>International Inventories</u></b>			
<b>TSCA</b>	Yes		
<b>DSL</b>	Yes		
<b>NDSL</b>	No		
<b>ELINCS</b>	No		
<b>EINECS</b>	Yes		
<b>ENCS</b>	Yes		
<b>CHIINA</b>	Yes		
<b>KECL</b>	Yes		
<b>PICCS</b>	Yes		
<b>AICS</b>	Yes		
<b><u>U.S. Federal Regulations</u></b>			
<b>SARA 313</b>			
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains the following chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:			
<b><u>Component</u></b>	<b><u>CAS-No</u></b>	<b><u>Weight %</u></b>	<b><u>SARA 313-Threshold Values</u></b>
Sulfuric acid (mists)	7664-93-9	93	1.0
<b><u>SARA 311/312 Hazardous Categorization</u></b>			
<b>Chronic Health Hazard</b>	No		
<b>Acute Health Hazard</b>	Yes		
<b>Fire Hazard</b>	No		
<b>Sudden Release of Pressure Hazard</b>	No		
<b>Reactive Hazard</b>	Yes		

# SULFURIC ACID, 93%, 66 DEGREE BAUMÉ

<b>CLEAN WATER ACT</b>					
<u>Component</u>	<u>CWA – Reportable Quantities</u>	<u>CWA – Toxic Pollutants</u>	<u>CWA – Priority Pollutants</u>	<u>CWA – Hazardous Substances</u>	
Sulfuric acid 7664-93-9 (93)	1000 lb			X	
<b>CERCLA</b>					
<u>Component</u>	<u>CERCLA RQ (lb)</u>	<u>SARA EHS TPQ (lb)</u>			
Sulfuric acid	1000 lb	1000 lb			
<b>Releases above the RQ require immediate reporting to the National Response Center at (800) 424-8802 and to the state and/or local emergency planning committees.</b>					
<b>U.S. State Regulations</b>					
<b>California Proposition 65</b>					
“Strong inorganic acid mists containing sulfuric acid” has been listed on California’s Proposition 65 as a cancer-causing agent.					
<u>Component</u>	<u>CAS-No</u>	<u>California Prop. 65</u>			
Sulfuric acid	7664-93-9	Carcinogen			
<b>State Right-to-Know</b>					
<u>Component</u>	<u>Massachusetts</u>	<u>New Jersey</u>	<u>Pennsylvania</u>	<u>Illinois</u>	<u>Rhode Island</u>
Sulfuric acid	X	X	X	X	X
<b>Other International Regulations</b>					
Mexico	No information available				
Canada	This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.				
<b>WHMIS Hazard Class</b>					
E Corrosive material					
D1A Very toxic materials					
<b>16. OTHER INFORMATION</b>					
Current Issue Date:	March 1, 2014				
Previous Issue Date:	March 28, 2013				
Revision Summary:	Company Name Change				
Disclaimer:					
<p>All information, statements, data, advice and/or recommendations, including, without limitation, those relating to storage, loading/unloading, piping and transportation (collectively referred to herein as “information”) are believed to be accurate and reliable. However, no representation or warranty, express or implied, is made as to its completeness, accuracy, fitness for a particular purpose or any other matter, including, without limitation, that the practice or application of any such information is free of patent infringement or other intellectual property misappropriation. Chemtrade Logistics Inc. and its affiliates (collectively, “Chemtrade”) are not engaged in the business of providing technical, operational, engineering or safety information for a fee, and, therefore, any such information provided herein has been furnished as an accommodation and without charge. All information provided herein is intended for use by persons having requisite knowledge, skill and experience in the chemical industry. Chemtrade shall not be responsible or liable for the use, application or implementation of the information provided herein, and all such information is to be used at the risk, and in the sole judgment and discretion, of such persons, their employees, advisors and agents.</p>					
End of MSDS					