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SULFURIC ACID 96%

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Material Safety Data Sheet

Emergency Telephone Number
(414) 623-2140

Columbus Chemical Industries, Inc.
N4335 Temkin Road
Columbus, WI 53925

Entered File: 10/8/86
Effective Date: 09-05-85

PRODUCT IDENTIFICATION:

Synonyms: Oil of Vitriol

Formula CAS No.: 7664-93-9

Molecular Weight: 98.07

Hazardous Ingredients:
Not applicable.

Chemical Formula: H₂SO₄

PRECAUTIONARY MEASURES

WARNING! CAUSES SEVERE BURNS. MAY BE FATAL IF SWALLOWED. HARMFUL IF INHALED.

Do not get in eyes, on skin, or on clothing.

Do not breathe mist.

Keep container closed.

Use only with adequate ventilation.

Wash thoroughly after handling.

This substance is classified as a POISON under the Federal Caustic Poison Act.

EMERGENCY/FIRST AID

In all cases call a physician.

In case of contact, immediately flush skin or eyes with plenty of water for at least 15 minutes. If swallowed, DO NOT INDUCE VOMITING! Give large quantities of water. Never give anything by mouth to an unconscious person. If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

SEE SECTION 5.

DOT Hazard Class: Corrosive Material

Physical Data

SECTION 1

Appearance: Colorless, oily liquid.

Odor: Odorless.

Solubility: Infinite @ 20°C.

Boiling Point: ca. 310°C (590°F)

Vapor Density (Air=1): < 0.3 @ 25°C
(77°F)

Melting Point: ca. -14°C (6°F).

Vapor Pressure (mm Hg): 1 @ 146°C
(250°F).

Specific Gravity: 1.84

Evaporation Rate: No information found.

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Fire and Explosion Information

SECTION 2

Fire: Not combustible, but substance is a strong oxidizer and its heat of reaction with reducing agents or combustibles may cause ignition. Reacts with most metals releasing flammable, potentially explosive hydrogen gas.

Explosion: Not combustible, but substance is a strong oxidizer and its heat of reaction with reducing agents or combustibles may cause ignition.

Fire Extinguishing Media: Dry chemical, foam or carbon dioxide. Water spray may be used to keep fire exposed containers cool.

Special Information: In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

Reactivity Data

SECTION 3

Stability: Stable under ordinary conditions of use and storage.

Hazardous Decomposition Products: Toxic fumes of oxides of sulfur. Will react with water or steam to produce toxic and corrosive fumes. Reacts with carbonates to generate carbon dioxide gas, and with cyanides and sulfides to form poisonous hydrogen cyanide and hydrogen sulfide respectively.

Hazardous Polymerization: Will not occur.

Incompatibilities: Water, bases, organic material, halogens, metal acetylides, oxides and hydrides, strong oxidizing and reducing agents and many other reactive substances.

Leak/Spill Disposal Information

SECTION 4

Dike and cover leaking or spilled liquid with dirt, vermiculite, kitty-litter or other inert absorbent. Cover spill with sodium bicarbonate or soda ash and mix. Clean-up personnel require protective clothing and respiratory protection from vapors and mists. Neutralized waste may be containerized and disposed in a RCRA approved waste disposal facility. Flush area of spill with dilute soda ash solution and discard to sewer.

Reportable Quantity (RQ) (CWA/CERCLA) : 1000 lbs.
Ensure compliance with local, state and federal regulations.

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Health Hazard Information

SECTION 5

A. Exposure/Health Effects

Inhalation: Inhalation produces damaging effects on the mucous membranes and upper respiratory tract. May cause lung edema. Symptoms may include irritation of the nose and throat, and labored breathing.

Ingestion: Corrosive. Swallowing can cause severe burns of the mouth, throat, and stomach, leading to death. Can cause sore throat, vomiting, diarrhea.

Skin Contact: Corrosive. Symptoms of redness, pain, and severe burn can occur.

Eye Contact: Corrosive. Splashes can cause blurred vision, redness, pain and severe tissue burns.

Chronic Exposure: Long-term exposure to mist or vapors may cause damage to teeth.

Aggravation of Pre-existing Conditions: Persons with pre-existing skin disorders or eye problems or impaired respiratory function may be more susceptible to the effects of the substance.

B. FIRST AID

Inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

Ingestion: If swallowed, DO NOT induce vomiting. Give large quantities of water or milk if available. Call a physician immediately. Never give anything by mouth to an unconscious person.

Skin Exposure: In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Call a physician.

Eye Exposure: Wash eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

C. TOXICITY DATA (RTECS, 1982)

Oral rat LD50: 2140 mg/kg.
 Inhalation Guinea Pig LC50: 18 mg/m³.

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Occupational Control Measures

SECTION 6

Airborne Exposure Limits:

-OSHA Permissible Exposure Limit (PEL):
1 mg/m³ (TWA).
-ACGIH Threshold Limit Value (TLV):
1 mg/m³ (TWA).

Ventilation System:

A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, "Industrial Ventilation, A Manual of Recommended Practices", most recent edition, for details.

**Personal Respirators
(NIOSH Approved)**

If the TLV is exceeded a full facepiece chemical cartridge respirator may be worn, in general, up to 100 times the TLV or the maximum use concentration specified by the respirator supplier, whichever is less. Alternatively, a supplied air full facepiece respirator or airtight hood may be worn.

Skin Protection:

Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls to prevent skin contact.

Eye Protection:

Use chemical safety goggles and/or a full face shield where splashing is possible. Contact lenses should not be worn when working with this material.

Maintain eye wash fountain and quick-drench facilities in work area.

Storage and Special Information

SECTION 7

Store in a cool, dry, ventilated storage area with acid resistant floors and good drainage. Protect from physical damage. Keep out of direct sunlight and away from heat, water, and incompatible materials. Do not wash out container and use it for other purposes. When diluting, always add the acid to water; never add water to the acid.

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