

MATERIAL SAFETY DATA SHEET

SULFURIC ACID 30%

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This information valid through July 31, 1996

SECTION 1. - - - - - CHEMICAL IDENTIFICATION- - - - -

CATALOG #: 84724
NAME: SULFURIC ACID 30%

SECTION 2. - - - - - COMPOSITION/INFORMATION ON INGREDIENTS - - - - -

CAS #: 7664-93-9
MF: H2O4S
EC NO: 231-639-5

SYNONYMS

ACIDE SULFURIQUE (FRENCH) * ACIDO SOLFORICO (ITALIAN) * BATTERY ACID *
BOV * DIHYDROGEN SULFATE * DIPPING ACID * ELECTROLYTE ACID *
MATTLING ACID * OIL OF VITRIOL * SCHWEFELSAEURELOESUNGEN (GERMAN) *
SULFURIC ACID (ACGIH:DOT:OSHA) * SULFURIC ACID, SPENT (UN1832) (DOT) *
SULPHURIC ACID * UN1830 (DOT) * UN1832 (DOT) * VITRIOL BROWN OIL *
ZWAVELZUROPLOSSINGEN (DUTCH) *

SECTION 3. - - - - - HAZARDS IDENTIFICATION - - - - -

LABEL PRECAUTIONARY STATEMENTS

OXIDIZING
HIGHLY TOXIC (USA DEFINITION)
TOXIC (EUROPEAN DEFINITION)
CONTACT WITH COMBUSTIBLE MATERIAL MAY CAUSE FIRE.
MAY CAUSE CANCER BY INHALATION.
CAUSES BURNS.
TOXIC BY INHALATION, IN CONTACT WITH SKIN AND IF SWALLOWED.
REACTS VIOLENTLY WITH WATER.
KEEP AWAY FROM COMBUSTIBLE MATERIAL.
IN CASE OF ACCIDENT OR IF YOU FEEL UNWELL, SEEK MEDICAL ADVICE
IMMEDIATELY (SHOW THE LABEL WHERE POSSIBLE).
WEAR SUITABLE PROTECTIVE CLOTHING, GLOVES AND EYE/FACE
PROTECTION.
DO NOT BREATHE VAPOR.
VERY HYGROSCOPIC

SECTION 4. - - - - - FIRST-AID MEASURES- - - - -

IN CASE OF CONTACT, IMMEDIATELY FLUSH EYES OR SKIN WITH COPIOUS
AMOUNTS OF WATER FOR AT LEAST 15 MINUTES WHILE REMOVING CONTAMINATED
CLOTHING AND SHOES.
ASSURE ADEQUATE FLUSHING OF THE EYES BY SEPARATING THE EYELIDS
WITH FINGERS.
IF INHALED, REMOVE TO FRESH AIR. IF NOT BREATHING GIVE ARTIFICIAL
RESPIRATION. IF BREATHING IS DIFFICULT, GIVE OXYGEN.
IF SWALLOWED, WASH OUT MOUTH WITH WATER PROVIDED PERSON IS CONSCIOUS.
CALL A PHYSICIAN IMMEDIATELY.
WASH CONTAMINATED CLOTHING BEFORE REUSE.
DISCARD CONTAMINATED SHOES.

SECTION 5. - - - - - FIRE FIGHTING MEASURES - - - - -

EXTINGUISHING MEDIA
NONCOMBUSTIBLE.
USE EXTINGUISHING MEDIA APPROPRIATE TO SURROUNDING FIRE CONDITIONS.
DO NOT USE WATER.
SPECIAL FIREFIGHTING PROCEDURES
WEAR SELF-CONTAINED BREATHING APPARATUS AND PROTECTIVE CLOTHING TO
PREVENT CONTACT WITH SKIN AND EYES.
STRONG OXIDIZER.
UNUSUAL FIRE AND EXPLOSIONS HAZARDS
EMITS TOXIC FUMES UNDER FIRE CONDITIONS.
CONTACT WITH OTHER MATERIAL MAY CAUSE FIRE.

SECTION 6. - - - - - ACCIDENTAL RELEASE MEASURES- - - - -

EVACUATE AREA.
WEAR SELF-CONTAINED BREATHING APPARATUS, RUBBER BOOTS AND HEAVY
RUBBER GLOVES.

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COVER WITH DRY-LIME, SAND, OR SODA ASH. PLACE IN COVERED CONTAINERS USING NON-SPARKING TOOLS AND TRANSPORT OUTDOORS. VENTILATE AREA AND WASH SPILL SITE AFTER MATERIAL PICKUP IS COMPLETE. AVOID INHALATION.

SECTION 7. - - - - - HANDLING AND STORAGE- - - - -

REFER TO SECTION 8.

ADDITIONAL INFORMATION

INCOMPATIBLE WITH CARBIDES, CHLORATES, FULMINATES, NITRATES, PICRATES, CYANIDES, ALKALI HALIDES, ZINC IODIDE, PERMANGANATES, HYDROGEN PEROXIDE, AZIDES, PERCHLORATES, NITROMETHANE, PHOSPHOROUS, NITRITES. VIOLENT REACTION WITH: CYCLOPENTADIENE, CYCLOPENTANONE OXIME, NITROARYL AMINES, HEXALITHIUM DISILICIDE, PHOSPHOROUS (III) OXIDE.

SECTION 8. - - - - - EXPOSURE CONTROLS/PERSONAL PROTECTION- - - - -

WEAR APPROPRIATE NIOSH/MSHA-APPROVED RESPIRATOR, CHEMICAL-RESISTANT GLOVES, SAFETY GOGGLES, OTHER PROTECTIVE CLOTHING.

USE ONLY IN A CHEMICAL FUME HOOD.

SAFETY SHOWER AND EYE BATH.

FACESHIELD (8-INCH MINIMUM).

DO NOT BREATHE VAPOR.

AVOID CONTACT WITH EYES, SKIN AND CLOTHING.

AVOID PROLONGED OR REPEATED EXPOSURE.

WASH THOROUGHLY AFTER HANDLING.

CARCINOGEN.

POISON

CORROSIVE.

KEEP TIGHTLY CLOSED.

DO NOT STORE NEAR, NOR ALLOW CONTACT WITH, CLOTHING AND OTHER

COMBUSTIBLE MATERIAL.

DO NOT ALLOW CONTACT WITH WATER.

VERY HYGROSCOPIC

STORE IN A COOL DRY PLACE.

SECTION 9. - - - - - PHYSICAL AND CHEMICAL PROPERTIES - - - - -

APPEARANCE AND ODOR

CLEAR, COLORLESS LIQUID (ACS)

PHYSICAL PROPERTIES

FLASHPOINT NONE

VAPOR PRESSURE: 1MM 145.8 C

SPECIFIC GRAVITY: 1.840

VAPOR DENSITY: <.3 @ 25 C

SECTION 10. - - - - - STABILITY AND REACTIVITY - - - - -

INCOMPATIBILITIES

BASES

HALIDES

ORGANIC MATERIALS

FINELY POWDERED METALS

PROTECT FROM MOISTURE.

DO NOT ALLOW WATER TO ENTER CONTAINER BECAUSE OF VIOLENT REACTION.

HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS

SULFUR OXIDES

SECTION 11. - - - - - TOXICOLOGICAL INFORMATION - - - - -

ACUTE EFFECTS

MAY BE FATAL IF SWALLOWED.

HARMFUL IF INHALED OR ABSORBED THROUGH SKIN.

MATERIAL IS EXTREMELY DESTRUCTIVE TO TISSUE OF THE MUCOUS MEMBRANES

AND UPPER RESPIRATORY TRACT, EYES AND SKIN.

INHALATION MAY BE FATAL AS A RESULT OF SPASM, INFLAMMATION AND EDEMA

OF THE LARYNX AND BRONCHI, CHEMICAL PNEUMONITIS AND PULMONARY EDEMA.

SYMPTOMS OF EXPOSURE MAY INCLUDE BURNING SENSATION, COUGHING,

WHEEZING, LARYNGITIS, SHORTNESS OF BREATH, HEADACHE, NAUSEA AND

VOMITING.

CHRONIC EFFECTS

CARCINOGEN.

THE INTERNATIONAL AGENCY FOR RESEARCH ON CANCER (IARC) HAS DETERMINED

THAT OCCUPATIONAL EXPOSURE TO STRONG-INORGANIC-ACID MISTS CONTAINING

SULFURIC ACID IS CARCINOGENIC TO HUMANS (GROUP 1).

RTECS #: WS5600000

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SULFURIC ACID

IRRITATION DATA

EYE-RBT 250 UG SEV

AJOPAA 29,1363,46

EYE-RBT 5 MG/30S RINSE SEV

TXCYAC 23,281,82

TOXICITY DATA

UNR-MAN LDLO:135 MG/KG

85DCAI 2,73,70

ORL-RAT LD50:2140 MG/KG

AIHAAP 30,470,69

IHL-RAT LC50:510 MG/M3/2H

85GMAT -,107,82

IHL-MUS LC50:320 MG/M3/2H

85GMAT -,107,82

IHL-GPG LC50:18 MG/M3

MELAAD 45,590,54

ONLY SELECTED REGISTRY OF TOXIC EFFECTS OF CHEMICAL SUBSTANCES (RTECS) DATA IS PRESENTED HERE. SEE ACTUAL ENTRY IN RTECS FOR COMPLETE INFORMATION.

SECTION 12. ----- ECOLOGICAL INFORMATION ----- DATA NOT YET AVAILABLE.

SECTION 13. ----- DISPOSAL CONSIDERATIONS ----- FOR SMALL QUANTITIES: CAUTIOUSLY ADD TO A LARGE STIRRED EXCESS OF WATER. ADJUST THE PH TO NEUTRAL, SEPARATE ANY INSOLUBLE SOLIDS OR LIQUIDS AND PACKAGE THEM FOR HAZARDOUS-WASTE DISPOSAL. FLUSH THE AQUEOUS SOLUTION DOWN THE DRAIN WITH PLENTY OF WATER. THE HYDROLYSIS AND NEUTRALIZATION REACTIONS MAY GENERATE HEAT AND FUMES WHICH CAN BE CONTROLLED BY THE RATE OF ADDITION.

OBSERVE ALL FEDERAL, STATE AND LOCAL ENVIRONMENTAL REGULATIONS.

SECTION 14. ----- TRANSPORT INFORMATION ----- CONTACT FLUKA CHEMICAL COMPANY FOR TRANSPORTATION INFORMATION.

SECTION 15. ----- REGULATORY INFORMATION ----- EUROPEAN INFORMATION

EC INDEX NO: 016-020-00-8

OXIDIZING

TOXIC

R 35

CAUSES SEVERE BURNS.

S 26

IN CASE OF CONTACT WITH EYES, RINSE IMMEDIATELY WITH PLENTY OF WATER AND SEEK MEDICAL ADVICE.

S 30

NEVER ADD WATER TO THIS PRODUCT.

S 45

IN CASE OF ACCIDENT OR IF YOU FEEL UNWELL, SEEK MEDICAL ADVICE IMMEDIATELY (SHOW THE LABEL WHERE POSSIBLE).

REVIEWS, STANDARDS, AND REGULATIONS

OEL-MAK

ACGIH TLV-TWA 1 MG/M3; STEL 3 MG/M3

85INA8 6,1461,91

IARC CANCER REVIEW:HUMAN SUFFICIENT EVIDENCE

IMEMDT 54,41,92

IARC CANCER REVIEW:GROUP 1

IMEMDT 54,41,92

EPA FIFRA 1988 PESTICIDE SUBJECT TO REGISTRATION OR RE-REGISTRATION

FEREAC 54,7740,89

MSHA STANDARD-AIR:TWA 1 MG/M3

DTLVS* 3,239,71

OSHA PEL (GEN INDU):8H TWA 1 MG/M3

CFRGBR 29,1910.1000,94

OSHA PEL (CONSTRUC):8H TWA 1 MG/M3

CFRGBR 29,1926.55,94

OSHA PEL (SHIPYARD):8H TWA 1 MG/M3

CFRGBR 29,1915.1000,93

OSHA PEL (FED CONT):8H TWA 1 MG/M3

CFRGBR 41,50-204.50,94

OEL-ARAB REPUBLIC OF EGYPT:TWA 1 MG/M3 JAN93

OEL-AUSTRALIA:TWA 1 MG/M3 JAN93

OEL-BELGIUM:TWA 1 MG/M3;STEL 3 MG/M3 JAN93

OEL-CZECHOSLOVAKIA:TWA 1 MG/M3;STEL 2 MG/M3 JAN93

OEL-DENMARK:TWA 1 MG/M3 JAN93

OEL-FINLAND:TWA 1 MG/M3;STEL 3 MG/M3;SKIN JAN93

OEL-FRANCE:TWA 1 MG/M3;STEL 3 MG/M3 JAN93

OEL-GERMANY:TWA 1 MG/M3 JAN93

OEL-HUNGARY:STEL 1 MG/M3 JAN93

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OEL-JAPAN:TWA 1 MG/M3 JAN93
OEL-THE NETHERLANDS:TWA 1 MG/M3 JAN93
OEL-THE PHILIPPINES:TWA 1 MG/M3 JAN93
OEL-POLAND:TWA 1 MG/M3 JAN93
OEL-RUSSIA:STEL 1 MG/M3;SKIN JAN93
OEL-SWEDEN:TWA 1 MG/M3;STEL 3 MG/M3 JAN93
OEL-SWITZERLAND:TWA 1 MG/M3;STEL 2 MG/M3 JAN93
OEL-THAILAND:TWA 1 MG/M3 JAN93
OEL-TURKEY:TWA 1 MG/M3 JAN93
OEL-UNITED KINGDOM:TWA 1 MG/M3 JAN93
OEL IN BULGARIA, COLOMBIA, JORDAN, KOREA CHECK ACGIH TLV
OEL IN NEW ZEALAND, SINGAPORE, VIETNAM CHECK ACGIH TLV
NIOSH REL TO SULFURIC ACID-AIR:10H TWA 1 MG/M3
NIOSH* DHHS #92-100,92
NOHS 1974: HZD 70870; NIS 313; TNF 54746; NOS 143; TNE 499446
NOES 1983: HZD 70870; NIS 300; TNF 54516; NOS 182; TNE 775587; TFE
173653
EPA TSCA SECTION 8(B) CHEMICAL INVENTORY
EPA TSCA SECTION 8(D) UNPUBLISHED HEALTH/SAFETY STUDIES
EPA TSCA SECTION 8(E) RISK NOTIFICATION, 8EHQ-0892-9247;8EHQ-0892-9248
EPA TSCA TEST SUBMISSION (TSCATS) DATA BASE, OCTOBER 1995
NIOSH ANALYTICAL METHOD, 1994: ACIDS, INORGANIC, 7903
OSHA ANALYTICAL METHOD #ID-113

U.S. INFORMATION

THIS PRODUCT IS SUBJECT TO SARA SECTION 313 REPORTING REQUIREMENTS.

SECTION 16. - - - - - OTHER INFORMATION- - - - -

THE ABOVE INFORMATION IS BELIEVED TO BE CORRECT BUT DOES NOT PURPORT TO
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