

FUMARIC ACID

MSDS Number

BHCSV

National Stock Number

6810-00-477-2929

Product Name

FUMARIC ACID

Manufacturer

FISHER SCIENTIFIC CHEMICAL DIV

Product Identification

Product ID:FUMARIC ACID

MSDS Date:11/09/1988

FSC:6810

NIIN:00-477-2929

MSDS Number: BHCSV

Responsible Party

FISHER SCIENTIFIC CHEMICAL DIVISION

1 REAGENT LANE

FAIR LAWN , NJ 07410

Emergency Phone: 201-796-7523

Info Phone: 201-796-7100

Preparer: GASTON L. PILLORI

Cage: 1B464

Contractor

FISHER SCIENTIFIC CO. CHEMICAL MFG DIV

FAIRLAWN, NJ 07410-2802

US

201-796-7100

Cage: 1B464

Ingredients

FUMARIC ACID (SARA III)

CAS: 110-17-8

RTECS: LS9625000

Fraction By Weight: 100%

EPA Report Quantity: 5000 LBS

DOT Report Quantity: 5000 LBS

Hazards

LD50 LC50 Mixture:LD50 (ORAL RAT) IS 10,700 MG/KG

Routes of Entry: Inhalation:YES Skin:NO Ingestion:YES

Reports of Carcinogenicity:NTP:NO IARC:NO OSHA:NO

Health Hazards Acute and Chronic:ACUTE: INHALE- IRRITATING TO NOSE AND THROAT. SKIN- IRRITATION AND REDNESS. EYE- REDNESS AND PAIN.

INGEST- SORE THROAT, VOMITING, ABDOMINAL PAIN. CHRONIC: INGEST-

HUMANS TOLERATE 500MG/DAY W/ NO ADVER SE EFFECTS. EYE-

CONJUNCTIVITIS. SKIN- IRRITATION. INHALE- NO DATA AVAILABLE.

Explanation of Carcinogenicity:NONE OF THE CHEMICALS IN THIS PRODUCT IS

LISTED BY IARC, NTP OR OSHA AS A CARCINOGEN.

Effects of Overexposure:IRRITATION OF THE NOSE, THROAT WITH SORE THROAT, COUGHING, OR DIFFICULTY BREATHING. IRRITATION OF THE SKIN AND EYES. SORE THROAT, VOMITING, AND ABDOMINAL PAIN IF INGESTED. Medical Cond Aggravated by Exposure:PERSONS WITH A HISTORY OF SKIN AND RESPIRATORY DISORDERS MAY BE AT INCREASED RISK FROM EXPOSURE.

First Aid

First Aid:INHALATION: REMOVE SUBJECT TO FRESH AIR. GIVE ARTIFICIAL RESPIRATION IF THE SUBJECT NOT BREATHING. EYE: FLUSH WITH PLENTY OF WATER FOR 15 MINUTES. GET IMMEDIATE MEDICAL ATTENTION. SKIN: WASH WITH SOAP AND WATER. INGESTION: DO NOT INDUCE VOMITING. GET IMMEDIATE MEDICAL ATTENTION. GIVE LARGE AMOUNTS OF WATER TO DILUTE THE ACID.

Fire Fighting

Autoignition Temp:Autoignition Temp Text:1364F

Lower Limits:3.0

Upper Limits:40

Extinguishing Media:USE CARBON DIOXIDE, HALON, FOAM, DRY CHEMICAL, OR WATER FOG.

Fire Fighting Procedures:MOVE CONTAINERS FROM FIRE AREA IF POSSIBLE. DO NOT SCATTER SPILLED MATERIAL WITH HIGH PRESSURE WATER STREAMS. DIKE FIRE CONTROL WATER FOR LATER DISPOSAL.

Unusual Fire/Explosion Hazard:SLIGHT FIRE HAZARD WHEN EXPOSED TO HEAT OR FLAME. USE WATER IN FLOODING AMOUNTS AS A FOG. SOLID STREAMS OF WATER MAY BE INEFFECTIVE. COOL SURROUNDING CONTAINERS

Accidental Release

Spill Release Procedures:STOP LEAK IF YOU CAN DO IT WITHOUT RISK. FOR SMALL SPILLS, TAKE UP WITH SAND OR OTHER ABSORBENT MATERIAL AND PLACE INTO CLEAN, DRY CONTAINERS FOR LATER DISPOSAL. KEEP UNNECESSARY PEOPLE AWAY. ISOLATE HAZARD AREA AND DENY ENTRY.

Neutralizing Agent:SLAKED LIME, SODIUM BICARBONATE, CRUSHED LIMESTONE, AGRICULTURAL LIME.

Handling

Handling and Storage Precautions:STORE IN COOL, DRY, WELL VENTILATED AREA. PROTECT FROM PHYSICAL DAMAGE, HEAT AND IGNITION SOURCES. KEEP CONTAINERS CLOSED.

Other Precautions:STORE AWAY FROM INCOMPATIBLE SUBSTANCES SUCH AS STRONG OXIDIZERS.

Exposure Controls

Respiratory Protection:IF VENTILATION DOES NOT MAINTAIN INHALATION EXPOSURES BELOW PEL (TLV), USE NIOSH/MSHA APPROVED RESPIRATOR AS PER CURRENT 29 CFR 1910.134, INSTRUCTIONS/WARNINGS AND NIOSH-RESPIRATOR SELECTION.

Ventilation:MECHANICAL (GENERAL) VENTILATION IS REQUIRED. LOCAL EXHAUST MAY BE REQUIRED IF WORK AREA IS NOT VENTED.

Protective Gloves:RUBBER

Eye Protection:CHEMICAL SAFETY GOGGLES. NO CONTACTS.

Other Protective Equipment:SAFETY SHOWER AND EYE BATH. OTHER EQUIPMENT AS REQUIRED TO MINIMIZE EXPOSURE FROM PROLONGED OR REPEATED CONTACT.

Work Hygienic Practices:WASH THOROUGHLY AFTER HANDLING AND BEFORE EATING. LAUNDER CONTAMINATED CLOTHING BEFORE REUSE.

Supplemental Safety and Health

Chemical Properties

HCC:N1

Boiling Pt:B.P. Text:329F,165C

Melt/Freeze Pt:M.P/F.P Text:549F,287C

Vapor Pres:10.1

Spec Gravity:1.635

Solubility in Water:.63%

Appearance and Odor:ODORLESS, WHITE NEEDLES, PRISMS, OR LEAFLETS WITH A

SOUR TASTE.

Stability

Stability Indicator/Materials to Avoid: YES

ALUMINUM, IRON, AND ZINC SOLUTIONS MAY RELEASE EXPLOSIVE HYDROGEN GAS.

Stability Condition to Avoid: ABNORMAL TEMPERATURES AND PRESSURES.

Hazardous Decomposition Products: MAY INCLUDE TOXIC AND HAZARDOUS OXIDES OF CARBON, AND IRRITATION FUMES OF MALEIC ANHYDRIDE.

Disposal

Waste Disposal Methods: DISPOSE OF IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL LAWS AND REGULATIONS.

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