

MALLINCKRODT INC.,SCIENCE PRODUCTS DIVISION -- ETHYL ETHER -- 6505-00-153-8225
===== Product Identification =====

Product ID:ETHYL ETHER
MSDS Date:02/15/1989
FSC:6505
NIIN:00-153-8225
MSDS Number: BRKSD
=== Responsible Party ===
Company Name:MALLINCKRODT INC.,SCIENCE PRODUCTS DIVISION
Address:PARIS BYPASS
Box:M
City:PARIS
State:KY
ZIP:40361
Country:US
Info Phone Num:314-982-5000
Emergency Phone Num:314-982-5000
CAGE:62910
=== Contractor Identification ===
Company Name:MALLINCKRODT SPECIALTY CHEMICALS CO
Address:222 RED SCHOOL LANE
Box:City:PHILLIPSBURG
State:NJ
ZIP:08865
Country:US
Phone:908-859-2151
CAGE:62910

===== Composition/Information on Ingredients =====

Ingred Name:ETHYL ETHER (SARA III)
CAS:60-29-7
RTECS #:KI5775000
Other REC Limits:NONE DETERMINED
OSHA PEL:400 PPM/500 STEL
ACGIH TLV:400PPM/500STEL; 9192
EPA Rpt Qty:100 LBS
DOT Rpt Qty:100 LBS

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Hazards Identification
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LD50 LC50 Mixture:ORAL LD50 (RAT) IS 1215 MG/KG

Routes of Entry: Inhalation:YES Skin:YES Ingestion:YES

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

Health Hazards Acute and Chronic:INHALATION-IRRITANT. GENERAL

ANESTHESIA BY INHALATION. CONTINUED EXPOSURE MAY LEAD TO
RESPIRATORY FAILURE OR DEATH. INGESTION-IRRITATING TO THE MUCOUS
MEMBRANES. INGESTION OF 1-2 OUNCES MAY BE FATAL. SKIN-IRRITATING
TO THE SKIN & MUCOU

S MEMBRANES. EYE-MAY CAUSE IRRITATION. PROLONGED
EXPOSURE CAN CAUSE EYE DAMAGE.

Explanation of Carcinogenicity:NOT CARCINOGENIC.

Effects of Overexposure:INHALATION-IRRITATION OF NOSE & THROAT,
VOMITING & IRREGULAR RESPIRATION, FOLLOWED BY DIZZINESS, DROWSINESS
& UNCONSCIOUSNESS. INGESTION-THE STOMACH BECOMES DISTENDED, WHICH
CAUSE BELCHING, VOMITING, UNCONSCIOUSNESS & COMA. PROLONGED
EXPOSURES MAY RESULT IN HEADACHE, DROWSINESSM EXCITATION AND
PSYCHIC DISTURBANCES.

Medic
al Cond Aggravated by Exposure:PERSONS WITH PRE-EXISTING SKIN
DISORDERS OR EYE PROBLEMS OR IMPAIRED LIVER, KIDNEY OR RESPIRATORY
FUNCTION MAY BE MORE SUSCEPTIBLE TO THE EFFECTS OF THIS SUBSTANCE.

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First Aid Measures
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First Aid:INHALATION-REMOVE TO FRESH AIR. IF NOT BREATHING PERFORM CPR.
IF HARD TO BREATHE, GIVE OXYGEN. CALL PHYSICIAN. INGESTION-INDUCE
VOMITING BY GIVING 2 GLASSES OF WATER & STICKING FINGER DOWN
THROAT. CALL P
HYSICIAN. SKIN-WASH SKIN WITH PLENTY OF WATER FOR AT
LEAST 15 MIN. GET MEDICAL ATTENTION. EYE-WASH EYES WITH PLENTY OF
WATER FOR AT LEAST 15 MIN. CALL A PHYSICIAN.

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Fire Fighting Measures
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Flash Point Method:CC

Flash Point:-49F,-45C

Autoignition Temp:Autoignition Temp Text:160C

Lower Limits:1.9

Upper Limits:36.0

Extinguishing Media:DRY CHEMICAL, FOAM OR CARBON DIOXIDE. TREAT AS A
FLAMMABLE GAS IN A FIRE SITUATION. USE WATER TO COOL EXPOSE

D

CONTAINERS

Fire Fighting Procedures: IN THE EVENT OF A FIRE, WEAR FULL PROTECTIVE CLOTHING & NIOSH-APPROVED SELF-CONTAINED BREATHING APPARATUS WITH FULL FACEPIECE OPERATED IN THE PRESSURE DEMAND.

Unusual Fire/Explosion Hazard: ABOVE FLASH POINT, VAPOR-AIR MIXTURES ARE EXPLOSIVE WITHIN FLAMMABLE LIMITS. MAY FORM EXPLOSIVE PEROXIDES ON LONG STANDING OR AFTER EXPOSURE TO AIR OR LIGHT.

===== Accidental Release Measures =====

Spill Release Procedures:

REMOVE ALL SOURCES OF IGNITION. VENT AREA. USE RESP PROTECTION & PROTECTIVE CLOTHING. CONTAIN AND RECOVER LIQUID WHEN POSSIBLE. ABSORB WITH VERMICULITE, DRY SAND, EARTH OR SIMILAR MATERIAL. SCOOP UP WITH NONSPARKING TOOLS & PLACE IN A CLOSED CONTAINER.

===== Handling and Storage =====

Handling and Storage Precautions: PROTECT AGAINST PHYSICAL DAMAGE.

OUTSIDE OR DETACHED STORAGE PREFERRED. INSIDE STORAGE SHOULD BE STANDARD FLAMMABLE LIQUID STORAGE ROOM OR CABINET.

Other Precautions: SEPARATE FROM OXIDIZING MATERIALS. STORAGE & USE SHOULD BE NO SMOKING AREAS. ISOLATE FROM OTHER COMBUSTIBLE MATERIAL. PROTECT FROM DIRECT SUNLIGHT.

===== Exposure Controls/Personal Protection =====

Respiratory Protection: IF THE TLV IS EXCEEDED A FULL FACEPIECE CHEMICAL CARTRIDGE RESPIRATOR MAY BE WORN UP TO THE MAXIMUM USE CONCENTRATION SPECIFIED BY THE RESPIRATOR. ALTERNATIVELY, A SUPPLIED AIR FULL FACEPIECE RESPIRATOR OR OR AIRLINED HOOD MAY BE WORN.

Ventilation: A SYSTEM OF LOCAL AND/OR GENERAL EXHAUST IS RECOMMENDED TO KEEP EMPLOYEE EXPOSURE BELOW EXPOSURE LIMITS.

Protective Gloves: WEAR PROTECTIVE GLOVES.

Eye Protection: USE CHEMICAL SAFETY GOGGLES.

Other Protective Equipment: WEAR CLEAN BODY COVERING.

Work Hygienic Practices: MAINTAIN EYE WASH FOUNTAIN AND QUICK DRENCH FACILITIES IN WORK AREA.

Supplemental Safety and Health

DANGER! DO NOT OPEN UNLESS CONTENTS ARE AT ROOM TEMPERATURE (72F) OR

BELOW. ALLOW ATLEAST 24 HOURS FOR MATERIAL TO COOL TO ROOM TEMPERATURE BEFORE OPENING CONTAINER. DANGER! EXREMELY FLAMMABLE. HARMFU L IF SWALLOWED OR INHALED.

===== Physical/Chemical Properties =====

HCC:F2

Boiling Pt:B.P. Text:95.0F,35.0C

Melt/Freeze Pt:M.P/F.P Text:-189F,-123C

Vapor Pres:422 MMHG

Vapor Density:2.6

Spec Gravity:0.71

Evaporation Rate & Reference:37.5 (BU-AC=1)

Solubility in Water:7.5 GM/100 GM WATER.

Appearance and Odor:COLORLESS LIQUID

. SWEET, ETHEREAL ODOR.

===== Stability and Reactivity Data =====

Stability Indicator/Materials to Avoid:YES

CAN REACT DANGEROUSLY WITH ACETYL PEROXIDE, LIQUID AIR, BROMOAZIDE, CHLORINE, AND STRONG OXIDIZERS SUCH AS NITRATES.

Stability Condition to Avoid:HEAT, LIGHT & LONG STANDING CONTRIBUTE TO INSTABILITY. REACTS ITH AIR TO FORM EXPLOSIVE PEROXIDES.

Hazardous Decomposition Products:TOXIC GASES AND VAPORS SUCH AS CARBON MONOXIDE MAY BE RELEASED IN A FIRE.

===== Disposal Considerations =====

Waste Disposal Methods:COLLECT SPILLS & DISSOLVE IN AN ALCOHOL OF GREATER MOLCULAR WEIGHT THAN BUTYL ALCOHOL, THEN ATOMIZE IN AN RCRA APPROVED COMBUSTION CHAMBER. ETHER SHOULD NOT BE FLUSHED TO SEWER BECAUSE OF THE POSSIBIL ITY OF AN EXPLOSION; ENSURE COMPLIANCE.

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