



Material Safety Data Sheet

For industrial use only. Not for drug, household or other uses.

Composition/Information on Ingredient

CAS: **159357-40-1**: *1,1'-Biphenyl-3,3',4,4'-tetracarboxylic acid, 3,4'-diethyl ester*

159357-41-2: *1,1'-Biphenyl-3,3',4,4'-tetracarboxylic acid, 3,3'-diethyl ester*

Code: M

RTECS: Code: X

Name: *1,1'-Biphenyl-3,3',4,4'-tetracarboxylic acid, diethyl ester(BPDE)*

Other REC Limits: N/K

OSHA PEL: N/K

Code: M

OSHA STEL:

Code:

ACGIH TLV: N/K

Code: M

ACGIH STEL: N/P

Code:

Control Measures

Respiratory Protection:

USE ENGINEERING CONTROLS WHERE TECHNICALLY FEASIBLE SUCH AS ISOLATION, ENCLOSURES, EXHAUST VENTILATION, WETTING/DUST COLLECTION SYSTEMS WHEREVER NECESSARY TO CONTROL AIRBORNE FIBERS/DUSTS

Ventilation:

IF THIS MATERIAL IS CUT OR OTHERWISE MECHANICALLY WORKED, DUSTS/FIBERS MAY BE GENERATED.

Protective Gloves:

IMPERVIOUS

Eye Protection:

GOGGLES/FULL-LENGTH FACE SHIELD

Other Protective Equipment:

Equipment: N/K

Work Hygienic Practices:

WASH THOROUGHLY AFTER HANDLING OR PERFORMING OPERATIONS WHICH INVOLVE FIBER OR DUST GENERATIONS.

Supplemental Safety and Health:

4 N/K

Health Hazards Data

LD50 LC50 Mixture:

NO INFORMATION AVIALABLE

Route Of Entry Inds - Inhalation: YES

Skin: YES

Ingestion: NO

Carcinogenicity Inds - NTP: NO

IARC: NO

OSHA: NO

Health Hazards Acute And Chronic:

INHALATION: IRRITATION OF THE NOSE/THROAT, ANOSMIA, TEMPORARY LUNG IRRITATION EFFECTS W/COUGH, DISCOMFORT, DIFFICULTY BREATHING, ASTHMA-LIKE REACTIONS, WHEEZING, COUGH. EYE: IRRITATION, TEARING, BLURRING OF VISION, PERMANENT DAMAGE/BLINDNESS. SKIN: ALLERGIC, IRRITATION, DISCOMFORT, RASH, & SENSITIZATION.

Explanation Of Carcinogenicity:

NONE

Signs And Symptions Of Overexposure:

INHALATION: IRRITATION, ASTHMA-LIKE REACTIONS. EYE: IRRITATION, MAY CAUSE PERMANENT DAMAGE. SKIN: IRRITATION, RASH, ALLERGIC REACTION, SENSITIZATION.

Medical Cond Aggravated By Exposure:

LUNG DISEASES

First Aid:

INHALATION: REMOVE TO FRESH AIR. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION. IF BREATHING IS DIFFICULT, GIVE OXYGEN. CALL PHYSICIAN. SKIN: WASH W/SOAP & PLENTY OF WATER. EYE: FLUSH W/PLENTY OF WATER FOR AT LEAST 15 MINS. CALL PHYSICIAN. INGESTION: NOT A PROBABLE ROUTE OF EXPOSURE.

Spill Release Procedures:

ELIMINATE ALL SOURCE OF IGNITION. SHOVEL OR VACUUM UP USING A HIGH EFFICIENCY PARTICULATE AIR VACUUM EQUIPMENT (HEPA). PREVENT LIQUID FROM ENTERING SEWERS, WATERWAYS, OR LOW AREAS. USE MEK OR ACTONE FOR DECONTAMINATION.

Neutralizing Agent: N/K

Waste Disposal Methods:

FOLLOW APPLICABLE FEDERAL, STATE & LOCAL REGULATIONS. REMOVAL NONUSABLE SOLID MATERIAL & CONTAMINATED MATERIAL FOR DISPOSAL IN AN APPROVED/PERMITTED LANDFILL. DON'T INCINERATE. 3

Handling And Storage Precautions:

USE ENGINEERING CONTROLS WHERE TECHNICALLY FEASIBLE TO CONTROL AIRBORNE FIBERS/DUST

Other Precautions:

DON'T GET IN EYES, ON SKIN/CLOTHING. KEEP CONTAINER TIGHTLY CLOSED. IF SHIPPED IN DRY ICE, REMOVE DRY ICE PRIOR TO STORAGE IN A FREEZER. WASH THOROUGHLY AFTER HANDLING OR PERFORMING OPERATIONS WHICH INVOLVE FIBER OR DUST GENERATION.

Fire and Explosion Hazard Information

Flash Point: N/A

Autoignition Temp: N/A

Lower Limits: N/K

Upper Limits: N/K

Extinguishing Media:

USE ALCOHOL FOAM, DRY CHEMICAL, CO₂, WATER SPRAY

Fire Fighting Procedures:

WEAR SELF-CONTAINED BREATHING APPARATUS/FULL PROTECTIVE GEAR.

Unusual Fire/Explosion Hazard: N/K

Physical/Chemical Properties

Chemical Formula: C₂₀H₁₈O₈

Molecular weight: 386.2

Boiling Point: N/A

Melt/Freeze : 146~199°C

Decomp Temp: N/K

Vapor Pres: N/K

Vapor Density: N/K

Spec Gravity: N/K

Bulk Density: 0.81 g/cc

PH: 3.4(water)

VOC Grams/Liter: N/K

Viscosity: N/P

Evaporation Rate & Reference: N/K

Solubility in EtOH(25 °C): 3.3g/100g

Appearance and Odor:

WHITE SOLID AT AMBIENT TEMPS/PRESSURE; ODORLESS.

Percent Volatiles by Volume: N/K

Corrosion Rate: N/K

Reactivity Data

Stability Indicator: YES

Stability Condition To Avoid: HEAT, SPARKS, & OPEN FLAMES

Materials To Avoid: N/K

Hazardous Decomposition Products: N/K

Hazardous Polymerization Indicator: YES

Conditions To Avoid Polymerization:

TEMPS >60 °C AVOID CAUSES SLOW POLYMERIZATION WHICH WOULD DEGRADE PRODUCT UTILITY.

Toxicological Information

Information: N/P

MSDS Transport Information

Information: N/P

Regulatory Information

Sara Title III Information: N/P

Federal Regulatory Information: N/P

State Regulatory Information: N/P

Other Information

For industrial use only. Not for drug, household or other uses.

WARRANTY

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product.