

diphenyl sulfide 139-66-2 MSDS

Section 1 - Chemical Product MSDS Name: Phenyl sulfide 99% Material Safety Data Sheet
Synonym: Diphenyl sulfide; Diphenyl sulphide; Diphenyl thioether; Sulfide, diphenyl;
1,1'-Thiobis(benzene)

Section 2 - COMPOSITION, INFORMATION ON INGREDIENTS

CAS#	Chemical Name	content	EINECS#
139-66-2	Phenyl sulfide	99	205-371-4

Hazard Symbols: XN

Risk Phrases: 22 38

Section 3 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Harmful if swallowed. Irritating to skin. Stench.

Potential Health Effects

Eye:

May cause severe eye irritation.

Skin:

May cause severe skin irritation.

Ingestion:

Causes gastrointestinal irritation with nausea, vomiting and diarrhea. May be harmful if swallowed.

Contact with stomach acid may liberate toxic hydrogen sulfide gas. Hydrogen sulfide affects the nervous system producing headache, dizziness, excitement, staggering gait, diarrhea, and painful or difficult urination. H₂S doesn't combine with hemoglobin; its asphyxiant action is due to paralysis of the respiratory center.

Inhalation:

Causes irritation of the mucous membrane and upper respiratory tract.

Chronic:

Rats fed large doses of phenyl sulfide for 13 weeks displayed changes in liver weight and bladder weight.

Section 4 - FIRST AID MEASURES

Eyes: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical aid immediately.

Skin:

In case of contact, immediately flush skin with plenty of water.

Remove contaminated clothing and shoes. Get medical aid. Wash clothing before reuse.

Ingestion:

If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical aid.

Inhalation:

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

Notes to Physician:

Treat symptomatically and supportively.

Section 5 - FIRE FIGHTING MEASURES

General Information:

As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

Extinguishing Media:

Use water spray, dry chemical, or carbon dioxide.

Section 6 - ACCIDENTAL RELEASE MEASURES

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks:

Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Provide ventilation.

Section 7 - HANDLING and STORAGE

Handling:

Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Do not get in eyes, on skin, or on clothing. Keep container tightly closed. Use only in a chemical fume hood. Avoid breathing vapor or mist.

Storage:

Keep containers tightly closed. Store in a cool, dry area away from incompatible substances. Separate from oxidizing materials.

Section 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION

Engineering Controls:

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

Exposure Limits CAS# 139-66-2: Personal Protective Equipment Eyes: Wear chemical splash goggles.

Skin:

Wear appropriate gloves to prevent skin exposure.

Clothing:

Wear appropriate clothing to prevent skin exposure.

Respirators:

A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Liquid

Color: clear, colorless

Odor: stench

pH: Not available.

Vapor Pressure: 7.54E-003 mm Hg @ 25 deg C

Viscosity: Not available.

Boiling Point: 296 deg C @ 760 mmHg

Freezing/Melting Point: -40 deg C

Autoignition Temperature: Not available.

Flash Point: > 112 deg C (> 233.60 deg F)

Explosion Limits, lower: Not available.

Explosion Limits, upper: Not available.

Decomposition Temperature: Not available.

Solubility in water: insoluble

Specific Gravity/Density: 1.11 g/cm³

Molecular Formula: C₁₂H₁₀S

Molecular Weight: 186.27

Section 10 - STABILITY AND REACTIVITY

Chemical Stability:

Stable under normal temperatures and pressures.

Conditions to Avoid:

Excess heat.

Incompatibilities with Other Materials:

Strong oxidizing agents, diazonium salts.

Hazardous Decomposition Products:

Carbon monoxide, carbon dioxide, hydrogen sulfide, sulfur oxides (SO_x), including sulfur oxide and sulfur dioxide.

Hazardous Polymerization: Will not occur.

Section 11 - TOXICOLOGICAL INFORMATION

RTECS#:

CAS# 139-66-2: SX2275000 LD50/LC50:

CAS# 139-66-2: Oral, rat: LD50 = 490 uL/kg; Skin, rabbit: LD50 = 11300 uL/kg.
490 uL/kg = 544 mg/kg.

Carcinogenicity:

Phenyl sulfide - Not listed by ACGIH, IARC, or NTP.

Other:

See actual entry in RTECS for complete information.

Section 12 - ECOLOGICAL INFORMATION

Section 13 - DISPOSAL CONSIDERATIONS

Dispose of in a manner consistent with federal, state, and local regulations.

Section 14 - TRANSPORT INFORMATION

IATA

Shipping Name: TOXIC LIQUID, ORGANIC, N.O.S.*

Hazard Class: 6.1

UN Number: 2810

Packing Group: III

IMO

Shipping Name: TOXIC LIQUID, ORGANIC, N.O.S.

Hazard Class: 6.1

UN Number: 2810

Packing Group: III

RID/ADR

Shipping Name: TOXIC LIQUID, ORGANIC, N.O.S.

Hazard Class: 6.1

UN Number: 2810

Packing group: III

Section 15 - REGULATORY INFORMATION

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: XN

Risk Phrases:

R 22 Harmful if swallowed.

R 38 Irritating to skin.

Safety Phrases:

S 23 Do not inhale gas/fumes/vapour/spray.

S 28A After contact with skin, wash immediately with plenty of water.

WGK (Water Danger/Protection)

CAS# 139-66-2: No information available.

Canada

CAS# 139-66-2 is listed on Canada's DSL List.

CAS# 139-66-2 is listed on Canada's Ingredient Disclosure List.

US FEDERAL

TSCA

CAS# 139-66-2 is listed on the TSCA inventory.

SECTION 16 - ADDITIONAL INFORMATION

N/A