

Material Safety Data Sheet

HAZARD WARNINGS	RISK PHRASES	PROTECTIVE CLOTHING
	Harmful compound, minimize exposure.	

Section I. Chemical Product and Company Identification

Chemical Name	trans-Stilbene		
Catalog Number	S0090	Supplier	TCI America 9211 N. Harborside St. Portland OR 1-800-423-8616
Synonym	Benzene, 1,1'-(1,2-ethenediyl)bis-, (E)- (9CI)		
Chemical Formula	C ₆ H ₅ CH:CHC ₆ H ₅		
CAS Number	103-30-0	In case of Emergency Call	Chemtec® (800) 424-9300 (U.S.) (703) 527-3887 (International)

Section II. Composition and Information on Ingredients

Chemical Name	CAS Number	Percent (%)	TLV/PEL	Toxicology Data
trans-Stilbene	103-30-0	Min. 98.0 (GC)	Not available.	Mouse LD ₅₀ (oral) 920 mg/kg Mouse LD ₅₀ (intraperitoneal) 6500 mg/kg

Section III. Hazards Identification

Acute Health Effects	Harmful if ingested or inhaled. Minimize exposure to this material. Severe overexposure can result in injury or death. Follow safe industrial hygiene practices and always wear proper protective equipment when handling this compound.
Chronic Health Effects	CARCINOGENIC EFFECTS : Not available. MUTAGENIC EFFECTS : Not available. TERATOGENIC EFFECTS : Not available. DEVELOPMENTAL TOXICITY : Reproductive Effects. Rat TDLo Oral 1400 mg/kg male 4 weeks prior to mating. TOXIC Effects : Paternal Effects - Testes, epididymis, sperm duct. Paternal Effects - Other effects on male. Repeated or prolonged exposure to this compound is not known to aggravate existing medical conditions.

Section IV. First Aid Measures

Eye Contact	Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.
Skin Contact	In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.
Inhalation	If the victim is not breathing, perform mouth-to-mouth resuscitation. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, oxygen can be administered. Seek medical attention if respiration problems do not improve.
Ingestion	INDUCE VOMITING by sticking finger in throat. Lower the head so that the vomit will not reenter the mouth and throat. Loosen tight clothing such as a collar, tie, belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. Examine the lips and mouth to ascertain whether the tissues are damaged, a possible indication that the toxic material was ingested; the absence of such signs, however, is not conclusive.

Section V. Fire and Explosion Data

Flammability	May be combustible at high temperature.	Auto-Ignition	Not available.
Flash Points	Not available.	Flammable Limits	Not available.
Combustion Products	These products are toxic carbon oxides (CO, CO ₂).		
Fire Hazards	Not available.		
Explosion Hazards	Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.		
Fire Fighting Media and Instructions	SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or foam. DO NOT use water jet. Consult with local fire authorities before attempting large scale fire-fighting operations.		

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Emergency phone number (800) 424-9300

Section VI. Accidental Release Measures**Spill Cleanup
Instructions**

Harmful material.
Use a shovel to put the material into a convenient waste disposal container. Finish cleaning the spill by rinsing any contaminated surfaces with copious amounts of water. Consult federal, state, and/or local authorities for assistance on disposal.

Section VII. Handling and Storage**Handling and Storage
Information**

HARMFUL. Keep away from heat. Mechanical exhaust required. When not in use, tightly seal the container and store in a dry, cool place. Avoid excessive heat and light. Do not breathe dust.
Always store away from incompatible compounds such as oxidizing agents.

Section VIII. Exposure Controls/Personal Protection**Engineering Controls**

Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protection

Splash goggles. Lab coat. Dust respirator. Boots. Gloves. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product. Be sure to use a MSHA/NIOSH approved respirator or equivalent.

**Exposure Limits**

Not available.

Section IX. Physical and Chemical Properties**Physical state @ 20°C**

Solid. (White Crystalline Powder.)

Solubility

Freely soluble in benzene, ether.
Soluble in 90 parts cold alcohol, 13 parts boiling alcohol.
Practically insoluble in water.

Specific Gravity

0.97 (water=1)

Molecular Weight

180.25

Partition Coefficient

Log K_{ow} : 4.81

Boiling Point

305 to 307 °C (581 to 584.6 °F)

Vapor Pressure

8.81×10^{-4} mmHg @ 25 °C

Melting Point

123 °C (253.4 °F)

Vapor Density

Not available.

Refractive Index

1.6264 @ 17 °C

Volatility

Not available.

Critical Temperature

Not available.

Odor

Not available.

Viscosity

Not available.

Taste

Not available.

Section X. Stability and Reactivity Data**Stability**

This material is stable if stored under proper conditions. (See Section VII for instructions)

Conditions of Instability

Avoid excessive heat and light.

Incompatibilities

Reactive with strong oxidizing agents.

Section XI. Toxicological Information**RTECS Number**

WJ4926500

Routes of Exposure

Eye Contact. Ingestion. Inhalation.

Toxicity Data

Mouse LD₅₀ (oral) 920 mg/kg
Mouse LD₅₀ (intraperitoneal) 6500 mg/kg

Chronic Toxic Effects

CARCINOGENIC EFFECTS : Not available.
MUTAGENIC EFFECTS : Not available.
TERATOGENIC EFFECTS : Not available.
DEVELOPMENTAL TOXICITY: Reproductive Effects.
Rat TDLo Oral 1400 mg/kg male 4 weeks prior to mating.
TOXIC Effects:
Paternal Effects - Testes, epididymis, sperm duct.
Paternal Effects - Other effects on male.
Repeated or prolonged exposure to this compound is not known to aggravate existing medical conditions.

Acute Toxic Effects

Harmful if ingested or inhaled. Minimize exposure to this material. Severe overexposure can result in injury or death. Follow safe industrial hygiene practices and always wear proper protective equipment when handling this compound.


Section XII. Ecological Information

Ecotoxicity	Not available.
Environmental Fate	trans-1,2-Diphenylethylene's production and use in the manufacture of dyes and optical bleaches, and as phosphors and scintillators may result in its release to the environment. If released to air, a vapor pressure of 8.81X10 ⁻⁴ mm Hg at 25 deg C indicates trans-1,2-diphenylethylene will exist solely as a vapor in the ambient atmosphere. Vapor-phase trans-1,2-diphenylethylene will be degraded in the atmosphere by reaction with photochemically-produced hydroxyl radicals and ozone molecules. The half-life for the reaction in air with hydroxyl radicals is estimated to be 6 hours. The half-life for the reaction in air with ozone is estimated to be 1 hour. If released to soil, trans-1,2-diphenylethylene is expected to have no mobility based upon an estimated K _{oc} of 9,850. Volatilization from moist soil surfaces may be an important fate process based upon an estimated Henry's Law constant of 7.2X10 ⁻⁴ atm-cu m/mole; however, adsorption to soil may attenuate this process. trans-1,2-Diphenylethylene is not expected to volatilize from dry soil surfaces based upon its vapor pressure. If released into water, trans-1,2-diphenylethylene is expected to adsorb to suspended solids and sediment based upon its estimated K _{oc} . Volatilization from water surfaces may be an important fate process based upon this compound's estimated Henry's Law constant. Estimated volatilization half-lives for a model river and model lake are 2 and 140 hours, respectively. However, volatilization from water surfaces is expected to be attenuated by adsorption to suspended solids and sediment. The estimated volatilization half-life from a model pond is 90 days if adsorption is considered. An estimated BCF of 1,000 suggests the potential for bioconcentration in aquatic organisms is very high. Occupational exposure to trans-1,2-diphenylethylene may occur through inhalation of dust particles and dermal contact with this compound at workplaces where it is produced or used. Limited monitoring data indicate that non-occupational exposure can occur from the ingestion of contaminated drinking water.

Section XIII. Disposal Considerations

Waste Disposal	Recycle to process, if possible. Consult your local regional authorities. You may be able to dissolve or mix material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber system. Observe all federal, state and local regulations when disposing of the substance.
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Section XIV. Transport Information

DOT Classification	Not a DOT controlled material (United States).
PIN Number	Not applicable.
Proper Shipping Name	Not applicable.
Packing Group (PG)	Not applicable.
DOT Pictograms	

Section XV. Other Regulatory Information and Pictograms

TSCA Chemical Inventory (EPA)	This compound is ON the EPA Toxic Substances Control Act (TSCA) inventory list.
WHMIS Classification (Canada)	On DSL.
EINECS Number (EEC)	203-098-5
EEC Risk Statements	R20/21/22- Harmful by inhalation, in contact with skin and if swallowed.
Japanese Regulatory Data	Not available.

Section XVI. Other Information

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Validated on 4/27/2007.
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Notice to Reader

TCI laboratory chemicals are for research purposes only and are NOT intended for use as drugs, food additives, households, or pesticides. The information herein is believed to be correct, but does not claim to be all inclusive and should be used only as a guide. Neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All chemical reagents must be handled with the recognition that their chemical, physiological, toxicological, and hazardous properties have not been fully investigated or determined. All chemical reagents should be handled only by individuals who are familiar with their potential hazards and who have been fully trained in proper safety, laboratory, and chemical handling procedures. Although certain hazards are described herein, we can not guarantee that these are the only hazards which exist. Our MSDS sheets are based only on data available at the time of shipping and are subject to change without notice as new information is obtained. Avoid long storage periods since the product is subject to degradation with age and may become more dangerous or hazardous. It is the responsibility of the user to request updated MSDS sheets for products that are stored for extended periods. Disposal of unused product must be undertaken by qualified personnel who are knowledgeable in all applicable regulations and follow all pertinent safety precautions including the use of appropriate protective equipment (e.g. protective goggles, protective clothing, breathing equipment, facial mask, fume hood). For proper handling and disposal, always comply with federal, state, and local regulations.