

SECTION 4. FIRST-AID MEASURES

INHALATION EXPOSURE: Remove to fresh air. Give oxygen and call a physician.
EYE CONTACT: Flush with water for 15 min. Seek medical help if necessary.
SKIN CONTACT: Wash area well with water. Seek medical help if necessary.
INGESTION: Administer water and call a physician or poison control center immediately. Do not induce vomiting.

SECTION 5. FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA

CO₂, FOAM, DRY CHEMICAL

SPECIAL FIRE FIGHTING PROCEDURES

Use standard fire fighting procedures.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

None.

SECTION 6. ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED

Standard absorbents can be used.

Wet used absorbent with water; store in air-tight container.

WASTE DISPOSAL METHOD: Incineration or sanitary landfill in accordance with local, state, and federal regulations.

SECTION 7. HANDLING AND STORAGE

HANDLING

Observe all warnings and precautions listed for the product.

Use in accordance with good manufacturing and industrial hygiene practices. Use product in a properly ventilated work area. Do not eat, drink or smoke while handling product.

STORAGE

Packaging: Glass, Aluminum or Phenolic Lined Steel

Store tightly sealed under inert gas in a cool, well-ventilated area.

FIRE PROTECTION

Keep away from heat, sparks, and open flame.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

VENTILATION: Local exhaust preferred. General ventilation required.

RESPIRATORY: Usually not required. Avoid inhaling concentrated vapors.

SKIN: Avoid skin contact. Use chemical resistant gloves.

EYES: Splash-proof safety glasses or goggles.

OTHER PROTECTIVE EQUIPMENT: Safety shower, eye wash

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: Liquid

APPEARANCE: colorless liquid

ODOR DESCRIPTION: fresh, fruity, citrus odor.

BOILING POINT: 221.95 C (EPI 4.0)

VAPOR PRESSURE : 0.0779 mmHg (20C, EPI 4.0)

VAPOR DENSITY (Air = 1): > 1

SPECIFIC GRAVITY @ 25C (water = 1): 0.8350:0.8450

SOLUBILITY IN WATER: Insoluble in water; soluble in alcohol.

FLASH POINT (CC): 185 F 85 C

LOGP : 3.550

SECTION 10. STABILITY AND REACTIVITY

INCOMPATIBILITIES

CONDITIONS TO AVOID: Presents no special reactivity hazard.

MATERIALS TO AVOID: Strong oxidizing agents

HAZARDOUS COMBUSTION PRODUCTS

CO, CO₂, water

SECTION 11. TOXICOLOGICAL INFORMATION

ACUTE EFFECTS

Most likely route of entry is through the skin.
Full strength may be irritating to skin and eyes.

IRRITATION DATA

Eye Rabbit: 0.5% test mat'l Blepharospasm in 6/6 after instillation of mat'l. Slight redness and increased discharge up to 24 hr observation. All cleared after 72 hours.

Skin Rabbit: irritant effects at 100%, erythema = 1.33, edema = 1.67. Very slight to well-defined erythema was evident, as was slight swelling. Skin fissures with scabbing and flaking evident in all.

TOXICITY DATA

Ames: The test mat'l was considered to be non-mutagenic in *S. typhimurium* strains TA1535, TA1537, TA98, TA100 & TA102 w/ & w/o metabolic activation upto 1000 ug/plate. (Pre-incubation test)

Ames: The test mat'l was considered to be non-mutagenic in *S. typhimurium* strains TA1535, TA1537, TA98, TA100 & TA102 w/ & w/o metabolic activation upto 5000 ug/plate. (Plate incorporation test)

Genotoxicity Oral (mouse) Under the conditions of the study, the test mat'l is considered to be non-mutagenic in this micronucleus assay; vehicle: corn oil; 500, 1000 & 2000 mg/kg doses.

LD50 Dermal (guinea pig) > 5 g/kg. Result for similar mat'l cis-4-Decenal.
LD50 Oral (rat) 7000 mg/kg.

OTHER DATA

0.5% test mat'l in alcohol produced no sensitization in 43/44 subjects. 1/44 considered not sensitized, but rechallenge recommended. Under rechallenge, no sensitization effects continued to be seen.

Photoallergy test G. pig: No effects. Dilution vehicle ethanol. Induction at 10%, challenge at 3%.

Phototoxicity skin G. pig: No effects. Dilution vehicle ethanol with 2% DMSO added. Mat'l tested at 3% in vehicle.

THRESHOLD LIMIT VALUE (TLV): Not established

OSHA PERMISSABLE EXPOSURE LIMIT (PEL): Not established

LISTED AS CARCINOGEN BY NTP, IARC, OR OSHA?: NO

SECTION 12. ECOLOGICAL INFORMATION

GENERAL

Prevent contamination of soil, ground- and surface water.

ECOTOXIC EFFECTS

Biodegradation test (OECD 301F): 20 mg/l readily biodegradable. 77% biodegradation after 28 days. 10-day window criterion fulfilled. No toxic effects noted.

SECTION 13. DISPOSAL CONSIDERATION

WASTE DISPOSAL METHOD: Incineration or sanitary landfill in accordance with local, state, and federal regulations.

SECTION 14. TRANSPORT INFORMATION

Class	Pack Group	Sub. Risk	UN No.
-------	------------	-----------	--------

Road(U.S.-DOT):	not regulated.
Air (IATA):	not regulated.
Sea (IMDG):	not regulated.

SECTION 15. REGULATORY INFORMATION

REVIEWS, STANDARDS, AND REGULATIONS

This chemical is listed on the following inventories:

TSCA AICS CHINA DSL EINECS(265-741-6) PICCS

LISTED AS CARCINOGEN BY NTP, IARC, OR OSHA?: NO

SECTION 16. OTHER INFORMATION

DISCLAIMER OF WARRANTIES AND LIMITATION OF LIABILITY

THE INFORMATION IN THIS MSDS WAS OBTAINED FROM SOURCES WHICH WE BELIEVE ARE RELIABLE. HOWEVER, THE INFORMATION IS PROVIDED WITHOUT ANY WARRANTY, EXPRESS OR IMPLIED REGARDING ITS CORRECTNESS.

BEDOUKIAN RESEARCH INC. ("BRI") MAKES NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OF ANY OTHER NATURE WITH RESPECT TO THE INFORMATION OR THE PRODUCT TO WHICH THE INFORMATION REFERS.

BRI'S SOLE AND EXCLUSIVE LIABILITY WITH RESPECT TO PRODUCTS PROVIDED TO BRI'S SATISFACTION TO BE DEFECTIVE OR NONCONFORMING SHALL BE THE REPLACEMENT OF SUCH PRODUCTS WITHOUT CHARGE OR REFUND OF THE PURCHASE PRICE UPON THE RETURN OF SUCH PRODUCTS IN ACCORDANCE WITH BRI'S INSTRUCTIONS. THIS REMEDY, IN THE MANNER PROVIDED HEREIN, SHALL CONSTITUTE FULFILLMENT OF ALL LIABILITIES OF BRI, WHETHER BASED ON CONTRACT, TORT OR OTHERWISE WITH RESPECT TO, OR ARISING OUT OF THE PRODUCTS. BRI SHALL NOT BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL, CONTINGENT OR SPECIAL DAMAGES.

GO BACK