

MATERIAL SAFETY DATA SHEET

MSDS No. EW090233
Revised Date: 2013/05/09

CODE: 093-02331, 095-02330, 099-02333

IDENTITY Isoprothiolane Standard

1. IDENTIFICATION OF THE SUBSTANCE OR MIXTURE AND OF THE SUPPLIER

PRODUCT IDENTIFIER : Isoprothiolane Standard

MANUFACTURER : Wako Pure Chemical Industries, Ltd.

SUPPLIER : SUPPLIER(In JAPAN) : Wako Pure Chemical Industries, Ltd.
ADDRESS : 1-2, Doshomachi 3-chome, Chuo-ku, Osaka, 540-8605, Japan
TELEPHONE NUMBER & EMERGENCY TELEPHONE NUMBER: (06)6203-3741

SUPPLIER(In U.S.A.) : Wako Chemicals USA, Inc.
ADDRESS : 1600 Bellwood Road, Richmond, VA 23237, U.S.A.
TELEPHONE NUMBER : (804)271-7677
EMERGENCY TELEPHONE NUMBER : (800)424-9300 (CHEMTREC)

SUPPLIER(In EUROPE) : Wako Chemicals GmbH, Germany
ADDRESS : Fuggerstrasse 12 ,D-41468 Neuss, GERMANY
TELEPHONE NUMBER & EMERGENCY TELEPHONE NUMBER : (02131)311-0

RECOMMENDED USE : Research use only.

2. HAZARDS IDENTIFICATION

CLASSIFICATION: according to Regulation (EC)No 1272/2008

GHS CLASSIFICATION : Acute toxicity-Oral: Category 4
Acute toxicity-Inhalation: Category 4
Eye damage/Eye irritation: Category 2
Hazardous to the aquatic environment - Acute hazard: Category 2
Hazardous to the aquatic environment - Chronic hazard: Category 2

PICTOGRAM :



WARNING

HAZARD STATEMENTS : H302 Harmful if swallowed.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H411 Toxic to aquatic life with long lasting effects.

PRECAUTIONARY STATEMENTS : P273 Avoid release to the environment.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

EU CLASSIFICATION: according to Directive 67/548/EEC

SYMBOL : Xn, N

R-phrase : R20/22 Harmful by inhalation and if swallowed.

R36 Irritating to eyes.

R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

3. COMPOSITION/INFORMATION ON INGREDIENTS

CHEMICAL IDENTITY : Di-isopropyl 1,3-dithiolan-2-ylidenemalonate

FORMULA : C₁₂H₁₈O₄S₂

MOLECULAR WEIGHT : 290.40

CAS NUMBER : 50512-35-1

TSCA INVENTORY : Not listed (See Section 15)

EINECS No. : Not listed

EC INDEX NUMBER : Not listed

4. FIRST AID MEASURES

GENERAL ADVICE : Wash off immediately with soap and plenty of water. In the case of respirable dust and/or fumes, use self-contained breathing apparatus and dust impervious protective suit. Use personal protective equipment.

INHALATION : Move victim to fresh air. If breathing is difficult, give oxygen. If irritation persists, consult a physician.

SKIN CONTACT : Remove contaminated clothes and shoes, rinse skin with plenty of water or shower. Use soap to help assure removal. If irritation persists, consult a physician.

EYE CONTACT : Remove any contact lenses at once. Flush eyes well with a large amount of running water for at least 15 minutes. Assure adequate flushing by separating the eyelids with sterile fingers. If irritation persists, transport to a hospital immediately.

INGESTION : Rinse mouth, give plenty of water to dilute the substance. Never give anything by mouth to an unconscious person. Transport to a hospital immediately.

5. FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA : Carbon dioxide, dry chemical powder, foam, water, water spray

FIRE & EXPLOSION HAZARDS : Toxic, irritating dust or smoke may be emitted.

SPECIAL PROTECTIVE EQUIPMENT FOR FIREFIGHTERS : Firemen should wear normal protective equipment (full bunker gear) and positive-pressure self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS : Remove ignition sources and ventilate the area. In case of insufficient ventilation, wear suitable respiratory equipment. Avoid raising dust and avoid contact with skin and eyes.

ENVIRONMENTAL PRECAUTIONS : Prevent spills from entering sewers, watercourses or low areas.

METHODS FOR CLEANING UP : Do not touch spilled material without suitable protection (See section 8). After material is completely picked up, wash the spill site with soap and water and ventilate the area. Put all wastes in a plastic bag for disposal and seal it tightly. Remove, clean, or dispose of contaminated clothing.

7. HANDLING AND STORAGE

PRECAUTION FOR SAFE HANDLING : Avoid contact with eyes, skin and clothing. Avoid prolonged or repeated exposure. Handle material with suitable protection.

CONDITIONS FOR SAFE STORAGE : Store away from sunlight in a cool (2 - 10 °C = 36 - 50 °F) well-ventilated dry place. Keep container tightly closed.

INCOMPATIBILITIES : Oxidizers

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING MEASURES : Use exhaust ventilation to keep airborne concentrations below exposure limits. Use only with adequate ventilation.

VENTILATION : Local Exhaust ; Necessary, Mechanical (General) ; Recommended

INDIVIDUAL PROTECTION MEASURES :

Respiratory protection : Use a NIOSH/MSHA or European Standard EN149 approved respirator if the vapor concentrations exceed regulatory guidelines.

Hand protection : Chemical resistant gloves

Eye protection : Safety glasses (goggles)

Skin protection : Protective clothing

CONTROL PARAMETER :

OSHA Final Limits : None established

ACGIH TLV(s) : None established

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE : White - slightly yellow, crystals - crystalline powder

ODOUR : Not available

pH : Not available

MELTING POINT : 54 - 56 °C = 129 - 133 °F

INITIAL BOILING POINT : 167 - 169 °C = 333 - 336 °F / 66.7 Pa

FLASH POINT : Not available

FLAMMABILITY (solid, gas) : Not available

EXPLOSIVE LIMITS : Not available

VAPOR PRESSURE : Not available

SPECIFIC GRAVITY : Not available

SOLUBILITY IN ;

WATER : Practically insoluble

METHANOL, ACETONE : Soluble

PARTITION COEFFICIENT (log Po/w) : 2.88

DECOMPOSITION TEMPERATURE : Not available

10. STABILITY AND REACTIVITY

CHEMICAL STABILITY : Stable under recommended storage conditions.

CONDITIONS TO AVOID : Sunlight, heat

INCOMPATIBLE MATERIALS : Oxidizers

HAZARDOUS DECOMPOSITION PRODUCTS : Carbon oxides (CO, CO₂), sulfur oxides (SO_x)

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY(oral/dermal/inhalation) : LD50(ori, rat): 1190mg/kg (RTECS)
LD50(skin, rat): 10250mg/kg (RTECS)
LD50(ipr, rat): 480mg/kg (RTECS)
LD50(ori, mouse): 1340mg/kg (RTECS)
LC50(ihl, rat): 2.77mg/L (Japan application for pesticide registration, 2001)
TOXICITY DATA : May be harmful if inhaled and ingested.
SKIN CORROSION/IRRITATION : May cause skin irritation.
EYE DAMAGE/EYE IRRITATION : rabbit; Moderate (Japan application for pesticide registration, 2001)
RESPIRATORY OR SKIN SENSITIZATION : Not available
GERM CELL MUTAGENICITY : Not available
REPRODUCTIVE TOXICITY : Not available
STOT (SINGLE EXPOSURE) : Not available
STOT (REPEATED EXPOSURE) : Not available
ASPIRATION HAZARD : Not available
CARCINOGENICITY : Not available
ADDITIONAL INFORMATION ;
NTP : Not listed
IARC : Not listed
OSHA : Not listed
ACGIH : Not listed

12. ECOLOGICAL INFORMATION

ECOTOXICITY : LC50(rainbow trout): 8100ug/L/96hr (Japan department of environmen lisk report vol 2, 2003)
PERSISTENCE AND DEGRADABILITY : Not available
BIOACCUMULATION POTENTIAL : Not available
MOBILITY IN SOIL : Not available
OTHER ADVERSE EFFECTS : Not available

13. DISPOSAL CONSIDERATION (INCLUDING CONTAINER)

Dispose of contents/container in accordance with local/regional/national/international regulations.
Do not dump into sewers, on the ground or into anybody of water.

14. TRANSPORT INFORMATION

IATA :
UN NUMBER : UN3077
UN PROPER SHIPPING NAME : Environmentally hazardous substance, solid, n.o.s. (Isoprothiolane)
CLASS or DIVISION : Miscellaneous dangerous goods.(Class 9)
PACKING GROUP : PG III
MARINE POLLUTANT : Yes
DOT(Department of Transportation) :
IDENTIFICATION NUMBER : UN3077
PROPER SHIPPING NAME : Environmentally hazardous substance, solid, n.o.s. (Isoprothiolane)
HAZARD CLASS : Miscellaneous hazardous material (Class 9)

15. REGULATORY INFORMATION

US REGULATIONS ;
EPA : CERCLA RQ= Not listed
EPCRA TPQ= Not listed
OSHA : TQ= Not listed
TSCA : Use of this product must be restricted to research or analysis for the development of a product in accordance with the Act.

16. OTHER INFORMATION INCLUDING INFORMATION ON PREPARATION AND REVISION OF THE SDS

REFERENCE :

1. Registry of Toxic Effects of Chemical Substances (RTECS)
2. Regulation (EC)No 1272/2008 [CLP]

No specific notes

The above information is believed to be correct to be the best of our knowledge and information but does not purport to be all inclusive and shall be used only as a guide. This product is intended to be used by expert persons having chemical knowledge and skill, at their own discretion and risk and

Wako shall not be held liable for any damage resulting from handling or from contact with the above material.