

Environmental hazards:

Hazard to the aquatic environment(Acute hazard)	Category 3
Hazard to the aquatic environment(Long-term hazard)	Category 3
Hazard to the ozone layer	Classification Not Possible

GHS label elements
Symbol

Signal word

Danger

Hazard statements

Flammable solid
 May be harmful if swallowed
 May be harmful if inhaled
 Causes mild skin irritation
 May damage fertility or the unborn child
 Causes damage to organs (Respiratory organs, Liver, Central nervous system, Kidney)
 May cause respiratory irritation
 May cause drowsiness or dizziness
 Causes damage to organs (Respiratory organs, Liver, Central nervous system, Kidney Nervous system) through prolonged or repeated exposure
 Harmful to aquatic life
 Harmful to aquatic life with long lasting effects

Precautionary Statements

Prevention

Obtain special instructions before use.
 Do not handle until all safety precautions have been read and understood.
 Keep away from heat/sparks/open flames/hot surfaces. – No smoking.
 Wear protective gloves/protective clothing/eye protection/face protection.
 Do not eat, drink or smoke when using this product.
 Wash thoroughly after handling.
 Do not breathe dust/fume/gas/mist/vapours/spray.
 Avoid release to the environment.

Response

In case of fire: Use foam, dry chemical powder or carbon dioxide for extinction.
 Get medical advice/attention if you feel unwell.
 If skin irritation occurs: Get medical advice/attention.
 If exposed or concerned: Get medical advice/attention.

Storage

Store locked up.

Disposal

Dispose of contents/container to in accordance with local /regional/national/international regulations.

3. Composition/information on ingredients

Substance or Mixture : Mixture
 Chemical characterization : Butyl rubber sealant

Hazardous ingredients

Ingredient	CAS No.	Concentration
Xylene	1330-20-7	2 – 3 %
Ethylbenzene	100-41-4	1 – 2 %
Toluene	108-88-3	4 – 5 %
Hydrotreated light distillate (petroleum)	8052-41-3	20 – 25 %

Ingredients

Chemical entity	Proportion
Butyl rubber	15 – 25 %
Softener	5 – 15 %
Filler, Pigment	45 – 55 %
Solvent	30 – 35 %

4. First-aid measures

- Inhalation : Move exposed person to fresh air. Keep person warm and at rest.
Get medical attention if symptoms appear.
- Skin contact : Remove/Take off immediately all contaminated clothing and shoes.
Wash with soap and water. Continue to rinse for at least 10 minutes
Get medical attention if irritation develops.
Wash contaminated clothing before reuse.
- Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.
- Ingestion : Do not induce vomiting. Get medical attention immediately.
- Protection of first-aiders : Put on appropriate personal protective equipment.

5. Fire-fighting measures

- Suitable extinguishing media:
Use water spray, foam, dry chemical powder or carbon dioxide.
- Not suitable extinguishing media:
No data
- Special exposure hazards:
Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. This material is harmful to aquatic organisms. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
- Hazardous combustion products
Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
- Special protective equipment for fire-fighters:
Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6. Accidental release measures

- Personal precautions, protective equipment and emergency procedures;
Shut off all ignition sources. No flares, smoking or flames in hazard area.
Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see section 8).
- Environmental precautions;
Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.
Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
- Methods and materials for containment and cleaning up;
Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Dispose of via a licensed waste disposal contractor.

7. Handling and storage

- Precautions for safe handling:
Put on appropriate personal protective equipment (see section 8).
Keep away from heat, sparks and open flame.–No smoking
Ground/Bond container and receiving equipment.
Use explosion-proof electrical/ventilating/lighting/equipment.
Take precautionary measures against static discharge.
Use only non-sparking tools.
Use only outdoors or in a well-ventilated area.
Avoid contact with eyes and other membranes.
Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking.
- Conditions for safe storage, including any incompatibilities;
Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink.
Protect from frost, atmospheric moisture and water. Store locked up.

8. Exposure controls/personal protection

Control parameters

Xylene

TLV-TWA 100ppm, 434mg/m³ (skin) (ACGIH 2006)
 TLV-STEL 150ppm, 650mg/m³ (skin) (ACGIH 2006)

Ethylbenzene

TLV-TWA 20ppm (ACGIH 2012)

Toluene

TLV-TWA 20ppm (skin) (ACGIH 2009)

Hydrotreated light distillate (petroleum)

TLV-TWA 100ppm (ACGIH 2005)

Engineering controls:

Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Hygiene measures

Ensure that eyewash stations and safety showers are close to the workstation location.
 Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period.

Personal protection

Respiratory protection (specify type): Chemical cartridge respirator with an organic vapour cartridge.

Hand protection: Rubber gloves.

Eye protection: Safety glasses.

Skin and body protection: Work clothes.

9. Physical and chemical properties

Appearance : Grey paste
 Odour : like aroma
 pH : Not applicable
 Melting point : No data
 Boiling point : No data
 Flash point : 33.8 °C (Closed cup)
 Ignition point : No data
 Upper/lower flammability or explosive limits : No data
 Vapour pressure : No data
 Density : approx. 1.2 g/cm³ (at 25 degrees.)
 Solubility in water : insoluble (at 20 degrees.)
 Decomposition temp.: No data

10. Stability and reactivity

Stability : The product is stable.
 Possibility of hazardous reactions : Stable usually.
 Conditions to avoid : No data
 Incompatible materials : No data
 Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

11. Toxicological information

Acute toxicity (oral)

Xylene Oral LD50 (rat) 3,500 mg/kg (CaPSAR, 1993)
 Ethylbenzene Oral LD50 (rat) 3,500 mg/kg (EHC 186 (1996))
 Toluene Oral LD50 (rat) 4,800mg/kg calculated (EU-RAR No.30 (2003))

Acute toxicity (inhalation: vapour)

Ethylbenzene LC50 (rat) 17.2 mg/L (4,000 ppm) (ATSDR (1999), EHC 186, (1996))
 Toluene LC50 (rat) 18mg/L calculated (EU-RAR No.30 (2003))

Skin corrosion/Irritation

Xylene Based on the description in the report on the rabbit skin irritation test: moderate irritant (CERI-NITE Hazard Assessment No.62, 2004)
 Ethylbenzene: Based on the evidence of primary skin irritation tests (ATSDR (1999)): A 24-hour application causes mild skin irritation (ethyl benzene is considered mildly irritating to the skin, though the results are not those of 4-hour application).
 Toluene: Based on the evidence of moderate skin irritation caused by toluene in rabbit primary skin irritation test (4 hour exposure) (EU-RAR No. 30, 2003).

Toxic to reproduction

- Xylene: Based on the evidence of weight reduction and hydrocephalus in fetuses at dosing levels not toxic to parent animals in mouse developmental toxicity tests, described in CERI-NITE Hazard Assessment (No. 62, 2004), EHC 190 (1997) and IRIS (2003).
- Ethylbenzene: Based on the description of mice/rat teratogenicity tests (CERI Hazard Data 96-41 (1998), SIDS (2005), MOE Risk Assessment vol. 1 (2002)): Toxic effects on the embryo (urinary malformation) are observed at dosing levels not toxic to maternal animals.
- Toluene: Based on the results of human epidemiological studies suggesting increased incidence of natural abortion after toluene exposure, abnormal development and malformation of newborns caused by prenatal toluene abuse and decreased plasma concentrations of luteinizing hormone and testosterone after toluene exposure.

Specific target organs/systemic toxicity following single exposure

- Xylene: Based on the human evidence including "throat irritation, severe pulmonary congestion, alveolar hemorrhage, pulmonary edema, congestion accompanying hepatomegaly, centrilobular vacuolation of hepatocytes, nerve cell damage associated with dot hemorrhage, swelling and disappearance of Nissl bodies, limb cyanosis, a transient increase in serum transaminase activity, an increase in the blood level of urea, a decrease in endogenous creatinine clearance in the urine, liver damage, severe kidney damage, amnesia, coma" (CERI-NITE Hazard Assessment No.62, 2004) and "pulmonary congestion, pulmonary edema, focal alveolar hemorrhage" (MOE Risk Assessment Vol.1, 2002) and the evidence from animal studies including "strong narcotic effect (EHC 190, 1997). The basis for the classification includes data on xylene with unknown composition or containing other substances (ethyl benzene, toluene, etc.).
- Toluene: Based on the human evidence including "toluene is rapidly absorbed mainly through inhalation and acts on the central nervous system. Toluene causes fatigue, sleepiness, dizziness and mild respiratory irritation at 50-100 ppm, excitement associated with paresthesia and nausea at 200-400 ppm and central nervous system suppression leading to drunkenness, delirium and abnormal gait at 500-800 ppm" (CERI Hazard Data 96-4, 1997)

Specific target organs/systemic toxicity following repeated exposure

- Xylene: Based on the human evidence including "eye/nose irritation, thirst" (DFGOT Vol. 15, 2001) and "chronic headache, chest pain, abnormal electroencephalogram, dyspnea, cyanosis of the hands, fever, a decrease in WBC count, discomfort, impairment of pulmonary function, a decrease in working capacity, physical/mental disorders" (CERI-NITE Hazard Assessment No.62, 2004). The basis for the classification includes data on xylene with unknown composition or containing other substances (ethyl benzene, toluene, etc.).
- Toluene: Based on the human evidence including "Toluene induces drug dependency, and inhalant abuse of toluene causes chronic central nervous system damage including restricted vision, headache associated with nystagmus and hearing loss, tremor, ataxia and amnesia. Cerebral atrophy was found in CT tests, and renal dysfunction manifested as proteinuria and hematuria was also observed (CERI Hazard Data 96-4, 1997).

12. Ecological information**Aquatic ecotoxicity**

- Xylene: Fish LC50 ; 3.3mg/L/96H (CERI-NITE Hazard Assessment 2005)
- Ethylbenzene: Shellfish LC50 ; 0.4mg/L/96H (CERI-NITE Hazard Assessment 2006)
- Toluene: 96-hour EC50=3.5mg/L of brine shrimp

Hazard to the ozone layer: Does not contain any ingredient listed in the Annexes to the Montreal Protocol. Classification Not Possible.

13. Disposal considerations**Waste disposal method**

It must be disposed of in a special waste disposal unit in accordance with the corresponding regulations.

Contaminated packaging

Packaging that cannot be cleaned should be disposed of as product waste.

14. Transport information

IMDG

UN number : 1325
 IMDG Class : 4.1
 Packing group : III
 Proper shipping name : Flammable solid

IATA

UN number : 1325
 IATA Class : 4.1
 Packing group : III
 Proper shipping name : Flammable solid

Sea Pollution Prevention Act Harmful liquid material
 The enforcement order separate table first; Y Group
 (Xylene, Ethylbenzene, Toluene)
 However, it is non-corresponded when net weights of one
 container are less than 5L

15. Regulatory information

Follow all regulations in your country.

Regulation in Japan

Fire Service Law : The second group materials
 Industrial Safety and Health Law
 Control concerning toxic artic ; Xylene, Ethylbenzene, Toluene,
 Hydrotreated light distillate (petroleum)

Pollutant Release and Transfer Register : Xylene, Ethylbenzene, Toluene

Poisonous and Deleterious Substances Cont : Not available

Sea Pollution Prevention Act Harmful liquid material
 The enforcement order separate table first; Y Group
 (Xylene, Ethylbenzene, Toluene)
 However, it is non-corresponded when net weights of one
 container are less than 5L

16. Other information**Literature:**

- 1) Chemicals Safety Data Sheet (MSDS) Part 1: Content and Order of Items
- 2) Guideline for MSDS Edition (Revised Edition) by Japan Chem. Ind. Assoc.
- 3) GHS Classification Database, Site of National Institute of Technology and Evaluation
- 4) Hazard Handbook of Chemicals by Japan Industrial Safety and Health Association
- 5) Hazard communication of chemicals based on GHS-Labeling and Safety Data Sheet(SDS) JIS Z 7253:2012

This data sheet is edited by referring to currently available information, however, it is not intended to guarantee the data values or the precision of contained information. The precautions mentioned above are for ordinary handling and use only therefore please handle with care by implementing appropriate safety measures for new application and usage.