

SAFETY DATA SHEET

1. Product and company (manufacturer) identification

Product:	Eslon Draitight 502A
Manufacturer:	Sekisui Chemical Co., Ltd.
Address:	Toranomon 2-10-4, Minato-ku, Tokyo 105-8566
Responsible section:	Urban Infrastructure & Environmental Products Company Pipe Systems Division
Telephone:	+81-3-6748-6492
Urgent telephone:	+81-3-6748-6492
Fax:	+81-3-6748-6564
Urgent contact:	Same as above
Application & restriction	Bonding agent for polyvinyl chloride piping system for sewers. Other applications are prohibited.
Document number:	#502A

2. Hazards identification

GHS Classification

Physicochemical hazards:	Explosives	Not classified
	Flammable gases	Not classified
	Aerosols	Not classified
	Oxidizing gases	Not classified
	Gases under pressure	Not classified
	Flammable liquids	Not classified
	Flammable solids	Not classified
	Self-active chemicals	Not classified
	Pyrophoric liquids	Not classified
	Pyrophoric solids	Not classified
	Self-heating chemicals	Classification not possible
	Chemicals which, in contact with water, emit flammable gases	Not classified
	Oxidizing liquids	Not classified
	Oxidizing solids	Not classified
	Organic peroxides	Not classified
	Substances corrosive to metals	Classification not possible
Health hazards:	Desensitized explosives	Not classified
	Acute toxicity (oral)	Not classified
	Acute toxicity (dermal)	Classification not possible
	Acute toxicity (inhalation: gas)	Not classified
	Acute toxicity (inhalation: vapor)	Classification not possible
	Acute toxicity (inhalation: dust and mist)	Classification not possible
	Skin corrosion/irritation	Category 2
	Eye damage/irritation	Category 2B
	Respiratory sensitization	Classification not possible
	Skin sensitization	Category 1
	Germ cell mutagenicity	Classification not possible
	Carcinogenicity	Classification not possible
	Reproductive toxicity	Classification not possible
	Specific target organ toxicity (single exposure)	Category 3 (respiratory tract irritancy)
	Specific target organ toxicity (repeated exposure)	Category 1 (respiratory system)
	Aspiration hazard	Classification not possible
Environmental hazards:	Hazard to the aquatic environment (Acute hazard)	Category 1
	Hazard to the aquatic environment (Long-term hazard)	Category 1
	Hazard to the ozone layer	Classification not possible

Pictogram or symbol:



Signal word:

Danger

Hazard statement: (H315+H320) Causes skin and eye irritation
 (H317) May cause an allergic skin reaction.
 (H335) May cause respiratory irritation.
 (H372) Causes damage to organs (respiratory) through prolonged or repeated exposure.
 (H410) Very toxic to aquatic life with long lasting effects.

Precautionary statement:
 Do not breathe dust/fume/gas/mist/vapors/spray. (P260)
 Avoid breathing dust/fume/gas/mist/vapors/spray. (P261)
 Wash hands and eyes thoroughly after handling. (P264)
 Do not eat, drink or smoke when using this product. (P270)
 Use only outdoors or in a well-ventilated area. (P271)
 Contaminated work clothing should not be allowed out of the workplace. (P272)
 Avoid release to the environment. (P273)
 Wear protective gloves. (P280)
 IF ON SKIN: Wash with plenty of soap and water. (P302+P352)
 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. (P304+P340)
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. (P305+P351+P338)
 Call a POISON CENTER or doctor/physician if you feel unwell. (P312)
 Get medical advice/attention if you feel unwell. (P314)
 Specific treatment (see the label). (P321)
 If skin irritation occurs: Get medical advice/attention. (P332+P313)
 If skin irritation or rash occurs: Get medical advice/attention. (P333+P313)
 If eye irritation persists: Get medical advice/attention. (P337+P313)
 Take off contaminated clothing and wash it before reuse. (P362+P364)
 Collect spillage. (P391)
 Store in a well-ventilated place. Keep container tightly closed. (P403+P233)
 Store locked up. (P405)
 Dispose of contents/container in accordance with local/regional/national/international regulations. (P501)

3. Composition/information on ingredients

Nature of composition: Mixture
Chemical or common name: Liquid epoxy resin
Hazardous ingredients: Reaction product of bisphenol A and epichlorohydrin, Titanium oxide, Portland cement

Component	Content	CAS Number	Reference Number in Gazetted List in Japan	Others
Reaction product of bisphenol A and epichlorohydrin	30 to 35%	25068-38-6	(7)-1283	
Trimethylolpropane triglycidyl ether	5 to 14%	30499-70-8	(7)-343	
Silica (amorphous)	5 to 14%	112926-00-8	(1)-548	
Titanium oxide	1 to 10%	13463-67-7	(1)-558	
Portland cement	45 to 50%	65997-15-1	-	

※The content is listed as a range as it is confidential information.

4. First-aid measures

If vapor is inhaled: Take the affected person to a clean-air space and give him rest in a easy-breathing pose.
 Seek physician's counsel as may be needed.

If touched to skin: Immediately wipe off and wash the skin with plenty water and soap.
 Take off the contaminated clothing's for cleaning.
 Seek physicians counsel if he suffers from irritation or drowsiness.

If gets in eye: Rinse cautiously with plenty water over 15 minutes.
 Remove contact lenses, if present and easy to do. Continue rinsing.
 Seek physician's counsel.

If swallowed: Immediately seek physician's counsel.
 Rinse the mouth well and drink a lot of water to vomit.

Special note to physician: No information

5. Fire-fighting measures

Extinguishing agents: Carbon dioxide, powder agent, foam agent
Prohibited extinguishing agent: Water flux
Specific hazards: Fire may cause to generate irritant, toxic or erosive gas.
 Easily flammable. It will readily be ignited by heat, spark or flame.
 Heating of container may cause explosion.
 Easily inflammable liquid and vapor.

Proper extinguishing method: Remove surrounding combustibles and use extinguishing agents.
 Use foam agent to choke a large scale fire.
 Fight against fire standing to its windward as much as possible and wear Respirator if necessary.
 The use of water can spread the fire and be dangerous.

6. Accidental release measures

Health hazard precaution, protective wear and first-aid	Workers should use protective wears (See Chapter 8) to prevent contact with the spilt adhesive and inhalation of its vapor. Rope off the crowd from the leak spot.
Environmental hazard precaution:	Prevent flow out to river, etc. so as not to badly affect the environment.
Recovery and neutralization:	For small scale leakage, use absorbent (sawdust, dirt, sand, waste rug) to remove most of the spill and collect in sealed containers. For large scale leakage, build bank around the spill and lead the liquid to a safer place for recovery. Alternatively, absorb the spillage onto sand, rags, etc. and collect it in a sealed container.
Prevention of secondary casualty:	Quickly remove all the combustibles from around the leak spot and provide extinguishers ready for use.

7. Handling and storage precautions**Handling**

Technical measures:	Use protective wears if inhalation or skin contact is foreseen. No open flames.
Local & total ventilation:	Handling work must be practiced in a room where local or total ventilation facility is functioning.
Safe handling:	Ban of high temperature substance, sparking and fire at nearby points. Prohibition of eating, drinking and smoking while the product is used. Wash hands well after handling. Avoid contact of the product with eye, skin and clothing. Do not inhale vapor, mist and spray of the product. Handle it only after reading and understanding all the precautions. Use the product only in a well ventilated room or outdoors.

Storage

Storing conditions:	Store in a remote room from heat, sparks and naked flame. No smoking in the storage room. Store in a cool, ventilated room. Lock the storage room.
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8. Exposure controls and personal protection

Facility measures:	Local ventilation of closed work room or total proper ventilation to prevent vapor inhalation.
Control concentration:	Not determined
Permissible concentration (Exposure limit, Biological exposure guide line)	
Japan society for occupational health.	Not determined
ACGIH(2005) TLV-TWA	1mg/m ³ (Portland cement)
Protective wears:	
Respiratory protection:	Use aspirator with appropriate filter
Hand protection:	Impermeable gloves
Eye protection:	Glasses-type goggles with side plates.
Skin and body protection:	Long-sleeve fatigue uniform
Hygienic measures:	Wash hands well after handling.

9. Physical and chemical properties

Physical state	Viscous liquid
Color	Ash gray
Odor	Characteristic
Melting point/Freezing point	No data available
Boiling point or initial boiling point	No data available
Flammability	No data available
Lower and upper explosion limit/flammability limit	No data available
Flash point	250°C
Auto-ignition temperature	No data available
Decomposition temperature	No data available
pH	Not applicable
Dynamic viscosity	Not applicable
Solubility	insoluble in water, soluble in common organic solvents
n-octanol/water partition coefficient:	No data available
Vapor pressure	Not applicable
Density and/or relative density	1.6~1.9 (20°C)
Relative vapor density	Heavier than air
Particle characteristics	No data available

10. Stability and reactivity

Stability:	Stable under normal conditions and handling.
Chemical stability:	Stable under normal conditions and handling.
Possibility of hazardous reaction:	Reacts with organic base, strong oxidizing agents.
Prohibitive conditions:	Heat
Prohibitive contact:	Organic base, oxidizing agent
Hazardous decomposed substances:	Generates Aldehyde, Acid and Organic matter by thermal decomposition.

11. Hazard information

Acute toxicity (oral)	Estimation ATE mix=11400mg/kg
Skin corrosion/irritation	The product, as the mixture, falls in Not classified
Eye damage/irritation	The product, as the mixture, falls in Category 2.
Skin sensitization	The product, as the mixture, falls in Category 2B.
Single toxicity	The product, as the mixture, falls in Category 1.
Reproductive toxicity	The product, as the mixture, falls in Category 3 (respiratory tract irritancy)
	The product, as the mixture, falls in Category 1 (respiratory system)

As a result of the Ministry of Health, Labor and Welfare's toxicity study, mutagenicity tests using micro-organisms and chromosomal aberration tests using mammalian cultured cells showed mutagenicity exceeding the prescribed criteria and may cause health problems.

12. Ecological information

Ecotoxicity:	None known at present.
Persistence/degradability:	None known at present.
Ecological accumulative property:	None known at present.
Mobility in soil:	None known at present.
Hazard to the aquatic environment (Acute hazard):	The product, as the mixture, falls in Category 1.
Hazard to the aquatic environment (Long-term hazard):	The product, as the mixture, falls in Category 1.
Hazard to the ozone layer:	Does not contain any ingredients listed in the Annexes to the Montreal Protocol. Classification not possible.

13. Notes on disposal

Residual & waste:	In the disposal of residual and other wastes, observe the relevant laws /regulations and local government rules. Users of the product should contract with the local government or licensed 'Industrial Waste Processors' for disposal of waste. It is important to let the contractor know well of fire and health hazards of the product, prior to disposal.
Contaminated containers & packages:	Clean the containers for reuse or dispose them properly in accordance with relevant regulations and local government rules. Completely empty containers prior to disposal.

14. Transport information

International rule	
UN number:	3077
Proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
UN classification:	Class 9
Packing group:	III
Sea Pollution Prevention Act	Harmful liquid material The enforcement order separate table first; X Group (Reaction product of bisphenol A and epichlorohydrin) However, it is not applicable when net weight in one container is 5L or less.
Domestic control:	
Guidance Number	171
Onshore control info.	Observe the Fire Defense Law.
Offshore control info.	Observe the Marine Vessel Safety Law.
Air cargo control info.	Observe the Aviation Law.
Special safety measure:	Observe the Fire Defense Law. On-board containers of hazardous material must be piled firmly and orderly to avoid falling, tumbling and breaking. Cargo of hazardous material must be transported in a way the containers or the material itself do not suffer severe friction and vibration. If possible cause of casualty, such as heavy leakage, is found during transportation, try to remedy the situation and notify the fact to the nearby fire department or the relevant bureau. The driver carrying hazardous material must hold Yellow Card. Do not load hazardous materials together with food and feedstuff.

15. Regulatory information**Labor Safety and Hygiene Law:**

Hazardous materials to be notified to the authority (Chapter 57, Section 2)

(Titanium oxide, portland cement)

Hazardous materials to be posted (Chapter 18 of Ordinance)

(Titanium oxide, portland cement)

Mutagenicity chemical substance

2nd class organic solvents (Solvent Addiction Prevention Rule, Clause 1.1.4)

(Not applicable)

Mutagenicity chemical substance

(Reaction product of bisphenol A and epichlorohydrin)

Carcinogenicity of chemical substances

(Ordinance on Industrial Safety and Health Chapter 34,Section 2-4)

(Not applicable)

Chemical substances that cause skin and other skin disorders

(related to Article 22 of the Law).

(Reaction product of bisphenol A and epichlorohydrin)

Fire Defense Law:

Not applicable

PRTR Law:

Not applicable

Poisonous & Deleterious Substance Control Law:

Not applicable

Sea Pollution Prevention Act

Harmful liquid material

The enforcement order separate table first; X Group

(Reaction product of bisphenol A and epichlorohydrin)

However, it is not applicable when net weight in one container is 5L or less.

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

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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.