ThreeBond

SAFETY DATA SHEET

Issue date 27-Sep-2021 **Revision Date** 27-Sep-2021 **Revision Number** 1

1. Identification

Product Name ThreeBond 2083L -Base resin-

Recommended use of the chemical and restrictions on use
Recommended use Adhesive, Sealant

Details of the supplier of the safety data sheet
Supplier ThreeBond Fine Chemical Co., Ltd.
1-1 Oyama-cho, Midori-ku, Sagamihara-shi, Kanagawa 252-0146 Japan

Emergency telephone number +81-42-703-7126 (Inquiries regarding SDS content)
+81-42-670-5333 (Inquiries regarding the product or SDS claim)

2. Hazard(s) identification

GHS - Classification

Acute toxicity - Oral	Classification not possible
Acute toxicity - Dermal	Classification not possible
Acute toxicity - Inhalation (Gases)	Classification not applicable
Acute toxicity - Inhalation (Vapors)	Classification not possible
Acute toxicity - Inhalation (Dusts/Mists)	Classification not possible
Skin corrosion/irritation	Category 2
Serious eye damage/eye 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
Effects on or via lactation	No effects on or via lactation
Specific target organ toxicity (single exposure)	Category 1
Category 1 Respiratory system.	
Specific target organ toxicity (repeated exposure)	Category 1
Category 1 Respiratory system.	
Aspiration hazard	Classification not possible
Acute aquatic toxicity	Category 2
Chronic aquatic toxicity	Category 2
Ozone	Classification not possible

GHS label elements



Signal word Danger

Hazard statements
H315 - Causes skin irritation

H320 - Causes eye irritation
H317 - May cause an allergic skin reaction
H370 - Causes damage to organs
H372 - Causes damage to organs through prolonged or repeated exposure
H411 - Toxic to aquatic life with long lasting effects
H370 - Causes damage to the following organs: Respiratory system.
H372 - Causes damage to the following organs through prolonged or repeated exposure: Respiratory system.

Precautionary statements
Prevention
Wash face, hands and any exposed skin thoroughly after handling.
Wear protective gloves.
Contaminated work clothing should not be allowed out of the workplace.
Do not breathe dust/fume/gas/mist/vapors/spray.
Do not eat, drink or smoke when using this product.
Use only outdoors or in a well-ventilated area.
Avoid release to the environment.

Response
IF exposed or concerned: Call a POISON CENTER or doctor.
Get medical advice/attention if you feel unwell.
Specific treatment (see section 4 on this SDS).
Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.
IF ON SKIN: Wash with plenty of water and soap.
Take off contaminated clothing and wash it before reuse.
If skin irritation or rash occurs: Get medical advice/attention.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
Call a POISON CENTER or doctor if you feel unwell.
Collect spillage.
Storage
Store locked up.
Store in a well-ventilated place. Keep container tightly closed.
Disposal
Dispose of contents/container to an approved waste disposal plant.

Other hazards

May be harmful in contact with skin.

3. Composition/information on ingredients

Pure substance/mixture Mixture

Chemical name	CAS No	Weight-%	ENCS Number	ISHL No
Titanium dioxide (IV)	13463-67-7	0.1-<1	(1)-558,(5)-5225	(5)-5225,(1)-558 2-(3)-509
Bisphenol A-epichlorohydrin polymer	25068-38-6	15-<25	(7)-1283	(7)-1283
Other epoxy resin	-	15-<25	-	-
Inorganic filler	-	55-<65	-	-

Pollutant Release and Transfer Registry (PRTR)
Not applicable

Industrial Safety and Health Law
ISHL Notifiable Substances
ISHL Notifiable Substances - information (safety data sheet) to be supplied; Industrial Safety and Health Law enforcement order Table 9 (related to Industrial Safety and Health Law article 57-2 and ISHL Ordinance Article 34-2-4)

Chemical name	CAS No	Category	Ordinance number
Titanium dioxide (IV)	13463-67-7	ISHL Notifiable Substances	191

Harmful Substances Whose Names Are to be Indicated on the Label
Not applicable

Poisonous and Deleterious Substances Control Law
Not applicable

Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc. (CSCL)
Priority assessment chemical substance

Chemical name	Chemical Substances Control Law
Bisphenol A-epichlorohydrin polymer	Priority assessment chemical substance

4. First-aid measures

General advice Show this safety data sheet to the doctor in attendance.

In case of inhalation Remove to fresh air. IF exposed or concerned: Get medical advice/attention. Get medical attention immediately if symptoms occur.

In case of skin contact May cause an allergic skin reaction. If symptoms persist, call a physician. Wash off immediately with soap and plenty of water for at least 15 minutes.

In case of eye contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If symptoms persist, call a physician. Keep eye wide open while rinsing. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.

In case of ingestion Do NOT induce vomiting. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Call a physician.

Most important symptoms/effects, acute and delayed Itching. Rashes. Hives.

Self-protection of the first aider Avoid contact with skin, eyes or clothing. Wear personal protective clothing (see section 8).

Note to physicians May cause sensitization in susceptible persons. Treat symptomatically.

5. Fire-fighting measures

Suitable Extinguishing Media Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media Do not scatter spilled material with high pressure water streams.

Specific hazards arising from the chemical Product is or contains a sensitizer. May cause sensitization by skin contact.

Flammable properties Containers may explode when heated.

Special extinguishing media
Large Fire Cool container with water spray.
CAUTION: Use of water spray when fighting fire may be inefficient.

Special protective equipment and precautions for fire-fighters Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.
For emergency responders	Use personal protection recommended in Section 8.
Environmental precautions	Prevent further leakage or spillage if safe to do so.
Methods for containment	Prevent further leakage or spillage if safe to do so.
Methods for cleaning up	Pick up and transfer to properly labeled containers.
Prevention of secondary hazards	Clean contaminated objects and areas thoroughly observing environmental regulations.
Other information	Refer to protective measures listed in Sections 7 and 8.

7. Handling and storage

Handling

Advice on safe handling	Take equipment measures listed in Section 8. Wear protection gear. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse.
Hygiene Measures	Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Avoid contact with skin, eyes or clothing.

Storage

Storage Conditions	Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Keep out of the reach of children.

8. Exposure controls/personal protection

Engineering controls

Showers
Eyewash stations
Ventilation systems.

Exposure guidelines

Chemical name	Japan Society of Occupational Health	ISHL Working Environmental Evaluation Standards - Administrative Control Levels	ACGIH TLV
Titanium dioxide (IV) 13463-67-7	TWA: 0.3 mg/m^3	-	TWA: 10 mg/m^3

Biological occupational exposure limits	Not applicable
Environmental exposure controls	Install local ventilation or seal source of substances. Install safety shower, hand wash, and eye wash station. Clearly indicate the location.

Personal protective equipment

Respiratory protection	In case of inadequate ventilation wear respiratory protection.
Hand protection	Wear suitable gloves. Impervious gloves.

Eye/face protection Wear safety glasses with side shields (or goggles). None required for consumer use.

Skin and body protection Wear suitable protective clothing. Long sleeved clothing.

9. Physical and chemical properties

Information on basic physical and chemical properties

Physical state Liquid
Color Light gray
Odor Slight odor

Property	Values	Remarks • Method
Melting point / freezing point	no data available	
Boiling point / boiling range	no data available	
Flammability	no data available	
Upper/lower flammability or explosive limits	no data available	
Upper flammability or explosive limits		
Lower flammability or explosive limits		
Flash point	206 °C	Seta closed cup
Autoignition temperature	no data available	
Decomposition temperature	no data available	
pH	no data available	
Kinematic viscosity	no data available	
Dynamic viscosity	no data available	
Water solubility	Slightly soluble	
Solubility(ies)	no data available	
Partition Coefficient (n-octanol/water)	no data available	
Vapor pressure	no data available	
Relative vapor density	no data available	
Relative density	1.6	
Particle characteristics		
Particle Size	no data available	
Particle Size Distribution	no data available	

10. Stability and reactivity

Stability Stable under normal conditions.

Possibility of hazardous reactions React vigorously with strong oxidant, strong Lewis acid, strong inorganic base, and organic base, and could cause fire.

Conditions to avoid The curing reaction is accompanied by a rapid heating. If large amount of the agent is mixed with the curing agent at one time, carbonization of the reactants along with the generation of toxic gases may cause degradation.

Incompatible materials Bases, OXIDIZERS.

Hazardous decomposition products May generate harmful gas by incineration.

11. Toxicological information

Acute toxicity

Classification not possible.

Numerical measures of toxicity - Product Information

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (dermal) 2,161.30 mg/kg

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Titanium dioxide (IV)	> 10000 mg/kg (Rat)	-	-
Bisphenol A-epichlorohydrin polymer	= 11400 mg/kg (Rat)	-	-

Abbreviations and acronyms

Rat: Rat

Rabbit: Rabbit

Symptoms Itching. Rashes. Hives. Redness. May cause redness and tearing of the eyes.

Product Information

Ingestion Specific test data for the substance or mixture is not available. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Inhalation Specific test data for the substance or mixture is not available. May cause irritation of respiratory tract.

Skin contact May cause sensitization by skin contact. Specific test data for the substance or mixture is not available. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. (based on components). Causes skin irritation.

Eye contact Specific test data for the substance or mixture is not available. Irritating to eyes. (based on components). Causes eye irritation.

Skin corrosion/irritation Classification based on data available for ingredients. Irritating to skin.

Serious eye damage/eye irritation Classification based on data available for ingredients. Irritating to eyes.

Respiratory or skin sensitization May cause sensitization by skin contact.

Germ cell mutagenicity Based on available data, the classification criteria are not met. Classification not possible.

Carcinogenicity The hazardous substance(s) which is (are) any of the following substances and listed on section 3 is (are) embedded in the product and not available as respirable dusts.When used as intended or as supplied, the product will not pose hazards of the hazardous substance(s). Silica, Quartz, Carbon black, Titanium oxide, Crystalline silica. Based on available data, the classification criteria are not met. Classification not possible.

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	Japan	IARC
Titanium dioxide (IV) 13463-67-7	2	Group 2B

Legend

IARC (International Agency for Research on Cancer)

Group 2B - Possibly Carcinogenic to Humans

Group 3 - Not Classifiable as to Carcinogenicity in Humans
Group 1 - Carcinogenic to Humans

Reproductive toxicity Based on available data, the classification criteria are not met. Classification not possible.

STOT - single exposure Based on the classification criteria of the Globally Harmonized System as adopted in the country or region with which this safety data sheet complies, this product has been determined to cause systemic target organ toxicity from acute exposure. (STOT SE). Causes damage to organs. May cause respiratory irritation. May cause drowsiness or dizziness.

H370 - Causes damage to the following organs: Respiratory system.

STOT - repeated exposure Causes damage to organs through prolonged or repeated exposure.

H372 - Causes damage to the following organs through prolonged or repeated exposure: Respiratory system.

Aspiration hazard Based on available data, the classification criteria are not met. Classification not possible.

12. Ecological information

Ecotoxicity Toxic to aquatic life with long lasting effects.

Percentage for unknown hazards 0 % of the mixture consists of component(s) of unknown hazards to the aquatic environment.

Persistence and degradability No information available.

Bioaccumulation No data available as this product.

Mobility in soil No information available.

Hazardous to the ozone layer Classification not possible. Based on available data, the classification criteria are not met.

Other adverse effects No information available.

Endocrine Disruptor Information

13. Disposal considerations

Waste from residues/unused products Dispose of in accordance with national, state and local regulations. Consult industrial waste managent companies for waste. Do not release this product to natural environment nor reclaim.

Contaminated packaging Dispose containers as same as residual of this product.

14. Transport information

IMDG

UN number or ID number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s., 9, III, Marine pollutant
Transport hazard class(es)	9
Packing group	III
Marine pollutant	P
EmS-No	F-A, S-F
Special Provisions	274, 335, 969

ADR

UN/ID No.	UN3082
Proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s.9, III, (-)
Transport hazard class(es)	9
Packing group	III
Environmental hazard	Yes
ERG code	9L
Special provisions	274, 335, 601, 375

IATA

UN/ID No.	UN3082
Proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. 9, III
Transport hazard class(es)	9
Packing group	III
Special provisions	A97, A158, A197

Japanese regulations

UN Number	UN3082
Proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. 9, III
Hazard class	9
Packing group	III
Special provisions	274, 335

15. Regulatory information

National regulations

Pollutant Release and Transfer Registry (PRTR)

Not applicable

Industrial Safety and Health Law

ISHL Notifiable Substances

ISHL Notifiable Substances - information (safety data sheet) to be supplied; Industrial Safety and Health Law enforcement order Table 9 (related to Industrial Safety and Health Law article 57-2 and ISHL Ordinance Article 34-2-4)

Poisonous and Deleterious Substances Control Law

Not applicable

Explosives Control Law

Not applicable

High Pressure Gas Safety Act

Not applicable

Fire Service Law:

Non-hazardous material

Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc. (CSCL)

Priority assessment chemical substance

Chemical name	CAS No	Chemical Substances Control Law
Bisphenol A-epichlorohydrin polymer	25068-38-6	Priority assessment chemical substance

Ship (Marine Transportation) Safety Act

See section 14 for more information

Civil Aeronautics Act
See section 14 for more information

16. Other information

Revision Date 27-Sep-2021

Key or legend to abbreviations and acronyms used in the safety data sheet

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA	TWA (time-weighted average)	Ceiling	Maximum limit value
*	Skin designation	+	Sensitizers

Key literature references and sources for data

JIS Z 7252:2019 Classification of chemicals based on "Globally Harmonized System of Classification and Labelling of Chemicals (GHS)". JIS Z 7253:2019 Hazard communication of chemicals based on GHS-Labelling and Safety Data Sheet (SDS).

Disclaimer

This SDS complies with the requirements of JIS Z 7252:2019 and JIS Z 7253:2019 (Japan). The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.