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Version 5

## Section 1: PRODUCT AND COMPANY IDENTIFICATION

### Product identifier

**Product name** ThreeBond 2089B Base resin

### Recommended use of the chemical and restrictions on use

**Recommended use** Adhesive, Sealant

### Details of the supplier of the safety data sheet

#### Manufacturer

ThreeBond Fine Chemical Co., Ltd.

#### Department in charge & Address

Production Engineering Division  
1-1 Oyama-cho, Midori-ku  
Sagamihara-shi, Kanagawa, Japan

### Emergency telephone number

+81-42-774-1333

## Section 2: HAZARDS IDENTIFICATION

### Classification of the substance or mixture

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2
Skin sensitization	Category 1
Specific target organ toxicity (repeated exposure)	Category 1
<b>Category 1</b> lung lung [by inhalation].	
Acute aquatic toxicity	Category 2
Chronic aquatic toxicity	Category 2

### Label elements



Signal word

Danger

### Hazard statements

H315 - Causes skin irritation

H317 - May cause an allergic skin reaction

H319 - Causes serious eye irritation

H372 - Causes damage to organs through prolonged or repeated exposure

H411 - Toxic to aquatic life with long lasting effects

Causes damage to the following organs through prolonged or repeated exposure: lung.

Causes damage to the following organs through prolonged or repeated exposure if inhaled: lung [by inhalation].

### Precautionary Statements - Prevention

- Wash face, hands and any exposed skin thoroughly after handling
- Wear protective gloves/protective clothing/eye protection/face protection
- 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
- Avoid release to the environment.

### Precautionary Statements - Response

- For first aid procedure, refer to this SDS.

- Get medical advice/attention if you feel unwell
- IF IN EYES: 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 soap and water
- Take off contaminated clothing and wash before reuse
- If skin irritation or rash occurs: Get medical advice/attention
- Collect spillage

**Precautionary Statements - Disposal**

- Dispose of contents/container to an approved waste disposal plant

**Section 3: COMPOSITION/INFORMATION ON INGREDIENTS**

Single substance or mixture      Mixture

Chemical name	Weight-%	ENCS	ISHL No.	CAS No.
Silica	0.1-1	-	-	-
Aluminum oxide	5-15	(1)-23	-	1344-28-1
Bisphenol A-epichlorohydrin polymer	10-20	(7)-1283	-	25068-38-6
Aluminum	5-15	-	-	7429-90-5
Inorganic filler	55-65	-	-	-

**Industrial Safety and Health Law**

Law Name	Chemical Name in Regulation	Ordinance Number
Harmful Substances Whose Names Are to be Indicated on the Label (Law Art.57, Para.1, Enforcement Order Art.18 Item 1, Item 2, Attached Table No.9)	Aluminum oxide	189
Harmful Substances Whose Names Are to be Indicated on the Label (Law Art.57, Para.1, Enforcement Order Art.18 Item 1, Item 2, Attached Table No.9)	Silica	312
Notifiable Substances (Law Art.57-2, Enforcement Order Art.18-2 Item 1, Item 2, Attached Table No.9)	Aluminum oxide	189
Notifiable Substances (Law Art.57-2, Enforcement Order Art.18-2 Item 1, Item 2, Attached Table No.9)	Silica	312
Notifiable Substances (Law Art.57-2, Enforcement Order Art.18-2 Item 1, Item 2, Attached Table No.9)	Aluminium and its water-soluble salts	37
Harmful Substances Whose Names Are to be Indicated on the Label (Law Art.57, Para.1, Enforcement Order Art.18 Item 1, Item 2, Attached Table No.9)	Aluminium and its water-soluble salts	37

**Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc**

Law Name	Chemical Name in Regulation	Ordinance Number
Priority Assessment Chemical Substances (Law Article 2, Para.5)	Polycondensate of 4,4'-isopropylidenediphenol and 1-chloro-2,3-epoxypropane (synonym:bisphenol A type epoxy resin) (liquid)	87

**Section 4: FIRST AID MEASURES**

**Inhalation**      Move victim to fresh air If breathing is irregular or stopped, administer artificial respiration

	Administer oxygen if breathing is difficult
<b>Skin contact</b>	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. In the case of skin irritation or allergic reactions see a physician.
<b>Eye contact</b>	In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes
<b>Ingestion</b>	Rinse mouth. Get medical attention.
<b>Self-protection of the first aider</b>	Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.

**Section 5: FIRE FIGHTING MEASURES**

<b>Flammable properties</b>	Containers may explode when heated.
<b>Suitable extinguishing media</b>	Dry chemical, CO <sub>2</sub> , water spray or regular foam Water spray, fog or regular foam Move containers from fire area if you can do it without risk Dike fire-control water for later disposal
<b>Unsuitable extinguishing media</b>	Do not scatter spilled material with high pressure water streams.
<b>Specific hazards arising from the chemical</b>	Some may burn but none ignite readily Those substances designated with a "P" may polymerize explosively when heated or involved in a fire Some may be transported hot
<b>Special extinguishing media</b>	Wear protection gear and extinguish from windward.

**Section 6: ACCIDENTAL RELEASE MEASURES**

<b>Personal precautions</b>	Do not touch or walk through spilled material Stop leak if you can do it without risk
<b>Environmental precautions</b>	Prevent entry into waterways, sewers, basements or confined areas
<b>Methods for containment</b>	Prevent dust cloud
<b>Methods for cleaning up</b>	With clean shovel place material into clean, dry container and cover loosely; move containers from spill area. Take up with sand or other non-combustible absorbent material and place into containers for later disposal. Cover liquid spill with sand, earth or other non-combustible absorbent material. Cover powder spill with plastic sheet or tarp to minimize spreading.
<b>Prevention of secondary hazards</b>	Keep ignition source away from spill.

**Section 7: HANDLING AND STORAGE**

<b>Handling</b>	
<b>Precautions for safe handling</b>	
<b>Advice on safe handling</b>	Take equipment measures listed in Section 8. Wear protection gear.
<b>Local and general ventilation</b>	Take equipment measures listed in Section 8. Wear protection gear.
<b>Storage</b>	
<b>Storage conditions</b>	Close lid. Avoid direct sun light and ignition source. Keep appropriate temperature.
<b>Material of vessels and packaging</b>	Keep this product in original container. Do not put it back in the container.

## Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### Exposure guidelines

Chemical name	Japan	ISHL Working Environmental Evaluation Standards - Administrative Control Levels	ACGIH TLV
Aluminum oxide	TWA: 2 mg/m <sup>3</sup> TWA: 0.5 mg/m <sup>3</sup>	-	TWA: 1 mg/m <sup>3</sup> respirable fraction
Aluminum	TWA: 2 mg/m <sup>3</sup> TWA: 0.5 mg/m <sup>3</sup>	-	TWA: 1 mg/m <sup>3</sup> respirable fraction

### Engineering 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 appropriate protection glove (Made from non-permeable material such as polyethylene, rubber)
- Eye/face protection**          Wear safety glasses with side shields (or goggles)
- Skin and body protection**      Wear protection apron, protection boots. Wear long sleeve cloth.

### Other information

Wash hands thoroughly after handling. When using do not eat, drink or smoke.

## Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical state	Paste
Odor	Slight odor
Color	Gray

<u>Property</u>	<u>Values</u>	<u>Remarks</u>
pH	No data available	
Melting point/freezing point	No data available	
Boiling point / boiling range	No data available	
Flash point	200 °C or above	
Evaporation rate	No data available	
Flammability (solid, gas)		
Flammability limit in air		
Upper flammability limit:	No data available	
Lower flammability limit:	No data available	
Specific gravity	2.15	
Water solubility	Slightly soluble	
Autoignition temperature	No data available	
Decomposition temperature	No data available	
Dynamic viscosity	No data available	

## Section 10: STABILITY AND REACTIVITY

<b>Stability</b>	Stable under normal conditions.
<b>Possibility of hazardous reactions</b>	Generate vigorous heat by mixing with strong acid. React vigorously with strong oxidant, strong Lewis acid, strong inorganic base, and organic base, and could cause fire.
<b>Conditions to avoid</b>	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.
<b>Incompatible materials</b>	Bases. Oxidiers.
<b>Hazardous decomposition products</b>	May generate harmful gas by incineration

## Section 11: TOXICOLOGICAL INFORMATION

### Acute toxicity

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

**Inhalation LC50** No data available as this product.

**Numerical measures of toxicity** - Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Aluminum oxide	> 5000 mg/kg ( Rat )	-	-
Bisphenol A-epichlorohydrin polymer	= 11400 mg/kg ( Rat )	-	-

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

<b>Skin corrosion/irritation</b>	No data available as this product.
<b>Serious eye damage/eye irritation</b>	No data available as this product.
<b>Sensitization</b>	No data available as this product.
<b>Germ cell mutagenicity</b>	No data available as this product.
<b>Carcinogenicity</b>	The table below indicates whether each agency has listed any ingredient as a carcinogen
<b>Reproductive toxicity</b>	No data available as this product.
<b>STOT - single exposure</b>	No data available as this product.
<b>STOT - repeated exposure</b>	No data available as this product.
<b>Aspiration hazard</b>	No data available as this product.

## Section 12: ECOLOGICAL INFORMATION

### **Ecotoxicity**

**Acute aquatic hazard** No data available as this product.

**Chronic aquatic hazard** No data available as this product.

**Ecotoxicity** Toxic to aquatic life with long lasting effects

**Persistence and degradability** No data available as this product.

### **Bioaccumulation**

No data available as this product.

Component Information No information available

### **Endocrine disruptor information**

Chemical name	EU - Endocrine Disruptors Candidate List	EU - Endocrine Disruptors - Evaluated Substances	Endocrine disrupting potential
Bisphenol A-epichlorohydrin polymer	Group III Chemical	-	-

### Section 13: DISPOSAL CONSIDERATIONS

<b>Waste from residues / unused products</b>	Dispose of in accordance with national, state and local regulations. Consult industrial waste management companies for waste. Do not release this product to natural environment nor reclaim.
<b>Contaminated packaging</b>	Dispose containers as same as residual of this product.

### Section 14: TRANSPORT INFORMATION

#### IMDG

<b>UN/ID No.</b>	UN3077
<b>Proper shipping name</b>	Environmentally hazardous substance, solid, n.o.s.
<b>Hazard class</b>	9
<b>Packing group</b>	III
<b>EmS-No</b>	F-A, S-F
<b>Marine pollutant</b>	P

#### ICAO/IATA (air)

<b>UN/ID No.</b>	UN3077
<b>Proper shipping name</b>	Environmentally hazardous substance, solid, n.o.s.
<b>Hazard class</b>	9
<b>Packing group</b>	III

#### ADR

<b>UN/ID No.</b>	UN3077
<b>Proper shipping name</b>	Environmentally hazardous substance, solid, n.o.s.
<b>Hazard class</b>	9
<b>Labels</b>	9
<b>Packing group</b>	III
<b>ERG code</b>	9L
<b>Environmental hazard</b>	Yes

#### Japanese regulations

<b>UN Number</b>	UN3077
<b>Proper shipping name</b>	Environmentally hazardous substance, solid, n.o.s.
<b>Hazard class</b>	9
<b>Packing group</b>	III
<b>Marine Transportation Safety Act</b>	Dangerous Substances (Ministry of Transportation Ordinance Regarding Transport by Ship and Storage, Ordinance Art.3, Attached Table 1)
<b>Civil Aeronautics Act</b>	Miscellaneous Dangerous Substances and Articles (MITL Notification for Air Transportation of Explosives etc., Ordinance Art.194, Attached Table 1)

### Section 15: REGULATORY INFORMATION

<b><u>Fire protection law criteria</u></b>	Non-hazardous material
<b><u>Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc</u></b>	Priority Assessment Chemical Substances (Law Article 2, Para.5)
<b><u>Industrial Safety and Health Law</u></b>	Harmful Substances Whose Names Are to be Indicated on the Label (Law Art.57, Para.1, Enforcement Order Art.18 Item 1, Item 2, Attached Table No.9) Notifiable Substances (Law Art.57-2, Enforcement Order Art.18-2 Item 1, Item 2, Attached Table No.9) Mutagens - Existing Chemicals (Law Art.57-5, Labor Standard Bureau Official Notice No. 51 of 1992) Dangerous Substances - Ignitable Substance (Enforcement Order Attached Table 1 Item 2)

### Section 16: OTHER INFORMATION

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**Issue date** 12-Mar-2015

**Other information** Please contact to local sales offices for further information.

**Disclaimer**

Handle with care. The data in this document is not guaranteed. This information may be revised based on new findings or test results. This data sheet is authored in accordance with Japanese regulations.