

Issue date 22-Jun-2021

Revision Date 22-Jun-2021

Revision Number 2

## 1. Identification

**Product Name** ThreeBond 1781

### 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, Sagami-hara-shi, Kanagawa 252-0146 Japan

**Emergency telephone number** +81-42-703-7126 (Inquiries regarding SDS)  
+81-42-670-5333 (Inquiries regarding product specifications)

## 2. Hazard(s) identification

### GHS - Classification

Flammable liquids	Category 4
Acute toxicity - Oral	Not classified
Acute toxicity - Dermal	Not classified
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	Not classified
Serious eye damage/eye irritation	Category 2A
Respiratory sensitization	Classification not possible
Skin sensitization	Classification not possible
Germ cell mutagenicity	Category 1B
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 3
Category 3 Target organ effects: Respiratory irritation.	
Specific target organ toxicity (repeated exposure)	Classification not possible
Aspiration hazard	Classification not possible
Acute aquatic toxicity	Category 3
Chronic aquatic toxicity	Category 3
Ozone	Classification not possible

### GHS label elements



**Signal word**

Danger

### **Hazard statements**

H319 - Causes serious eye irritation

H340 - May cause genetic defects  
 H335 - May cause respiratory irritation  
 H412 - Harmful to aquatic life with long lasting effects  
 H227 - Combustible liquid

### Precautionary statements

#### Prevention

Do not handle until all safety precautions have been read and understood.  
 Wear protective gloves/protective clothing/eye protection/face protection.  
 Wash face, hands and any exposed skin thoroughly after handling.  
 Avoid breathing dust/fume/gas/mist/vapors/spray.  
 Use only outdoors or in a well-ventilated area.  
 Avoid release to the environment.  
 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
 Obtain special instructions or technical data sheet before use.

#### Response

IF exposed or concerned: Get medical advice/attention.  
 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 INHALED: Remove person to fresh air and keep comfortable for breathing.  
 Call a POISON CENTER or doctor if you feel unwell.  
 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

#### Storage

Store locked up.  
 Store in a well-ventilated place. Keep container tightly closed.  
 Store in a well-ventilated place.

#### Disposal

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

### Other hazards

No information available.

## 3. Composition/information on ingredients

### Pure substance/mixture

Mixture

Chemical name	CAS No	Weight-%	ENCS Number	ISHL No
Hydroquinone	123-31-9	0.1-<1	(3)-543	(3)-543
Ethyl 2-cyanoacrylate	7085-85-0	99-<100	(2)-2789	(2)-2789

This product contains  $\geq 0.1$  -  $< 1.0\%$  of substance (s) that are classified for Carcinogenicity Category 2.

### 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
Hydroquinone	123-31-9	ISHL Notifiable Substances	461
Ethyl 2-cyanoacrylate	7085-85-0	ISHL Notifiable Substances	205

#### Harmful Substances Whose Names Are to be Indicated on the Label

Harmful Substances - names to be indicated on the label; Industrial Safety and Health Law enforcement order Table 9 (related to Industrial Safety and Health Law article 57 and ISHL Ordinance Article 33)

Chemical name	CAS No	Category	Ordinance number
Hydroquinone	123-31-9	Harmful Substances Whose	461

		Names Are to be Indicated on the Label	
Ethyl 2-cyanoacrylate	7085-85-0	Harmful Substances Whose Names Are to be Indicated on the Label	205

**Poisonous and Deleterious Substances Control Law**

Not applicable

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

Not applicable

**4. First-aid measures**

<b>General advice</b>	Show this safety data sheet to the doctor in attendance.
<b>In case of inhalation</b>	Remove to fresh air. IF exposed or concerned: Get medical advice/attention.
<b>In case of skin contact</b>	Soak skin in warm water. Gently remove material from skin.
<b>In case of eye contact</b>	Repeatedly wash with water. See doctor. Do not rub eye, nor use organic solvents, remover.
<b>In case of ingestion</b>	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.
<b>Most important symptoms/effects, acute and delayed</b>	May cause redness and tearing of the eyes. Burning sensation.
<b>Self-protection of the first aider</b>	Remove all sources of ignition. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Wear personal protective clothing (see section 8). Avoid contact with skin, eyes or clothing.
<b>Note to physicians</b>	Treat symptomatically.

**5. Fire-fighting measures**

<b>Suitable Extinguishing Media</b>	Dry chemical. Carbon dioxide (CO <sub>2</sub> ). Water spray. Alcohol resistant foam.
<b>Unsuitable extinguishing media</b>	Do not scatter spilled material with high pressure water streams.
<b>Specific hazards arising from the chemical</b>	Keep product and empty container away from heat and sources of ignition. In the event of fire, cool container with water spray.
<b>Special extinguishing media</b> <b>Large Fire</b>	Cool container with water spray. CAUTION: Use of water spray when fighting fire may be inefficient.
<b>Special protective equipment and precautions for fire-fighters</b>	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

**6. Accidental release measures**

<b>Personal precautions, protective equipment and emergency procedures</b>	Evacuate personnel to safe areas. Use personal protective equipment as required. See section 8 for more information. Take precautionary measures against static discharges. Do not touch or walk through spilled material. Ensure adequate ventilation. Avoid contact with skin, eyes or clothing.
<b>For emergency responders</b>	Use personal protection recommended in Section 8.

<b>Environmental precautions</b>	Refer to protective measures listed in Sections 7 and 8. Prevent further leakage or spillage if safe to do so.
<b>Methods for containment</b>	Stop leak if you can do it without risk. Do not touch or walk through spilled material. Dike far ahead of liquid spill for later disposal.
<b>Methods for cleaning up</b>	Take precautionary measures against static discharges. Dam up. Soak up with inert absorbent material. Pick up and transfer to properly labeled containers.
<b>Prevention of secondary hazards</b>	Clean contaminated objects and areas thoroughly observing environmental regulations.
<b>Other information</b>	Refer to protective measures listed in Sections 7 and 8.

## 7. Handling and storage

### Handling

**Advice on safe handling** Use personal protection equipment. Do not breathe vapor or mist. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take precautionary measures against static discharges. Use with local exhaust ventilation. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. Remove contaminated clothing and shoes. In case of insufficient ventilation, wear suitable respiratory equipment. Take equipment measures listed in Section 8. Wear protection gear.

**Hygiene Measures** Do not eat, drink or smoke when using this product. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection.

### Storage

**Storage Conditions** Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Keep in properly labeled containers. Store in accordance with the particular national regulations. Store in accordance with local regulations. Store locked up.

## 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
Hydroquinone 123-31-9	-	-	dermal sensitizer TWA: 1 mg/m <sup>3</sup>
Ethyl 2-cyanoacrylate 7085-85-0	-	-	dermal sensitizer;respiratory sensitizer STEL: 1 ppm TWA: 0.2 ppm

**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.

**Eye/face protection** Tight sealing safety goggles.

**Skin and body protection** Wear suitable protective clothing.

## 9. Physical and chemical properties

### Information on basic physical and chemical properties

**Physical state** Liquid  
**Color** Transparent clear  
**Odor** Irritating odor

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
<b>Melting point / freezing point</b>	no data available	
<b>Boiling point / boiling range</b>	no data available	
<b>Flammability</b>	no data available	
<b>Upper/lower flammability or explosive limits</b>	no data available	
Upper flammability or explosive limits		
Lower flammability or explosive limits		
<b>Flash point</b>	90 °C	
<b>Autoignition temperature</b>	200 °C or above	
<b>Decomposition temperature</b>	no data available	
<b>pH</b>	no data available	
<b>Kinematic viscosity</b>	no data available	
<b>Dynamic viscosity</b>	3 mPa •s	
<b>Water solubility</b>	Slightly soluble	
<b>Solubility(ies)</b>	no data available	
<b>Partition Coefficient (n-octanol/water)</b>	no data available	
<b>Vapor pressure</b>	no data available	
<b>Relative vapor density</b>	no data available	
<b>Relative density</b>	1.05	
<b>Particle characteristics</b>		
Particle Size	no data available	
Particle Size Distribution	no data available	

## 10. Stability and reactivity

**Stability** Rapid polymerization could occur.

**Possibility of hazardous reactions** May cause rapid polymerization reaction by heat, high humidity, or direct sun light.

**Conditions to avoid** Direct sunlight, High humidity, Heat.

**Incompatible materials** Water, Bases.

**Hazardous decomposition products** May generate harmful gas by incineration.

## 11. Toxicological information

### Acute toxicity

#### Numerical measures of toxicity - Product Information

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

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Hydroquinone	= 298 mg/kg ( Rat )	= 74800 mg/kg ( Rabbit )	-
Ethyl 2-cyanoacrylate	> 5000 mg/kg ( Rat )	> 2000 mg/kg ( Rabbit )	< 21.1 mg/L ( Rat ) 1 h

*Abbreviations and acronyms*

*Rat: Rat*

*Rabbit: Rabbit*

#### Symptoms

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

Specific test data for the substance or mixture is not available. May cause irritation. Prolonged contact may cause redness and irritation. May be harmful in contact with skin.

##### Eye contact

Specific test data for the substance or mixture is not available. Causes serious eye irritation. (based on components). May cause redness, itching, and pain.

#### Skin corrosion/irritation

Based on available data, the classification criteria are not met. Not classified. May cause skin irritation.

#### Serious eye damage/eye irritation

Classification based on data available for ingredients. Causes serious eye irritation.

#### Respiratory or skin sensitization

Classification not possible.

#### Germ cell mutagenicity

Contains a known or suspected mutagen. Classification based on data available for ingredients. May cause genetic defects.

#### Carcinogenicity

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
Hydroquinone 123-31-9	2	Group 3

#### Legend

IARC (International Agency for Research on Cancer)

Group 3 - Not Classifiable as to Carcinogenicity in Humans

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

**STOT - single exposure** May cause respiratory irritation.

**STOT - repeated exposure** Based on available data, the classification criteria are not met. Classification not possible.

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

## 12. Ecological information

**Ecotoxicity** Harmful 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.

Chemical name	Algae/aquatic plants	Fish	Crustacea
Hydroquinone	EC50: =0.335mg/L (72h, Pseudokirchneriella subcapitata)	LC50: 0.1 - 0.18mg/L (96h, Pimephales promelas) LC50: =0.044mg/L (96h, Oncorhynchus mykiss) LC50: =0.044mg/L (96h, Pimephales promelas) LC50: =0.17mg/L (96h, Brachydanio rerio)	EC50: =0.29mg/L (48h, Daphnia magna)

**Persistence and degradability** No information available.

**Bioaccumulation** No data available as this product.

### Component Information

Chemical name	Partition coefficient
Hydroquinone 123-31-9	0.5

**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.

## 13. Disposal considerations

**Waste from residues/unused products** 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.

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

## 14. Transport information

<b>IMDG</b>	Not regulated
<b>ADR</b>	Not regulated
<b>IATA</b>	
UN/ID No.	UN3334
Proper shipping name	Aviation regulated liquid, n.o.s.
Description	UN3334, Aviation regulated liquid, n.o.s. 9, III
Transport hazard class(es)	9
Packing group	III
Special provisions	A27
<b>Japanese regulations</b>	Not regulated

## 15. Regulatory information

### National regulations

#### Pollutant Release and Transfer Registry (PRTR)

Not applicable

#### Industrial Safety and Health Law

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##### 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:

Flammable liquids, group 4, 3rd class petroleums, water-insoluble, hazard rank III, 2000 liters

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

Not applicable

#### 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 22-Jun-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-Labeling 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.