ThreeBond

SAFETY DATA SHEET

Issue date 14-Nov-2019 **Revision Date** 14-Nov-2019 **Revision Number** 1

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier

Product name ThreeBond 1773E

Recommended use of the chemical and restrictions on use

Recommended use Adhesive, Sealant.

Details of the supplier of the safety data sheet

Company Name
ThreeBond International, Inc.
Supplier Address
6184 Schumacher Park Drive, West Chester, OH 45069 U.S.A

Emergency telephone number

24 Hour Emergency Phone Number Chemtrec 1-800-424-9300
Emergency Telephone +1-513-779-7300

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status
This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.122)

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2
Skin sensitization	Category 1
Specific target organ toxicity (single exposure)	Category 3
Flammable liquids	Category 4

Label elements

Emergency Overview

Warning

Hazard statements
H315 - Causes skin irritation
H317 - May cause an allergic skin reaction
H319 - Causes serious eye irritation
H335 - May cause respiratory irritation
Combustible liquid

The product contains no substances which at their given concentration, are considered to be hazardous to health

Appearance No information available **Physical state** Liquid **Odor** Irritating odor

Precautionary statements
P264 - Wash face, hands and any exposed skin thoroughly after handling
P280 - Wear protective gloves
P302 + P352 - IF ON SKIN: Wash with plenty of soap and water
P321 - Specific treatment (see supplemental first aid instructions on this label)
P332 + P313 - If skin irritation occurs: Get medical advice/attention
P362 - Take off contaminated clothing and wash before reuse
P280 - Wear protective gloves/protective clothing/eye protection/face protection
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P337 + P313 - If eye irritation persists: Get medical advice/attention
P261 - Avoid breathing dust/fume/gas/mist/vapors/spray
P272 - Contaminated work clothing should not be allowed out of the workplace
P333 + P313 - If skin irritation or rash occurs: Get medical advice/attention
P363 - Wash contaminated clothing before reuse
P501 - Dispose of contents/ container to an approved waste disposal plant
P271 - Use only outdoors or in a well-ventilated area
P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing
P312 - Call a POISON CENTER or doctor if you feel unwell
P403 + P233 - Store in a well-ventilated place. Keep container tightly closed
P405 - Store locked up
P210 - Keep away from heat/sparks/open flames/hot surfaces. — No smoking
P370 + P378 - In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish
P403 + P235 - Store in a well-ventilated place. Keep cool
P501 - Dispose of contents/container to industrial incineration plant

Hazards not otherwise classified (HNOC)
Other information
• May be harmful in contact with skin

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name	CAS No	Weight-%	Remarks
Ethyl 2-cyanoacrylate	7085-85-0	80-<90	
Bis(2.4.6-trimethyl benzoyl)-phenylphosphine oxide	162881-26-7	0.1-<1	
Methyl methacrylate	80-62-6	0.1-<1	

4. FIRST AID MEASURES

Description of first aid measures

General advice If symptoms persist, call a physician.

Eye contact Repeatedly wash with water. See doctor. Do not rub eye, nor use organic solvents, remover. Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing. If symptoms persist, call a physician.

Skin contact Soak skin in warm water. Gently remove material from skin. Immediate medical attention is not required. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. If skin irritation persists, call a physician.

Inhalation Remove to fresh air. Seek immediate medical attention/advice.

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

Self-protection of the first aider Use personal protective equipment as required.

Most important symptoms and effects, both acute and delayed

Symptoms No information available.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media
Use. Dry chemical. Carbon dioxide (CO2). Water spray (fog). Alcohol resistant foam. Extinguishing powder. Sand.

Unsuitable extinguishing media Caution: Use of water spray when fighting fire may be inefficient.

Specific hazards arising from the chemical
May generate irritate, harmful gas.

Explosion data
Sensitivity to mechanical impact None.
Sensitivity to static discharge None.

Protective equipment and precautions for firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Use personal protective equipment as required. Remove all sources of ignition. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Pay attention to flashback. Take precautionary measures against static discharges. Wear appropriate protection gear (Refer to Section 8) and avoid eye and skin contact.

Environmental precautions

Environmental precautions See Section 12 for additional ecological information. Do not flush into surface water or sanitary sewer system. Prevent further leakage or spillage if safe to do so. Prevent

product from entering drains. Keep out of waterways. Avoid release to the environment.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Soak up with inert absorbent material. Dam up. Pick up and transfer to properly labeled containers. Take precautionary measures against static discharges.

Prevention of secondary hazards Keep ignition source away from spill.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Use with local exhaust ventilation. All equipment used when handling the product must be grounded. Keep away from heat/sparks/open flames/hot surfaces. — No smoking. Use personal protective equipment as required. Do not breathe dust/fume/gas/mist/vapors/spray. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors). Take equipment measures listed in Section 8. Wear protection gear.

Conditions for safe storage, including any incompatibilities

Storage conditions Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Keep containers tightly closed in a cool, well-ventilated place. Keep away from heat. Keep in properly labeled containers. Close lid. Avoid direct sun light and ignition source. Keep appropriate temperature.

Incompatible materials Water. Bases.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure guidelines .

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Ethyl 2-cyanoacrylate 7085-85-0	STEL: 1 ppm TWA: 0.2 ppm	-	-
Methyl methacrylate 80-62-6	STEL: 100 ppm TWA: 50 ppm	TWA: 100 ppm TWA: 410 mg/m^3 (vacated) TWA: 100 ppm (vacated) TWA: 410 mg/m^3	IDLH: 1000 ppm TWA: 100 ppm TWA: 410 mg/m^3

NIOSH IDLH Immediately Dangerous to Life or Health

Other information Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

Appropriate engineering controls

Engineering controls Install local ventilation or seal source of substances. Install safety shower, hand wash, and eye wash station. Clearly indicate the location.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).

Skin and body protection Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

Respiratory protection	If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.
General hygiene considerations	When using do not eat, drink or smoke. Regular cleaning of equipment, work area and clothing is recommended.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	Liquid
Appearance	No information available
Odor	Irritating odor
Color	Transparent yellow
Odor threshold	No information available

Property	**Values**	**Remarks • Method**
pH	No information available	
Melting point/freezing point	No information available	
Boiling point / boiling range	No information available / °F	
Flash point	88 °C / 190 °F	No information available
Evaporation rate	No information available	
Flammability (solid, gas)	No information available	
Flammability limit in air		
Upper flammability limit:	No information available	
Lower flammability limit:	No information available	
Vapor pressure	No information available	
Vapor density	No information available	
Specific gravity	1.05	
Water solubility	Slightly soluble	No information available
Solubility in other solvents	No information available	
Partition coefficient	No information available	
Autoignition temperature	200 °C or above °C / 392 °F	
Decomposition temperature	No information available	
Dynamic viscosity	150 mPa･s	
Explosive properties	No information available	
Oxidizing properties	No information available	

10. STABILITY AND REACTIVITY

Reactivity
No data available

Chemical stability
Rapid polymerizationcould occur.

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

Conditions to avoid
High humidity. Direct sunlight. Heat. Heat, flames and sparks.

Incompatible materials
Water. Bases.

Hazardous decomposition products
May generate harmful gas by incineration.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information No data available

Inhalation No data available.

Eye contact No data available.

Skin contact No data available.

Ingestion No data available.

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Ethyl 2-cyanoacrylate 7085-85-0	> 5 mL/kg (Rat) > 5000 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	< 21.1 mg/L (Rat) 1 h
Bis(2.4.6-trimethyl benzoyl)-phenylphosphine oxide 162881-26-7	> 2000 mg/kg (Rat)	> 2000 mg/kg (Rat)	-
Methyl methacrylate 80-62-6	8420 - 10000 mg/kg (Rat) = 7872 mg/kg (Rat)	5000 - 7500 mg/kg (Rabbit) > 5 g/kg (Rabbit)	= 7093 ppm (Rat) 4 h

Information on toxicological effects

Symptoms No information available.

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

Sensitization No information available.
Germ cell mutagenicity No information available.
Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	ACGIH	IARC	NTP	OSHA
Methyl methacrylate 80-62-6	-	Group 3	-	-

IARC (International Agency for Research on Cancer)
Not classifiable as a human carcinogen

Reproductive toxicity No information available.
STOT - single exposure No information available.
STOT - repeated exposure No information available.
Aspiration hazard No information available.

Numerical measures of toxicity - Product Information

Unknown Acute Toxicity 14.12433% of the mixture consists of ingredient(s) of unknown toxicity
The following values are calculated based on chapter 3.1 of the GHS document . mg/kg

12. ECOLOGICAL INFORMATION

Ecotoxicity

0% of the mixture consists of components(s) of unknown hazards to the aquatic environment

Chemical name	Algae/aquatic plants	Fish	Toxicity to	Crustacea

			microorganisms	
Methyl methacrylate 80-62-6	170: 96 h Pseudokirchneriella subcapitata mg/L EC50	125.5 - 190.7: 96 h Pimephales promelas mg/L LC50 static 153.9 - 341.8: 96 h Lepomis macrochirus mg/L LC50 static 170 - 206: 96 h Lepomis macrochirus mg/L LC50 flow-through 243 - 275: 96 h Pimephales promelas mg/L LC50 flow-through 326.4 - 426.9: 96 h Poecilia reticulata mg/L LC50 static 79: 96 h Oncorhynchus mykiss mg/L LC50 flow-through 79: 96 h Oncorhynchus mykiss mg/L LC50 static	-	69: 48 h Daphnia magna mg/L EC50

Persistence and degradability
No information available.

Bioaccumulation
No information available.

Chemical name	Partition coefficient
Methyl methacrylate 80-62-6	0.7

Other adverse effects No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal of wastes Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated packaging Do not reuse container. Dispose containers as same as residual of this product.

US EPA Waste Number U162

Chemical name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	RCRA - U Series Wastes
Methyl methacrylate 80-62-6	U162	Included in waste stream: F039	-	U162

This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical name	California Hazardous Waste Status
Methyl methacrylate 80-62-6	Toxic Ignitable

14. TRANSPORT INFORMATION

DOT

UN/ID No. UN3334
Proper shipping name Aviation regulated liquid, n.o.s.
Hazard class 9
Special provisions A35, A189
Description UN3334, Aviation regulated liquid, n.o.s. (Methyl methacrylate, Hydroquinone), 9

Emergency Response Guide Number	171

TDG

UN/ID No.	UN3334
Proper shipping name	Aviation regulated liquid, n.o.s.
Hazard class	9
Description	UN3334, Aviation regulated liquid, n.o.s. (Methyl methacrylate, Hydroquinone), 9

MEX

UN/ID No.	UN3334
Proper shipping name	Aviation regulated liquid, n.o.s.
Hazard class	9
Special provisions	106, 274, 276
Description	UN3334, Aviation regulated liquid, n.o.s. (Methyl methacrylate, Hydroquinone), 9

ICAO/IATA (air)

UN/ID No.	UN3334
Proper shipping name	Aviation regulated liquid, n.o.s.
Hazard class	9
Packing group	III
Special provisions	A27
Description	UN3334, Aviation regulated liquid, n.o.s. (Methyl methacrylate, Hydroquinone), 9, III

IATA

UN/ID No.	UN3334
Proper shipping name	Aviation regulated liquid, n.o.s.
Hazard class	9
Packing group	III
ERG code	9A
Special provisions	A27
Description	UN3334, Aviation regulated liquid, n.o.s. (Methyl methacrylate, Hydroquinone), 9, III

IMDG

UN/ID No.	UN3334
Proper shipping name	Aviation regulated liquid, n.o.s.
Hazard class	9
Special provisions	960
Description	UN3334, Aviation regulated liquid, n.o.s., 9

RID

UN/ID No.	UN3334
Proper shipping name	Aviation regulated liquid, n.o.s.
Hazard class	9
Classification code	M11
Description	UN3334, Aviation regulated liquid, n.o.s., 9

ADR

UN/ID No.	UN3334
Proper shipping name	Aviation regulated liquid, n.o.s.
Hazard class	9
Packing group	III
Classification code	M11
Description	UN3334, Aviation regulated liquid, n.o.s., 9

ADN

UN Number	UN3334

Proper shipping name	Aviation regulated liquid, n.o.s.
Hazard class	9
Classification code	M11
Description	UN3334, Aviation regulated liquid, n.o.s., 9

15. REGULATORY INFORMATION

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories

Acute health hazard	Yes
Chronic Health Hazard	No
Fire hazard	Yes
Sudden release of pressure hazard	No
Reactive Hazard	No

CWA (Clean Water Act)

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Methyl methacrylate 80-62-6	1000 lb	-	-	X

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Chemical name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Methyl methacrylate 80-62-6	1000 lb	-	RQ 1000 lb final RQ RQ 454 kg final RQ

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Ethyl 2-cyanoacrylate 7085-85-0	X	-	-
Methyl methacrylate 80-62-6	X	X	X

U.S. EPA Label Information

EPA Pesticide Registration Number	Not applicable

16. OTHER INFORMATION

NFPA	**Health hazards**	0	**Flammability**	2	**Instability** 0	**Physical and Chemical Properties**	-
HMIS	**Health hazards**	0	**Flammability**	2	**Physical hazards** 0	**Personal protection**	X

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Revision note
No information available

Disclaimer

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.

End of Safety Data Sheet