To Our Customers:

The attached Safety Data Sheet (SDS) was prepared by the vendor of the product you purchased through one of our divisions. We used the manufacturer's electronic document directly or scanned a paper copy and generated a file for our automated SDS delivery system.

All statements, technical information, and recommendations contained therein are solely that of the manufacturer of the product. We at Zep Inc. did not verify the accuracy and completeness of the statements and do not warrantee or guarantee the information. We provide vendor SDSs in accordance with the requirements of the OSHA Hazard Communication Standard in order to assist our customers in their compliance efforts. We made every effort to deliver all of the information prepared by the manufacturer. We cannot anticipate all conditions under which this information will be used. If you have any questions about the statements on the SDS, please contact the company shown on the document.

Zep Inc. assumes no liability or responsibility for loss or damage resulting from the improper use or handling of this product, from incompatible product combinations, or from the failure to follow instructions, warnings, and advisories in the manufacturer's product label and Safety Data Sheet.

Sincerely,

Compliance Services
Zep Inc.

ThreeBond

SAFETY DATA SHEET

Issue date 20-Mar-2015 **Revision Date** 28-Apr-2016 **Version** 4

Section 1: PRODUCT AND COMPANY IDENTIFICATION

Product identifier
Product name ThreeBond 1215

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

Flammable liquids	Category 4
Reproductive Toxicity	Category 1A

Label elements

Signal word Danger

Hazard statements
H227 - Combustible liquid
H360 - May damage fertility or the unborn child

Precautionary Statements - Prevention
• Obtain special instructions before use
• Do not handle until all safety precautions have been read and understood
• Use personal protective equipment as required
• Keep away from heat/sparks/open flames/hot surfaces. — No smoking
Precautionary Statements - Response
• IF exposed or concerned: Get medical advice/attention
• In case of fire: Use CO2, dry chemical, or foam for extinction
Precautionary Statements - Storage
• Store locked up
• Store in a well-ventilated place. Keep cool
Precautionary Statements - Disposal
• Dispose of contents/container to an approved waste disposal plant

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

Single substance or mixture Mixture
2-Butanone, oxime; Generated during polymerization reaction.

Chemical name	Weight-%	ENCS	ISHL No.	CAS No.
Toluene	<1	(3)-2	-	108-88-3
Silicone resin and inorganic filler	90<	-	-	-
Silica	<1	-	-	-
Methyl ethyl ketone oxime	-	-	-	-

Effective June 1, 2016, regarding Japan's Industrial Safety and Health Law's "Notifiable Dangerous and Harmful ", target substances will be subjected to risk assessment in accordance with Japan's Industrial Safety and Health Law's "Harmful Substances Whose Names Are to be Indicated on the Label."

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)	Toluene	23
Notifiable Substances (Law Art.57-2, Enforcement Oder Art.18-2 Attached Table No.9)	Silica	312
Notifiable Substances (Law Art.57-2, Enforcement Oder Art.18-2 Attached Table No.9)	Toluene	407

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)	Toluene	46

Section 4: FIRST AID MEASURES

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

Skin contact 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.

Eye contact IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing Seek immediate medical attention/advice.

INGESTION Rinse mouth. Get medical attention.

Section 5: FIRE FIGHTING MEASURES

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

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

Special extinguishing media Wear protection gear and extinguish from windward.

Section 6: ACCIDENTAL RELEASE MEASURES

Personal precautions Wear appropriate protection gear (Refer to Section 8) and avoid eye and skin contact.

Environmental precautions Keep out of waterways. Avoid release to the environment.

Methods for containment In case of small spill, absorb the spill in dry sand, soil or cloth and keep in closed container. In case of large spill, surround the spill by bank to prevent from leakage, and collect the spill after it is moved to safety place.

Prevention of secondary hazards Keep ignition source away from spill.

Section 7: HANDLING AND STORAGE

Handling

Precautions for safe handling

Advice on safe handling Take equipment measures listed in Section 8. Wear protection gear.

Local and general ventilation Take equipment measures listed in Section 8. Wear protection gear.

Storage

Storage conditions Close lid. Avoid direct sun light and ignition source. Keep appropriate temperature.

Material of vessels and packaging 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
Toluene	TWA: 50 ppm TWA: 188 mg/m^3 Skin ISHL/ACL: 20 ppm	ISHL/ACL: 20 ppm	TWA: 20 ppm

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

- O **Respiratory protection** In case of inadequate ventilation wear respiratory protection
- O **Hand protection** Wear appropriate protection glove (Made from non-permeable material such as polyethylene, rubber)
- O **Eye/face protection** Wear safety glasses with side shields (or goggles)
- O **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 No information available
Color Gray

Property	Values	Remarks
pH	No data available	
Melting point/freezing point	No data available	
Boiling point / boiling range	No data available	
Flash point	62 °C	
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	1.5
Water solubility	Slightly soluble
Autoignition temperature	No data available
Decomposition temperature	No data available
Dynamic viscosity	75 Pa・s

Section 10: STABILITY AND REACTIVITY

Stability Stable under normal conditions.

Possibility of hazardous reactions React with moisture in air. Gradually release hazardous gas.

Conditions to avoid No information available

Incompatible materials No information available.

Hazardous decomposition products 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
Toluene	= 2600 mg/kg (Rat)	= 12000 mg/kg (Rabbit)	= 12.5 mg/L (Rat) 4 h

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

Skin corrosion/irritation No data available as this product.

Serious eye damage/eye irritation No data available as this product.

Sensitization No data available as this product.

Germ cell mutagenicity No data available as this product.

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

Chemical name	Japan	IARC
Toluene		Group 3

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

Reproductive toxicity No data available as this product.

STOT - single exposure No data available as this product.

STOT - repeated exposure No data available as this product.

Target organ effects Eyes, Respiratory system, Skin.

Aspiration hazard 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.

Chemical name	Algae/aquatic plants	Fish	Crustacea
Toluene	*433: 96 h Pseudokirchneriella subcapitata mg/L EC50 12.5: 72 h Pseudokirchneriella subcapitata mg/L EC50 static*	*15.22 - 19.05: 96 h Pimephales promelas mg/L LC50 flow-through 12.6: 96 h Pimephales promelas mg/L LC50 static 5.89 - 7.81: 96 h Oncorhynchus mykiss mg/L LC50 flow-through 5.8: 96 h Oncorhynchus mykiss mg/L LC50 semi-static 11.0 - 15.0: 96 h Lepomis macrochirus mg/L LC50 static 54: 96 h Oryzias latipes mg/L LC50 static 14.1 - 17.16: 96 h Oncorhynchus mykiss mg/L LC50 static 28.2: 96 h Poecilia reticulata mg/L LC50 semi-static 50.87 - 70.34: 96 h Poecilia reticulata mg/L LC50 static*	*11.5: 48 h Daphnia magna mg/L EC50 5.46 - 9.83: 48 h Daphnia magna mg/L EC50 Static*

Persistence and degradability No data available as this product.

Bioaccumulation No data available as this product.

Mobility in soil No data available as this product.

Endocrine disruptor information No data available as this product.

Section 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.

Section 14: TRANSPORT INFORMATION

IMDG Not regulated

ICAO/IATA (air) Not regulated

ADR Not regulated

Japanese regulations

Marine Transportation Safety Act Not applicable

Civil Aeronautics Act Not applicable

Section 15: REGULATORY INFORMATION

Effective June 1, 2016, regarding Japan's Industrial Safety and Health Law's "Notifiable Dangerous and Harmful ", target substances will be subjected to risk assessment in accordance with Japan's Industrial Safety and Health Law's "Harmful Substances Whose Names Are to be Indicated on the Label."

Fire protection law criteria Designated Combustible Substances - Combustible solids

Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc Priority Assessment Chemical Substances (Law Article 2, Para.5)

Industrial Safety and Health Law Harmful Substances Whose Names Are to be Indicated on the Label (Law Art.57, Para.1, Enforcement Order Art.18)
Notifiable Substances (Law Art.57-2, Enforcement Oder Art.18-2 Attached Table No.9)

Section 16: OTHER INFORMATION

Issue date 20-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.