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 to assist our customers in their compliance efforts. The attached document is in compliance with one of the respective country regulatory requirements noted below:

The OSHA Hazard Communication Standard (in the United States)
The Hazardous Products Regulations (in Canada)

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,

Product Stewardship Team
Zep Inc.

SAFETY DATA SHEET

ThreeBond

Date Prepared : 08/09/2017
SDS No : 0027-02-2015B (US)
Date-Revised : 05/14/2019
Revision No : 5

ThreeBond1216E

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: ThreeBond1216E
PRODUCT DESCRIPTION: Hi-Temp RTV Silicone
PRODUCT CODE: ThreeBond1216E

DISTRIBUTOR

ThreeBond International, Inc.
6184 Schumacher Park Drive
West Chester, OH 45069
Emergency Phone: (513) 779-7300

24 HR. EMERGENCY TELEPHONE NUMBERS

CHEMTREC (Domestic North America):(800) 424 - 9300
CHEMTREC (International):(703) 527 - 3887

2. HAZARDS IDENTIFICATION

GHS CLASSIFICATIONS

Health:

Serious eye damage/Eye irritation, Category 1
Skin Sensitization, Category 1B
Specific target organ toxicity after repeated exposure: (Hematopoietic System), Category 2

GHS LABEL

Exclamation mark | Health hazard | Corrosion

SIGNAL WORD: DANGER

HAZARD STATEMENTS

H318: Causes serious eye damage.
H317: May cause an allergic skin reaction.
H373: May cause damage to organs (state all organs affected, if known) through prolonged or repeated exposure (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard).

Precautionary statement(s)

Prevention:

P280: Wear protective gloves/protective clothing/eye protection/face protection.
P261: Avoid breathing dust/fume/gas/mist/vapours/spray.
P272: Contaminated work clothing should not be allowed out of the workplace.
P260: Do not breathe dust/fume/gas/mist/vapours/spray.

Response:

P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310: Immediately call a POISON CENTER/doctor/...
P302+P352: IF ON SKIN: Wash with plenty of water/...
P333+P313: If skin irritation or rash occurs: Get medical advice/attention.
P321: Specific treatment (see ... on this label).
P362+P364: Take off contaminated clothing and wash it before reuse.
P314: Get medical advice/attention if you feel unwell.

Disposal:

P501: Dispose of contents/container to ...

EMERGENCY OVERVIEW

PHYSICAL APPEARANCE: Gray paste

IMMEDIATE CONCERNS: Causes irritation or damage to eyes

POTENTIAL HEALTH EFFECTS

EYES: May cause irritation or damage to eyes.

SKIN: Repeated or prolonged contact with skin may cause slight irritation leading to dermatitis. Product contains oximes which are possible skin sensitizers.

SKIN ABSORPTION: No information available

INGESTION: Small amounts should not cause injury. Swallowing large amounts may cause slight injury.

INHALATION: Overexposure to the vapor of the curing by-product, MEKO, can cause drowsiness, and may irritate nose and throat.

CARCINOGENICITY: Suspected of causing cancer. [MEKO]. The following material (Crystalline silica, Titanium dioxide) is **embedded (bound)** in the product and not available as respiratory dusts. When used as intended or as supplied, the product will not pose hazards.

COMMENTS: Methyl ethyl ketoxime (MEKO) is formed upon contact with water or humid air. Male rodents exposed to MEKO vapor throughout their lifetime developed liver cancer. Additional testing is being planned by the MEKO supplier to determine any relevance to humans. Until more data is known, exposure levels should be maintained as low as achievable. Also, this product contains crystalline silica, titanium dioxide, which are considered a hazard by inhalation with dust. Crystalline silica is classified as an agent which is a probable carcinogen in humans. But, this product does not fall under the dust inhalation hazard or the carcinogen classification since it does not generate dust under normal handling conditions.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	Wt.%	CAS
Crystalline silica	10 - 20	14808-60-7
2-Butanone, O, O', O''-(ethenylsilylidyne) trioxime	1 - 10	2224-33-1
Amorphous Fumed Silica	1 - 10	68611-44-9
Titanium dioxide	< 1	13463-67-7

COMMENTS: Methyl ethyl ketoxime (MEKO #96-29-7): cracked gas

4. FIRST AID MEASURES

EYES: Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Have eyes examined and tested by medical personnel.

SKIN: Immediately wash skin with soap and plenty of water. Remove contaminated clothing. Get medical attention if symptoms (skin irritation or rash) occur. Wash clothing before reuse.

INGESTION: Rinse mouth well with water. Never give an unconscious person anything to ingest. Do not induce vomiting unless directed to do so by medical personnel. Seek immediate medical attention.

INHALATION: Remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Seek immediate medical attention.

SIGNS AND SYMPTOMS OF OVEREXPOSURE

ACUTE EFFECTS: No data as a product

CHRONIC EFFECTS: Oximes may cause skin sensitization. Overexposure to vapors may cause drowsiness. blood and liver injury, and may irritate eyes, nose, and throat.

NOTES TO PHYSICIAN: Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse.

5. FIRE FIGHTING MEASURES

GENERAL HAZARD: By heating and fire, harmful vapors/gases may be formed. Nitrogen oxides. (corrosive)

EXTINGUISHING MEDIA: Carbon dioxide, water, water fog (or spray), dry chemical, and foam.

EXPLOSION HAZARDS: None

FIRE FIGHTING PROCEDURES: As in any fire, wear self-contained breathing apparatus (SCBA) pressure-demand, (MSHA/NIOSH

approved or equivalent) and full protective gear. Use water spray to cool fire exposed surfaces and to protect personnel.

FIRE FIGHTING EQUIPMENT: Because fire may produce toxic thermal decomposition products, wear a self-contained breathing apparatus (SCBA) with a full facepiece operated in pressure-demand or positive-pressure mode/flame retardant coat/helmet/gloves/rubber boots.

FIRE EXPLOSION: It is not expected that the product presents danger of fire or explosion.

6. ACCIDENTAL RELEASE MEASURES

SMALL SPILL: Absorb with dry sand, soil, sawdust, cloth, etc., then place in a sealable container.

LARGE SPILL: Dike and prevent overflow. Guide to a safe place then dispose properly.

ENVIRONMENTAL PRECAUTIONS

WATER SPILL: Do not allow product to flow into rivers or affect the environment

GENERAL PROCEDURES: All ignition sources should be quickly removed (No smoking in the vicinity, prohibit sparks or fire sources)

RELEASE NOTES: Keep spilled material from entering storm drains, sewers, or other environmental mediums.

SPECIAL PROTECTIVE EQUIPMENT: Wear appropriate personal protection equipment to avoid contact to eyes, skin, and inhalation.

COMMENTS: Disposal of clean-up materials may be governmentally regulated. Observe all applicable local, state, and federal waste management regulations.

7. HANDLING AND STORAGE

GENERAL PROCEDURES: Avoid contact with eyes, skin, and clothing. Use with adequate ventilation. Take precaution against fire.

HANDLING: Wear appropriate personal protection. Use with adequate ventilation. Avoid eye contact with vapors, mist, or spray. For industrial or professional use only.

STORAGE: No specific precautions or incompatibilities.

COMMENTS: Containers, even those that have been emptied, will retain product residue and vapors. Always obey hazard warnings and handle empty containers as if they were full. Do not mix this product with other cleaning agents.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE GUIDELINES

OSHA HAZARDOUS COMPONENTS (29 CFR1910.1200)				
	EXPOSURE LIMITS			
Chemical Name	**Type**		**ppm**	**mg/m³**
Crystalline silica	**OSHA PEL**	**TWA**		0.3 mg/m³ (total dust)
	ACGIH TLV	**TWA**		0.025 mg/m3 Respiratory fraction
2-Butanone, O, O', O"-(ethenylsilylidyne) trioxime	**OSHA PEL**	**TWA**	[1]	[1]
Titanium dioxide	**OSHA PEL**	**TWA**		15 T mg/m³ (total dust)
	ACGIH TLV	**TWA**		10 mg/m3
OSHA TABLE COMMENTS: 1. See: Methyl Ethyl Ketoxime (MEKO) data.				

ENGINEERING CONTROLS: If handling this product indoors, seal off sources or use a local mechanical ventilation system, etc. Place a safety shower, hand washing sink and eye bath near area and clearly marked.

PERSONAL PROTECTIVE EQUIPMENT

EYES AND FACE: Safety glasses with side-shields conforming to EN166. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU)

SKIN: Wear suitable protective clothing and gloves.

RESPIRATORY: Respiration protection must be worn whenever the WEL levels have been exceeded. Use filter type A according to EN 14387.

PROTECTIVE CLOTHING: Wear solvent resistant or other impervious gloves

WORK HYGIENIC PRACTICES: Wash hands before eating, smoking, or using restroom. Food or beverages should not be consumed

anywhere this product is handled or stored. Wash thoroughly after handling.

OTHER USE PRECAUTIONS: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

COMMENTS: Product generates methyl ethyl ketoxime (MEKO) upon contact with water or humid air.
MEKO exposure limits: TWA, 3 ppm from Vendor Guide (United States)
AIHA TWA, 10 ppm, STEL, 10 ppm (Workplace Environmental Exposure Level, United States)

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: Paste

ODOR: Oxime

ODOR THRESHOLD: Not available

APPEARANCE: Paste

COLOR: Gray

pH: Not Available

PERCENT VOLATILE: < 2.0

FLASHPOINT AND METHOD: 45°C (113°F) Closed Cup

Notes: Does not sustain combustion.

FLAMMABLE LIMITS: No information available

AUTOIGNITION TEMPERATURE: Not yet Determined

VAPOR PRESSURE: Negligible (25° C)

VAPOR DENSITY: No information available

BOILING POINT: Not Applicable

FREEZING POINT: Not Determined

MELTING POINT: Not Determined

THERMAL DECOMPOSITION: No information available

SOLUBILITY IN WATER: None

PARTITION COEFFICIENT: N-OCTANOL/WATER: No information available

EVAPORATION RATE: < 1 (butyl acetate=1)

DENSITY: Relative density 1.41

SPECIFIC GRAVITY: 1.44 (Water = 1) at 4.0°C

VISCOSITY #1: to 215 Pa·s at 23°C

10. STABILITY AND REACTIVITY

REACTIVITY: No information available

HAZARDOUS POLYMERIZATION: Hazardous polymerization cannot occur.

STABILITY: Stable under normal handling

CONDITIONS TO AVOID: None known.

POSSIBILITY OF HAZARDOUS REACTIONS: Reacts to air moisture, slowly generating methyl ethyl ketoxime.

HAZARDOUS DECOMPOSITION PRODUCTS: Water, moisture, or humid air can cause Methyl ethyl ketoxime. Thermal breakdown of this product during fire or very high heat condition may evolve the following hazardous decomposition product: Carbon oxides and traces of incompletely burned carbon compounds. Silicone dioxide, Nitrogen, Formaldehyde.

INCOMPATIBLE MATERIALS: Strong oxidizing agents. Water, moisture

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY

Chemical Name	ORAL LD_{50} (rat)
Titanium dioxide	> 10000 mg/kg (rat)

DERMAL LD_{50}: > 1000 mg/kg (MEKO) rabbit male and female

ORAL LD_{50}: 900

NOTES: Rat, inhalation, TC50: >4 mg/l (MEKO, decomposed product)

GERM CELL MUTAGENICITY: None known.

CARCINOGENICITY

Chemical Name	IARC Status
Titanium dioxide	2B

REPRODUCTIVE TOXICITY: Not available

12. ECOLOGICAL INFORMATION

ENVIRONMENTAL DATA: No information available

ECOTOXICOLOGICAL INFORMATION: No information available

BIOACCUMULATION/ACCUMULATION: No information available

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: Waste must be disposed of in accordance with federal. state and local environmental control regulations. Consult your licensed waste contractor for detailed recommendations.

EMPTY CONTAINER: All containers should be thoroughly emptied before disposal.

RCRA/EPA WASTE INFORMATION: Non hazardous per EPA

14. TRANSPORT INFORMATION

DOT (DEPARTMENT OF TRANSPORTATION)

PROPER SHIPPING NAME: Not restricted by DOT

OTHER SHIPPING INFORMATION: This product is not intended to be transported in bulk.

AIR (ICAO/IATA): Not an IATA controlled material

VESSEL (IMO/IMDG): Not an IMDG controlled material.

15. REGULATORY INFORMATION

UNITED STATES

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)

311/312 HAZARD CATEGORIES: None

TSCA (TOXIC SUBSTANCE CONTROL ACT)

TSCA REGULATORY: All chemical substances in this material are included on or exempted from listing on the TSCA Inventory of Chemical Substances.

TSCA STATUS: All ingredients are in compliance with the TSCA

OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA)

29 CFR1910.119---PROCESS SAFETY MANAGEMENT OF HIGHLY HAZARDOUS CHEMICALS: Not Listed

STATES WITH SPECIAL REQUIREMENTS

Chemical Name	Requirements
Titanium dioxide	This product contains a component or components listed on the Massachusetts Right to Know list of hazardous substances. This product contains a component or components listed on the Pennsylvania Right to Know list of hazardous substances.

CALIFORNIA PROPOSITION 65: WARNING: This product contains chemicals known to the state of California to cause cancer and birth defects or other reproductive harm. Silica (bound), Titanium dioxide (bound)

Chemical Name	Wt.%	Listed
Crystalline silica	10 - 20	Cancer
Amorphous Fumed Silica	1 - 10	Cancer
Titanium dioxide	< 1	Cancer

16. OTHER INFORMATION

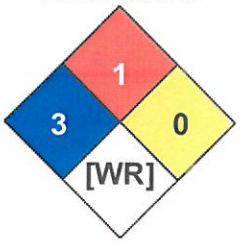
Date-Revised: 05/14/2019

REVISION SUMMARY: This MSDS replaces the 08/09/2017 MSDS.

HMIS RATING

HEALTH	*	3
FLAMMABILITY		1
PHYSICAL HAZARD		0
PERSONAL PROTECTION		B

NFPA CODES



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