



Prepared to OSHA, ACC, ANSI, NOHSC, WHMIS & 2001/58 EC Standards

MSDS Revision: 1.0

MSDS Revision Date: 06/10/2010

1. PRODUCT IDENTIFICATION

CHEMICAL RESPONSE CARD: **00**

1.1	Product Name:	THREEBOND 1216	RESPONSE TEAM PPE:				
1.2	Chemical Name:	See ingredients in Section 3					
1.3	Synonyms:	ThreeBond 1216, TB1216	WHMIS:				
1.4	Trade Names:	Threebond 1216					
1.5	Product Use:	Sealant	HEALTH:				1
1.6	Manufacturer's Name:	Three Bond Co., LTD.	FLAMMABILITY:				1
1.7	Manufacturer's Address:	1456 Hazama-cho, Hachioji-shi, Tokyo Japan	REACTIVITY:				1
1.8	Business Phone:	+81-42-661-1333 / +81-42-669-7235	PERSONAL PROTECTION:				B
1.9	Emergency Phone:	CHEMTREC +1 (800) 424-9300/+1 (703) 527-3887					

2. HAZARD IDENTIFICATION

2.1	Hazard Identification: This product is classified as a HAZARDOUS SUBSTANCE and as DANGEROUS GOODS according to the classification criteria of NOHSC: 1088 (2004) and ADG Code (Australia). Harmful in contact with skin. Reacts to air moisture, generates Methyl ethyl ketoxime (cracked gas).						
2.2	Routes of Entry:	Inhalation:	NA	Absorption:	YES	Ingestion:	YES
2.3	Effects of Exposure: EYES: Mild irritation. SKIN: May cause skin sensitization, an allergic reaction, which becomes evident upon re-exposure to this material. INGESTION: Harmful if swallowed. May cause irritation, nausea, vomiting, diarrhea. INHALATION: Respiratory irritation.						
2.4	Symptoms of Exposure: EYES: Mild irritation. SKIN: May cause irritation to sensitive skin. INGESTION: Overexposure may cause methemoglobinemia, characterized by dizziness, drowsiness, headache, shortness of breath, cyanosis (bluish discoloration of skin due to deficient oxygenation of the blood), rapid heart rate and chocolate-brown colored blood. INHALATION: Excessive inhalation of vapors can cause respiratory irritation, headache, and drowsiness. High concentrations of vapors are anesthetic and may have blood oxygen effects.						
2.5	Acute Health Effects: EYES: Mild irritation. SKIN: May cause irritation to sensitive skin. INGESTION: May cause methemoglobinemia, characterized by dizziness, drowsiness, headache, shortness of breath, cyanosis (bluish discoloration of skin due to deficient oxygenation of the blood), rapid heart rate and chocolate-brown colored blood. INHALATION: Excessive inhalation of vapors can cause respiratory irritation, headache, and drowsiness. High concentrations of vapors are anesthetic and may have blood oxygen effects.						
2.6	Chronic Health Effects: The manufacturer has not reported any chronic health effects.						
2.7	Target Organs: None reported by the manufacturer.						

NA = Not Available; ND = Not Determined; NE = Not Established; NF = Not Found; C = Ceiling Limit; See Section 16 for Additional Definitions of Terms Used. NOTE: all WHMIS required information is included. It is located in appropriate sections based on the ANSI Z400.1-2004 format.

Prepared to OSHA, ACC, ANSI, NOHSC, WHMIS & 2001/58 EC Standards

MSDS Revision: 1.0

MSDS Revision Date: 06/10/2010

3. COMPOSITION & INGREDIENTS

CHEMICAL NAME(S)	CAS No.	RTECS No.	EINECS No.	%	EXPOSURE LIMITS IN AIR (mg/m ³)								
					ACGIH		NOHSC			OSHA			OTHER
					ppm		ppm			ppm			
					TLV	STEL	ES-TWA	ES-STEL	ES-PEAK	PEL	STEL	IDLH	
SILICONE RESIN	NA	NA	NA	50-60	NA	NA	NF	NF	NF	NA	NA	NA	
ZINC COMPOUND	NA	NA	NA	25-35	(5)	NA	NF	NF	NF	(5)	NA	NA	RESP FRAC
SILICA	7631-86-9	EU8655000	231-545-4	5-15	NA	NA	NF	NF	NF	NA	NA	NA	
TOLUENE	108-88-3	XS5250000	203-625-9	< 3.0	188	NA	191	574	NF	188	375	500	SKIN
METHYLETHLKETOXIN (CRACKED GAS)	96-29-7	EL9275000	202-496-6	NA	NA	NA	NF	NF	NF	NA	NA	NA	
STABALIZING ADDITIVES	NA	NA	NA	NA	NA	NA	NF	NF	NF	NA	NA	NA	

4. FIRST AID MEASURES

4.1	<p>First Aid:</p> <p>EYES: Flush eyes thoroughly with copious amounts of water for at least 20 minutes, holding eyelids open to ensure complete flushing. Seek immediate medical attention.</p> <p>SKIN: Remove contaminated clothing and flush affected areas with water. Seek prompt medical attention. Launder clothing before reuse.</p> <p>INGESTION: Do not induce vomiting. Call a physician or poison control center for assistance and instructions. Seek immediate medical attention. If vomiting occurs spontaneously, keep victim's head lowered (forward) to reduce the risk of aspiration.</p> <p>INHALATION: Remove victim to fresh air at once. If breathing is difficult, provide supplemental oxygen. If breathing has stopped, provide artificial respiration. Seek immediate medical attention. Provide supportive treatment, keeping victim warm and quiet.</p>
4.2	<p>Medical Conditions Aggravated by Exposure:</p> <p>Personnel with pre-existing skin disorders should avoid repeated or prolonged contact with this product.</p>

5. FIREFIGHTING MEASURES

5.1	Flashpoint & Method: 62 °C (143.6 °F)
5.2	Autoignition Temperature: > 200 °C (392 °F)
5.3	Flammability Limits: Lower Explosive Limit (LEL): NA Upper Explosive Limit (UEL): NA
5.4	Fire & Explosion Hazards: May produce poisonous and irritating gasses when involved in a fire.
5.5	Extinguishing Methods: In case of small fire, use dry powder, carbon dioxide gas, foam etc. In case of large fire, use foam extinguisher to remove air.
5.6	Firefighting Procedures: Keep containers cool until well after the fire is out. Prevent runoff from fire control or dilution from entering sewers, drains, drinking water supply, or any natural waterway. Firefighters should wear full-face, self-contained breathing apparatus (MSHA/NIOSH approved or the equivalent) and impervious clothing.



Prepared to OSHA, ACC, ANSI, NOHSC, WHMIS & 2001/58 EC Standards

MSDS Revision: 1.0

MSDS Revision Date: 06/10/2010

6. ACCIDENTAL RELEASE MEASURES

6.1	Spills: Secure spill area, remove or minimize all sources of ignition, and maximize ventilation. Stop spill or leak at source if safely possible. Deny entry to all unprotected individuals. Individuals involved in the cleanup must wear appropriate personal protective equipment. Recover free liquid or cover with inert absorbent material and place into appropriate container(s) for disposal. If necessary, dike well ahead of the spill to prevent runoff into drains, sewers or any natural waterway or drinking supply. Contact appropriate local and/or provincial authorities for assistance and/or reporting requirements.
-----	---

7. HANDLING & STORAGE INFORMATION

7.1	Work & Hygiene Practices: Keep hands away from eyes when handling material or before washing after use. Wash thoroughly after using – particularly before eating and smoking. If this product is sanded or machined after curing, take appropriate precautions against inhalation of nuisance particulates. Medical surveillance and employee training to be required.
7.2	Storage & Handling: Handle cautiously; avoid contact with skin and eyes. Storage and handling areas should be equipped with proper containment to capture and neutralize spills. Store below 90 °F.
7.3	Special Precautions: Storage and use areas should be equipped with eyewash stations and safety showers.

8. EXPOSURE CONTROLS & PERSONAL PROTECTION

8.1	Ventilation & Engineering Controls: Recommended when handled at elevated temperatures or open equipment.
8.2	Respiratory Protection: None required under normal conditions. A respiratory protection program that meets ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirators use.
8.3	Eye Protection: Safety glasses with side shields should be used with this product. If splashing is anticipated, splash goggles and a face shield are recommended.
8.4	Hand Protection: Wear protective clothing to prevent skin contact. Aprons and gloves should be constructed of impermeable material. For frequent contact or total immersion, contact a manufacturer of protective clothing for appropriate chemical impervious equipment.
8.5	Body Protection: Wear protective clothing to prevent skin contact. Aprons and gloves should be constructed of impermeable material. For frequent contact or total immersion, contact a manufacturer of protective clothing for appropriate chemical impervious equipment.

9. PHYSICAL & CHEMICAL PROPERTIES

9.1	Density:	1.40
9.2	Boiling Point:	> 300 °F
9.3	Melting Point:	NA
9.4	Evaporation Rate:	Very Slow
9.5	Vapor Pressure:	< 5
9.6	Molecular Weight:	NA
9.7	Appearance & Color:	Gray paste, sharp odor
9.8	Odor Threshold:	Mild
9.9	Solubility:	Slightly soluble in water
9.10	pH	NA
9.11	Viscosity:	NA
9.12	Other Information:	NA

Prepared to OSHA, ACC, ANSI, NOHSC, WHMIS & 2001/58 EC Standards

MSDS Revision: 1.0

MSDS Revision Date: 06/10/2010

10. STABILITY & REACTIVITY

10.1	Stability: Stable. Combustible.
10.2	Hazardous Decomposition Products: Reacts to air moisture, slowly generates Methyl ethyl ketoxime (cracked gas). Incineration may produce poisonous gasses (carbon monoxide etc.).
10.3	Hazardous Polymerization: May polymerize. Reacts to air moisture, slowly generates Methyl ethyl ketoxime (cracked gas).
10.4	Conditions to Avoid: Moisture.
10.5	Incompatible Substances: Strong Oxidizing agents. May react with strong acids to form an explosive material.

11. TOXICOLOGICAL INFORMATION

11.1	Toxicity Data: Reacts to air moisture, generates Methyl ethyl ketoxime (cracked gas). May be harmful if swallowed, inhaled or absorbed through the skin.
11.2	Acute Toxicity: See section 2.5
11.3	Chronic Toxicity: See section 2.6
11.4	Suspected Carcinogen: Toluene - ACGIH: A4 - Not Classifiable as a Human Carcinogen. IARC: Group 3 carcinogen
11.5	Reproductive Toxicity:
	Mutagenicity: This product is not expected to cause mutagenic effects in humans.
	Embryotoxicity: This product is not expected to cause embryotoxic effects in humans.
	Teratogenicity: This product is not expected to cause teratogenic effects in humans.
	Reproductive Toxicity: This product is not expected to cause reproductive harm in humans.
11.6	Irritancy of Product: NA
11.7	Biological Exposure Indices: NA
11.8	Physician Recommendations: Treat symptomatically.

12. ECOLOGICAL INFORMATION

12.1	Environmental Stability: The manufacturer has not reported any detailed studies on the environmental fate of the material. However, prudent practice would dictate the material not be allowed to enter the environment.
12.2	Effects on Plants & Animals: The manufacturer has not reported any animal or plant effects
12.3	Effects on Aquatic Life: The manufacturer has not reported any aquatic life effects.

13. DISPOSAL CONSIDERATIONS

13.1	Waste Disposal: Dispose of in accordance with federal, state & provincial hazardous waste laws.
13.2	Special Considerations: If the material is unsuitable for recycling or reclamation, enclosed-controlled incineration is recommended unless otherwise prohibited by local ordinance.

Prepared to OSHA, ACC, ANSI, NOHSC, WHMIS & 2001/58 EC Standards

MSDS Revision: 1.0

MSDS Revision Date:

06/10/2010

14. TRANSPORTATION INFORMATION

The basic description (ID Number, proper shipping name, hazard class & division, packing group) is shown for each mode of transportation. Additional descriptive information may be required by 49 CFR, IATA/ICAO, IMDG, SCT, ADGR and the CTDGR.

14.1	49 CFR (GND): CONSUMER COMMODITY, ORM-D UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S., (ZINC COMPOUNDS, TOLUENE), 9, III
14.2	IATA (AIR): CONSUMER COMMODITY, 9, ID8000 UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S., (ZINC COMPOUNDS, TOLUENE), 9, III
14.3	IMDG (OCN): UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S., (ZINC COMPOUNDS, TOLUENE), 9, III
14.4	TDGR (CAN): MARK PACKAGE "LIMITED QUANTITY" or "QUANTITÉ LIMITÉE" or "LTD QTY" or "QUANT LTÉE" (≤ 1.0 L) UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S., (ZINC COMPOUNDS, TOLUENE), 9, III
14.5	ADR/RID (EU): UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S., (ZINC COMPOUNDS, TOLUENE), 9, III
14.6	SCT (MEX): UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S., (ZINC COMPOUNDS, TOLUENE), 9, III
14.7	ADGR (AUS): UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S., (ZINC COMPOUNDS, TOLUENE), 9, III



15. REGULATORY INFORMATION

15.1	SARA Reporting Requirements: This material contains Toluene and METHYL ETHYL KETOXIME which are subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.	
15.2	SARA Threshold Planning Quantity: Toluene: 1000 pounds (454 kg)	
15.3	TSCA Inventory Status: The components of this product are listed on the TSCA inventory. The following ingredients are registered for TSCA 12B: Methylethylketoxime. Chemical Substances have been reported to the EPA Office of Toxic Substances in accordance with the requirements of the Toxic Chemical Substances Control Act (Title 40 CFR 710).	
15.4	CERCLA Reportable Quantity (RQ): NA	
15.5	Other Federal Requirements: Methylethylketoxime fits the EPA Hazard Category definition of Immediate (Acute) and Delayed (Chronic) Health Hazards under SARA Sections 311, 312. Toluene is listed as a Hazardous Substance under the CWA. Toluene is listed as a Priority Pollutant under the Clean Water Act. Toluene is listed as a Toxic Pollutant under the Clean Water Act.	
15.6	Other Canadian Regulations All chemical substances of this product are listed on the CEPA DSL/NDSL or are exempt from list requirements. This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR.	
15.7	State Regulatory Information: Toluene can be found on the following state right to know lists: California, New Jersey, Florida, Pennsylvania, Minnesota, Massachusetts. WARNING: This product contains Toluene, a chemical known to the state of California to cause birth defects or other reproductive harm. California No Significant Risk Level: None of the chemicals in this product are listed.	
15.8	67/548/EEC (European Union) Requirements: The primary components of this product are NOT listed in Annex I of EU Directive 67/548/EEC: Reacts to air moisture, generates <u>Methylethylketoxime (cracked gas)</u>: Harmful (Xn). R: 48/22 Harmful: danger of serious damage to health by prolonged exposure if swallowed. S: 2-7-20/21-24 Keep out of reach of children. Keep container tightly closed. When using, do not eat, drink or smoke. Avoid contact with skin.	

Prepared to OSHA, ACC, ANSI, NOHSC, WHMIS & 2001/58 EC Standards

MSDS Revision: 1.0

MSDS Revision Date:

06/10/2010

16. OTHER INFORMATION

16.1 Other Information:

NA

16.2 Terms & Definitions:

Please see last page of this MSDS.

16.3 Disclaimer:

This Material Safety Data Sheet is offered pursuant to OSHA's Hazard Communication Standard, 29 CFR §1910.1200. Other government regulations must be reviewed for applicability to this product. To the best of ShipMate's & Kawasaki's knowledge, the information contained herein is reliable and accurate as of this date; however, accuracy, suitability or completeness is not guaranteed and no warranties of any type, either expressed or implied, are provided. The information contained herein relates only to the specific product(s). If this product(s) is combined with other materials, all component properties must be considered. Data may be changed from time to time. Be sure to consult the latest edition.

16.4 Prepared for:

Kawasaki Motors Corp., U.S.A.
9950 Jeronimo Road
Irvine, CA 92618 USA
Phone: +1 (949) 770-0400
Fax: +1 (949) 460-5625
<http://www.kawasaki.com/>

Kawasaki

16.5 Prepared by:

ShipMate, Inc.
P.O. Box 787
Sisters, OR 97759
Phone: +1 (310) 370-3600
Fax: +1 (310) 370-5700
E-mail: shipmate@shipmate.com
<http://www.shipmate.com/>



Prepared to OSHA, ACC, ANSI, NOHSC, WHMIS & 2001/58 EC Standards

MSDS Revision: 1.0

MSDS Revision Date: 06/10/2010

DEFINITIONS OF TERMS

A large number of abbreviations and acronyms appear on a MSDS. Some of these that are commonly used include the following:

GENERAL INFORMATION:

CAS No.	Chemical Abstract Service Number
----------------	----------------------------------

EXPOSURE LIMITS IN AIR:

ACGIH	American Conference on Governmental Industrial Hygienists
TLV	Threshold Limit Value
OSHA	U.S. Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
IDLH	Immediately Dangerous to Life and Health

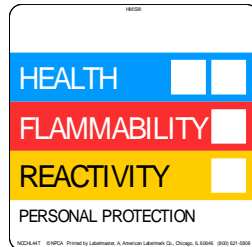
FIRST AID MEASURES:

CPR	Cardiopulmonary resuscitation - method in which a person whose heart has stopped receives manual chest compressions and breathing to circulate blood and provide oxygen to the body.
------------	--

HAZARDOUS MATERIALS IDENTIFICATION SYSTEM: HMIS

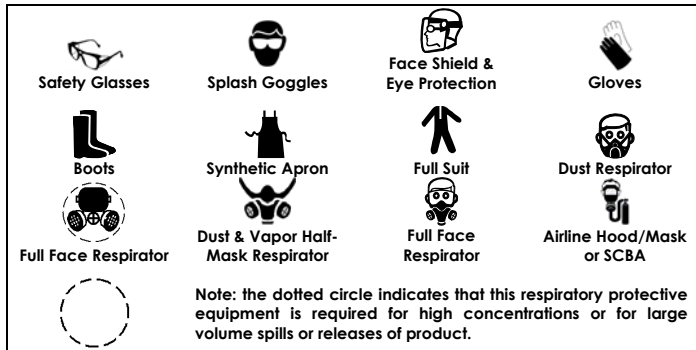
HEALTH, FLAMMABILITY & REACTIVITY RATINGS:

0	Minimal Hazard
1	Slight Hazard
2	Moderate Hazard
3	Severe Hazard
4	Extreme Hazard



PERSONAL PROTECTION RATINGS:

A		G	
B		H	
C		I	
D		J	
E		K	
F		X	Consult your supervisor or S.O.P. for special handling directions.



OTHER STANDARD ABBREVIATIONS:

NA	Not Available
NR	No Results
NE	Not Established
ND	Not Determined
ML	Maximum Limit
SCBA	Self-Contained Breathing Apparatus

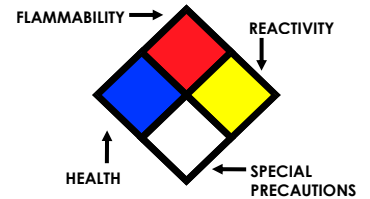
NATIONAL FIRE PROTECTION ASSOCIATION: NFPA

FLAMMABILITY LIMITS IN AIR:

Autoignition Temperature	Minimum temperature required to initiate combustion in air with no other source of ignition
LEL	Lower Explosive Limit - lowest percent of vapor in air, by volume, that will explode or ignite in the presence of an ignition source
UEL	Upper Explosive Limit - highest percent of vapor in air, by volume, that will explode or ignite in the presence of an ignition source

HAZARD RATINGS:

0	Minimal Hazard
1	Slight Hazard
2	Moderate Hazard
3	Severe Hazard
4	Extreme Hazard
ACD	Acidic
ALK	Alkaline
COR	Corrosive
-W	Use No Water
OX	Oxidizer



TOXICOLOGICAL INFORMATION:

LD₅₀	Lethal Dose (solids & liquids) which kills 50% of the exposed animals
LC₅₀	Lethal concentration (gases) which kills 50% of the exposed animal
ppm	Concentration expressed in parts of material per million parts
TD₁₀	Lowest dose to cause a symptom
TCLo	Lowest concentration to cause a symptom
TD₁₀, LD₁₀, & LD₀ or TC, TC₀, LC₁₀, & LC₀	Lowest dose (or concentration) to cause lethal or toxic effects
IARC	International Agency for Research on Cancer
NTP	National Toxicology Program
RTECS	Registry of Toxic Effects of Chemical Substances
BCF	Bioconcentration Factor
TL_m	Median threshold limit
log K_{ow} or log K_{oc}	Coefficient of Oil/Water Distribution

REGULATORY INFORMATION:

WHMIS	Canadian Workplace Hazardous Material Information System
DOT	U.S. Department of Transportation
TC	Transport Canada
EPA	U.S. Environmental Protection Agency
DSL	Canadian Domestic Substance List
NDSL	Canadian Non-Domestic Substance List
NOHSC	Australia National Occupational Health & Safety Code
PSL	Canadian Priority Substances List
TSCA	U.S. Toxic Substance Control Act
EU	European Union (European Union Directive 67/548/EEC)

EC INFORMATION:

C	E	F	N	O	T+	Xi	Xn
Corrosive	Explosive	Flammable	Harmful	Oxidizing	Toxic	Irritant	Harmful