

**MATERIAL SAFETY DATA SHEET (MSDS)**

FIRST ISSUE DATE March 20, 2004

**Section 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**

PRODUCT NAME Bolder Bond™

MFR'S NAME: Comptek Structural Composites. 4699 Nautilus Ct. South Boulder, CO 80301  
EMERGENCY PHONE: 303-531-5758 GENERAL INFORMATION: 303-531-5758

**Section 2: COMPOSITION, INFORMATION ON INGREDIENTS**

INGREDIENT	%	CAS #	EXPOSURE LIMITS
4,4'-Diphenylmethane diisocyanate	<1	101-68-8	0.051mg/m <sup>3</sup> ; TWA ACGIH
Diphenylmethane diisocyanate	<10	26447-40-5	N.E.
Polyisocyanate based on MDI	<30	none	N.E.
Borosilicate glass fiber roving	>60	65997-17-3	5mg/m <sup>3</sup> free floating fiber; PEL OSHA

**Section 3: HAZARDS IDENTIFICATION**

**EMERGENCY OVERVIEW:** A glass fiber fabric, impregnated with a polyurethane water-activated uncured (wet) resin, very similar to medical orthopedic cast material of a similar nature. Some people are inhalation-sensitive to the vapors of the various isocyanates and can have respiratory problems. Contact to unprotected body parts must be avoided. Burning resin would release highly toxic gases. Once exposed to water and cured, this product is essentially inert. Product gives off carbon dioxide gas while curing. Avoid unprotected use in confined spaces or where ventilation is poor.

**POTENTIAL HEALTH EFFECTS:**

**EYE:**

- May cause corneal damage or other eye injuries.

**SKIN:**

- May irritate unprotected skin after frequent or prolonged exposure.

**INGESTION:**

- Will cause mechanical and chemical damage to gastrointestinal tract.

**INHALATION:**

- May cause irritation of mucous membranes. Some sensitized persons may have serious respiratory reaction. Extreme cases may even resemble anaphylactic shock.

**CHRONIC EFFECTS:**

- Repeated or prolonged, unprotected exposure may cause respiratory sensitization. Bronchitis, asthma and other respiratory conditions are known to be aggravated.

**SIGNS & SYMPTOMS:**

- Tightness in the throat; difficulty breathing; wheezing, cough, shortness of breath; redness of skin and irritation. Flu-like symptoms, either immediate or delayed by several hours.

**Section 4: FIRST AID MEASURES**

⇒USE APPROPRIATE BLOOD-BORNE PATHOGENS PROTECTIONS⇐

**EYE:**

- Wipe excess from eyelid outer surfaces, then immediately flood with continuous, large quantities of water or eyewash. Get emergency medical attention.

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**SKIN:**

- Wipe away excess. Flood affected skin with large quantities of water and wash with soap & water. Get medical attention if irritation or other problems develop.

**INGESTION:**

- Highly unlikely to occur. If this occurs, do NOT induce vomiting and, if victim will receive medical attention quickly, do NOT administer water or any other liquid, unless directed to do so by a medical professional. Keep patient calm and get emergency medical attention.

**INHALATION:**

- Move victim to fresh air. Monitor and provide necessary breathing support. Get medical attention if difficulty lasts more than a few minutes, or if irritation or any other problems develop.

**Section 5: FIRE FIGHTING MEASURES**

FLASH POINT: >145°C ( >293°F) UEL/LEL: n.d.a. VAPOR DENSITY: much heavier than air  
NFPA FLAMMABILITY RATING: 1 AUTOIGNITION: n.d.a.  
COMBUSTION PRODUCTS: CO, CO<sub>2</sub>, NO<sub>x</sub>, & misc. hydrocarbons with traces of HCN & MDI vapors.  
SPECIAL HAZARDS: Burning may cause extra health and safety risks. At temperatures > 204°C (>400°F) portions of the resin may polymerize, creating pressure in containers and liberating hazardous gasses.  
EXTINGUISHING MEDIA: Use foam, CO<sub>2</sub>, dry chemical, water fog.  
FIRE FIGHTER INSTRUCTIONS: Stay upwind. Wear at least full bunker gear and SCBA.

**Section 6: ACCIDENTAL RELEASE MEASURES**

Ventilate. Avoid unprotected contact. Scoop up & place in vented containers.

**Section 7: HANDLING AND STORAGE**

Wash thoroughly after handling. Never eat or smoke around product.

Store in original sealed containers in a cool, dry ventilated storage area.

**Section 8: EXPOSURE CONTROLS, PERSONAL PROTECTION**

For Personal Exposure Limits (PEL), Threshold Limit Values (TLV) or other exposure limits, see Sec. 2.

GENERAL: Provide ventilation that will keep airborne concentration below exposure limits.

EYE/FACE: Safety glasses minimum. When applying product, addition of chemical splash goggles or face shield.

SKIN: Impervious chemical gloves.

RESPIRATORY: If engineering controls cannot keep exposures below those indicated in Section 2, use of at least a NIOSH-approved chemical cartridge respirator, or better, is required.

OTHER: Full coverage of skin is recommended. Never smoke or eat around product.

**Section 9: PHYSICAL AND CHEMICAL PROPERTIES**

APPEARANCE: sticky "wet" fabric  
pH: 7 VAPOR PRESS: 5mm Hg  
BOILING PT: 367°C ( 694°F)

ODOR: slight PHYSICAL STATE: solid/gel  
VAPOR DENSITY: 8.5 SPECIFIC GRAVITY: 1.14  
MELT PT: N/A SOLUBILITY IN H<sub>2</sub>O: very low

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### Section 10: STABILITY AND REACTIVITY

CHEMICAL STABILITY: Material is stable with no known conditions to avoid.

INCOMPATIBILITY: amines, strong bases, alcohols; and water in an uncontrolled exposure of bulk quantities of material.

HAZARDOUS POLYMERIZATION: Will not normally occur. Only large bulk quantities, as above.

HAZARDOUS DECOMPOSITION: None known, other than Sec. 5's Combustion Products.

### Section 11: TOXICOLOGICAL INFORMATION

n.d.a.

### Section 12: ECOLOGICAL INFORMATION

n.d.a.

### Section 13: DISPOSAL CONSIDERATIONS

Dispose in accordance with all applicable laws and regulations.

### Section 14: TRANSPORT INFORMATION

DOT: Not Regulated

IATA: Not Regulated

### Section 15: REGULATORY INFORMATION

OSHA HCS: not listed

CLEAN AIR 112(b): listed

SARA 313: listed

CA PROP. 65: not listed.

VOC %: zero

DOT 172.101: listed

TSCA: listed

SARA TPQ: not listed

RISK MGMT: not listed

CERCLA-RQ: 5,000 lbs, resin

STORMWATER RUNOFF: not listed

SARA PRIORITY (PC): not listed

RCRA Waste Number: none

### Section 16: OTHER INFORMATION

NFPA: Not actually rated by NFPA. Following are Comptek Structural Composites interpolations:

HEALTH 3      FIRE 1      REACTIVITY 1      OTHER none

ABBREVIATIONS: N/A = not applicable; N.D.A. = no data available; N.E. = not established

END OF MSDS

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