

# MATERIAL SAFETY DATA SHEET

## SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: V - SHIELD Part A  
GENERAL USE: Protective coating  
PRODUCT DESCRIPTION: Clear liquid, characteristic odor

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DISTRIBUTED BY  
Bond Water Technologies, Inc.

DATE PREPARED:  
SUPERSEDES:

ADDRESS (NUMBER, STREET, P.O. BOX)  
630 East Diamond Avenue, Suite J/K

TELEPHONE NUMBER FOR INFORMATION  
(301) 721-2663

(CITY, STATE AND ZIP CODE)  
Gaithersburg, MD 20877

COUNTRY  
USA

EMERGENCY TELEPHONE NUMBER  
CHEMTREC 800-424-9300

## SECTION 2 - HAZARDS IDENTIFICATION

### EMERGENCY OVERVIEW

Clear liquid, low volatility, eye and skin irritant. Low fire risk. React with amines to produce heat. Hazard Symbols - Xi, N. Risk Phrases - R36/38, 43, 51/53

### POTENTIAL HEALTH EFFECTS

INHALATION: None expected, however, certain individuals may experience minor nausea or headaches.

SKIN: Skin sensitizer, contact with the skin will cause severe irritation and pain. Repeated and / or prolonged contact with the skin may cause allergic reaction and / or sensitization.

EYES: This product is an eye irritant. Contact with the eyes will cause irritation. Contact with product at elevated temperatures can result in thermal burns.

INGESTION: May cause gastric distress, vomiting and diarrhea.

CARCINOGENICITY

NTP?

No

IARC MONOGRAPHS? No

OSHA REGULATED? No

## SECTION 3 - COMPOSITION / INFORMATION ON INGREDIENTS

HAZARDOUS COMPONENTS	CAS #	EINECS #	%(by weight)	OSHA PEL		ACGIH TWA	RQ LBS
				PPM	MG / M3	PPM MG / M3	
o-Cresol Glycidyl Ether	2210-79-9	218-645-3	15 - 20				not established
Polymer of epichlorohydrin & Bisphenol A	25068-38-6	500-033-5	80 - 85				not established

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SECTION 4 - FIRST AID MEASURES			
INHALATION: Remove affected person to fresh air; if symptoms persist seek medical attention.			
SKIN: Carefully remove contaminated clothing; wash affected area with soap and water; launder contaminated clothing before reuse; if irritation persists, seek medical attention. If contact with hot product occurs, immediately flush affected area with cool water for 15 minutes.			
EYES: Check for and remove contact lenses. Flush eyes with clear running water for 15 minutes while holding eyelids open; seek medical attention. If contact with hot product occurs, immediately flush with cool water for 15 minutes. Seek medical attention immediately.			
INGESTION: Give two glasses of water for dilution; DO NOT induce vomiting; seek medical attention; never give anything by mouth to an unconscious person.			
SECTION 5 - FIRE FIGHTING MEASURES			
FLASH POINT (METHOD USED)	FLAMMABLE LIMITS	Not applicable	Not applicable
> 200° F (> 93.3° C)	LEL:	Not determined	UEL:
	AUTOIGNITION TEMPERATURE:		NFPA CLASS: III B
GENERAL HAZARDS: Product will support combustion. Products of combustion include compounds of carbon, hydrogen and oxygen, including carbon monoxide.			
EXTINGUISHING MEDIA Carbon dioxide, water fog, dry chemical, chemical foam.			
FIRE FIGHTING PROCEDURES Firefighters must wear full facepiece self - contained breathing apparatus in positive pressure mode. Do not use solid stream of water since stream will scatter and spread fire. Fine water spray can be used to keep fire - exposed containers cool.			
UNUSUAL FIRE AND EXPLOSION HAZARDS Closed containers can explode due to buildup of pressure when exposed to extreme heat. Do not use direct stream of water on pool fires as product may reignite on water surface. Caution - Material will support combustion!			
HAZARDOUS COMBUSTION PRODUCTS Smoke, fumes or vapors, oxides of carbon.			
SECTION 6 - ACCIDENTAL RELEASE MEASURES			
STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Shut off source of leak if safe to do so. Dike and contain product. Confine spill, soak up with clay, sand or other approved absorbent, shovel product into approved container for disposal. Wash area with plenty of water.			
SECTION 7 - HANDLING AND STORAGE			
PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Keep container closed when not in use; protect containers from abuse; protect from extreme temperatures. Keep this and other chemicals out of reach of children.			
SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION			
ENGINEERING CONTROLS The use of local exhaust ventilation is recommended. No other special controls are indicated.			
PERSONAL PROTECTION: RESPIRATORY PROTECTION: None required			
PROTECTIVE GLOVES: Recommended for general protection			
EYE PROTECTION: Chemical splash goggles. Refer to 29 CFR 1910.133, ANSI Z87.1, or European Standard EN166.			
OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Safety eyewash station nearby.			
WORK / HYGIENIC PRACTICES: Practice safe workplace habits. Minimize body contact with this, as well as all chemicals in general.			

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<b>SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES</b>				
APPEARANCE AND ODOR Clear liquid, characteristic odor		VAPOR DENSITY (AIR = 1) Not applicable		
SPECIFIC GRAVITY (WATER = 1) 1.400 - 1.410		EVAPORATION RATE (Water = 1) Not applicable		
SOLUBILITY IN WATER Negligible		% VOLATILE (BY WEIGHT) None		
pH Not applicable		VAPOR PRESSURE Not applicable		
BOILING POINT Not applicable		FREEZING POINT Not determined		
VISCOSITY Not specified		VOLATILE ORGANIC COMPOUNDS (VOC's) None		
<b>SECTION 10 - STABILITY AND REACTIVITY</b>				
STABILITY STABLE:		UNSTABLE: X	CONDITIONS TO AVOID: Extreme temperatures.	
INCOMPATIBILITY (MATERIALS TO AVOID): Can react vigorously with strong oxidizers, strong acids, mineral and organic bases, primary and secondary aliphatic amines.				
HAZARDOUS DECOMPOSITION OR BYPRODUCTS: Decomposition will not occur if handled and stored properly. In case of a fire, oxides of carbon, hydrocarbons, fumes or vapors, and smoke may be produced.				
HAZARDOUS POLYMERIZATION		MAY OCCUR: X WILL NOT OCCUR:	CONDITIONS TO AVOID: Hazardous polymerization may occur with excess of aliphatic amine curing agent	
<b>SECTION 11 - TOXICOLOGICAL INFORMATION</b>				
Hazardous Ingredients		CAS #	EINECS #	LD50 of Ingredient Species and Route
o-Cresol Glycidyl Ether		2210-79-9	218-645-3	4,000 mg / kg Oral - rat
Polymer of epichlorohydrin & Bisphenol A		25068-38-6	500-033-5	> 3,000 mg / kg Oral - rat
				LC50 of Ingredient Species
				6,090 mg / m3 Inhalation - rat
				Not established
<b>SECTION 12 - ECOLOGICAL INFORMATION</b>				
No data are available on the adverse effects of this material on the environment. Neither COD nor BOD data are available. Based on the chemical composition of this product it is assumed that the mixture can be treated in an acclimatized biological waste treatment plant system in limited quantities. However, such treatment should be evaluated and approved for each specific biological system. None of the ingredients in this mixture are classified as a Marine Pollutant.				
<b>SECTION 13 - DISPOSAL CONSIDERATIONS</b>				
WASTE DISPOSAL METHOD: Dispose of in accordance with local, state, and federal regulations. Product is classified as non - hazardous, however, non-hazardous materials may become hazardous waste upon contact with other products. Refer to 40 CFR 260 - 299 for complete waste disposal regulations. Consult your local, state, or federal agency before disposing of any chemicals. According to the European Waste Catalogue, waste codes are application specific and should be assigned by the user based on the application for which the product is used.				
<b>SECTION 14 - TRANSPORT INFORMATION</b>				
PROPER SHIPPING NAME: Non - Hazardous for Transport		IATA HAZARD CLASS / Pack Group: Not regulated		
DOT HAZARD CLASS / Pack Group: Not regulated		IMDG HAZARD CLASS: Not regulated		
REFERENCE: Not Applicable		RID/ADR Dangerous Goods Code: Not regulated		
UN / NA IDENTIFICATION NUMBER: None		UN TDG Class / Pack Group: Not regulated		
LABEL: None Required		Hazard Identification Number (HIN): None		
HAZARD SYMBOLS: None				
Note: Transportation information provided is for reference only. Customer is urged to consult 49 CFR 100 - 177, IMDG, IATA, EC, United Nations TDG, and WHMIS (Canada) TDG information manuals for detailed regulations and exceptions covering specific container sizes, packaging materials and methods of shipping.				

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PRODUCT NAME: V - SHIELD Part A

**SECTION 15 - REGULATORY INFORMATION**

**TSCA (Toxic Substance Control Act)**

All components of this product are listed on the U.S. Toxic Substances Control Act Chemical Inventory (TSCA Inventory) or are exempted from listing because a Low Volume Exemption has been granted in accordance with 40 CFR 723.50.

**SARA TITLE III (Superfund Amendments and Reauthorization Act)**

31 1/312 Hazard Categories

Immediate health

313 Reportable Ingredients:

None

**CERCLA (Comprehensive Response Compensation and Liability Act)**

None

**California Prop 65, Safe Drinking Water and Toxic Enforcement Act of 1986**

There are no reportable chemicals present known to the state of California to cause cancer or reproductive toxicity.

**CPR (Canadian Controlled Products Regulations)**

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations. WHMIS Classification: D2B - Eye irritation; D2B - Skin Sensitization

**IDL (Canadian Ingredient Disclosure List)**

Components of this product identified by CAS number and listed on the Canadian Ingredient Disclosure List are shown in Section 3.

**DSL / NDSL (Canadian Domestic Substances List / Non-Domestic Substances List)**

Components of this product identified by CAS number are listed on the DSL or NDSL, or are otherwise in compliance with the New Substances Notification (NSN) regulations. Only ingredients classified as "hazardous" are listed in Section 3 unless otherwise indicated.

**EINECS (European Inventory of Existing Commercial Chemical Substances)**

Components of this product identified by CAS numbers are on the European Inventory of Existing Commercial Chemical Substances.

WGK Water Quality Index: 2

VbK Index: A III

**Risk Phrases**

R36/38 Irritating to eyes and skin.  
R43 May cause sensitization by skin contact.  
R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**SYMBOL(S) REQUIRED FOR LABEL**

Irritant          Environmental Hazard

**Safety Phrases**

S23 Do not breathe vapour.  
S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
S28 After contact with skin, wash immediately with plenty of soap and water.  
S36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

**SECTION 16 - OTHER INFORMATION**

Specific toxicity tests have not been conducted on this product. Our hazard evaluation is based on information from similar products, the ingredients, technical literature, and/or professional experience.

HMIS HAZARD RATINGS	HEALTH	2	* = Chronic Health Hazard	2 = MODERATE
	FLAMMABILITY	1	0 = INSIGNIFICANT	3 = HIGH
	PHYSICAL HAZARD	0	1 = SLIGHT	4 = EXTREME
	PERSONAL PROTECTIVE EQUIPMENT	B	Safety Glasses, Gloves	

**REVISION SUMMARY:**

This MSDS has been revised in the following sections:  
Complete format revision

MSDS Prepared by:

The information contained herein is believed to be accurate but is not warranted to be so. Data and calculations are based on information furnished by the manufacturer of the product and manufacturers of the components of the product. Users are advised to confirm in advance of need that information is current, applicable and suited to the circumstances of use. Vendor assumes no responsibility for injury to vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Furthermore, vendor assumes no responsibility for injury caused by abnormal use of this material even if reasonable safety procedures are followed. Any questions regarding this product should be directed to the manufacturer of the product as described in Section 1.