

Dear LEWISBins+ Customer;

Thank you for your interest in our products. You recently requested a Material Safety Data Sheet (MSDS) for the products we supply your facility.

Our products fall under an MSDS exemption since they are considered an "article" per the Federal Occupational Safety and Health Administration. (An excerpt of the OSHA Rule (29 C.F.R. Section 1910.1200) is printed below.)

1910.1200(b)(6)(v)(c) Hazard communication.

"Article" means a manufactured item other than a fluid or particle: (i) which is formed to a specific shape or design during manufacture; (ii) which has end use function(s) dependent in whole or in part upon its shape or design during end use; and (iii) which under normal conditions of use does not release more than very small quantities, e.g., minute or trace amounts of a hazardous chemical (as determined under paragraph (d) of this section), and does not pose a physical hazard or health risk to employees.

To assist you in your request for material information I have included an MSDS that is typical of the base materials in the products we manufacture for your company. We cannot certify that this is from the specific manufacturer who supplied the resin at the time we produced your product but it will help you in your analysis of the material.

If you should have additional questions or require additional information, please feel free to call your sales person or contact me directly at 262-560-5297. Thank you for allowing us the opportunity to be of service.

Regards,

Robert Nussbaum  
Director New Product Development



# Composites International

THERMOSET MOLDING COMPOUNDS

PRODUCT NAME:  
EFFECTIVE DATE:

**BMC & SMC POLYESTER THERMOSET MOLDING COMPOUND**  
**04/09/2012 - IDI**

## **Section 1      Product and Company Identification**

**PRODUCT NAME:** BMC & SMC Polyester Thermoset Molding Compound  
**SYNONYM:** DIELECTRITE / INSULTRUC / ROSITE

**MANUFACTURER:** INDUSTRIAL DIELECTRICS, INC.  
**ADDRESS:** 407 SOUTH 7TH STREET P.O. BOX 357  
**CITY:** NOBLESVILLE  
**STATE / PROVINCE:** IN  
**ZIP CODE:** 46061  
**EMERGENCY AND OTHER PHONE:** (317) 773-1766 / FAX (317) 773-3877

**EFFECTIVE DATE:** 04/09/2012  
**PRINT DATE:** 04/09/2012

## **Section 2      Composition Information on Ingredients**

### **PURE INGREDIENTS:**

**INGREDIENT NAME:** FIBERGLASS  
**INGREDIENT PERCENTAGE:** 01-50%  
**ACGIH TLV TWA:** N/A

**INGREDIENT NAME:** MINERAL FILLERS  
**INGREDIENT PERCENTAGE:** 20-80%  
**ACGIH TLV TWA:** N/A

**INGREDIENT NAME:** POLYESTER RESIN  
**INGREDIENT PERCENTAGE:** 10-40%  
**ACGIH TLV TWA:** N/A

**INGREDIENT NAME:** POLYETHELENE / POLYSTYRENE  
**INGREDIENT PERCENTAGE:** 0-15%  
**ACGIH TLV TWA:** N/A

**INGREDIENT NAME:** STYRENE MONOMER  
**CAS:** 100425  
**INGREDIENT PERCENTAGE:** 01-20%  
**OSHA PEL:** 100 PPM

## **Section 3      Hazards Identification**

**RELEVANT ROUTES OF EXPOSURE:** EYES, SKIN, BREATHING

**SIGNS AND SYMPTOMS OF ACUTE OVEREXPOSURE:**

EYES: IRRITATION, BLURRED VISION, TEARING.  
SKIN: IRRITATION, DEFATTING.  
BREATHING: DIZZINESS, NAUSEA.

**CARCINOGENCITY:**

NTP: N

LARC: N

OSHA: N

**ADDITIONAL INFORMATION:**

STATEMENTS OF HAZARD

CAUTION! MAY CAUSE EYE AND SKIN IRRITATION. MAY CAUSE RESPIRATORY TRACT IRRITATION, HEADACHE, DIZZINESS, AND NAUSEA.

**Section 4 First Aid Measures**

EYES: FLUSH WITH PLENTY OF WATER FOR 15 MINUTES.

SKIN: WASH WITH SOAP AND WATER.

INHALATION: REMOVE TO FRESH AIR. ADMINISTER OXYGEN IF THERE IS DIFFICULTY IN BREATHING.

**Section 5 Fire Fighting Procedures**FLAMMABLE LIMITS IN  
AIR (PERCENT BY VOL.): LEL-1.1% / UEL -6.1%

FLASH POINT: N/A

AUTOIGNITION TEMP: N/A

EXTIGUISHING MEDIA: H2O, CO2, OR DRY CHEMICAL

FIRE FIGHTING  
INSTRUCTIONS: RECOMMEND PROTECTIVE CLOTHING, FULL FACE SELF CONTAINED MSHA/NIOSH APPROVED BREATHING APPARATUS.UNUSUAL FIRE AND  
EXPLOSION HAZARDS: EXTENDED HIGH TEMPERATURES CAN RESULT IN EXOTHERMIC POLYMERIZATION, GIVING OFF PEROXIDES.FLAMABILITY  
CLASSIFICATION: LIMITS (% BY VOLUME): 0.8 LOWER, 11 UPPER; (VALUES FOR VINYL-TOLUENE)**Section 6 Accidental Release Measures**ACCIDENTAL RELEASE  
MEASURES: WHERE EXPOSURE LEVEL IS NOT KNOWN, WEAR NIOSH APPROVED, POSITIVE PRESSURE, SELF-CONTAINED RESPIRATOR. WHERE EXPOSURE LEVEL IS KNOWN, WEAR NIOSH APPROVED RESPIRATOR SUITABLE FOR LEVEL OF EXPOSURE. WEAR SAME PROTECTIVE CLOTHING / EQUIPMENT AS IN SECTION 8 (EXPOSURE CONTROLS / PERSONAL PROTECTION). SWEEP UP SPILLS AND PLACE IN A WASTE DISPOSAL CONTAINER. FLUSH AREA WITH WATER.**Section 7 Handling and Storage**

HANDLING PRECAUTION: AVOID BREATHING DUST. AVOID CONTACT WITH EYES, SKIN, AND CLOTHING. WASH THOROUGHLY AFTER HANDLING.

STORAGE PRECAUTION: FOR MAXIMUM STORAGE LIFE AND TO MAINTAIN MOLDABILITY, STORE AT BELOW 70 °F (22°C). THESE COMPOUNDS ARE PACKAGED IN SPECIAL BAGS IMPERMEABLE TO STYRENE OR VINYL TOLUENE. DO NOT PUNCTURE BAG. CLOSE TIGHTLY AFTER PARTIAL USE.

OTHER PRECAUTIONS: MAY CAUSE NUISANCE DUST UPON GRINDING OF MOLDED MATERIAL.

## **Section 8 Exposure Controls / Personal Protection**

<b>ENGINEERING CONTROLS:</b>	ENGINEERING CONTROLS ARE NOT USUALLY NECESSARY IF GOOD HYGIENE PRACTICES ARE FOLLOWED. BEFORE EATING, DRINKING, OR SMOKING, WASH FACE AND HANDS THOROUGHLY WITH SOAP AND WATER. AVOID UNNECESSARY SKIN CONTACT. IMPERVIOUS GLOVES AND APRON ARE RECOMMENDED TO PREVENT SKIN CONTACT. FOR OPERATIONS WHERE EYE OR FACE CONTACT CAN OCCUR, WEAR EYE PROTECTION SUCH AS CHEMICAL SPLASH-PROOF GOGGLES OR FACE SHIELD. WHERE EXPOSURES ARE BELOW THE PERMISSIBLE EXPOSURE LIMIT (PEL), NO RESPIRATORY PROTECTION IS REQUIRED. WHERE EXPOSURES EXCEED THE PEL, USE RESPIRATOR APPROVED BY NIOSH FOR THE MATERIAL AND LEVEL OF EXPOSURE. SEE "GUIDE TO INDUSTRIAL RESPIRATORY PROTECTION" (NIOSH). SINCE THIS MATERIAL CONTAINS A COMPONENT WITH A SKIN NOTATION WITH A PEL AS SHOWN IN THE REGULATED COMPONENTS SECTION, ADDITIONAL SKIN PROTECTION SUCH AS A PROTECTIVE SUIT OR CLOTHING MAY BE REQUIRED. CUTTING, GRINDING, OR SANDING OF PARTS FABRICATED AFTER CURING OF THIS MATERIAL MAY CREATE RESPIRABLE DUST PARTICLES. RESPIRATORY PROTECTION APPROPRIATE FOR THIS DUST MAY BE REQUIRED. REFER TO THE REGULATED COMPONENT SECTION FOR POTENTIAL HAZARDOUS COMPONENTS IN THE DUST. GLOVES, LONG-SLEEVE SHIRT AND SAFETY GLASSES ARE RECOMMENDED TO PREVENT CONTACT WITH ANY DUST PARTICLES GENERATED.
<b>VENTILATION REQUIREMENTS:</b>	N/A
<b><u>PERSONAL PROTECTIVE EQUIPMENT:</u></b>	
<b>EYE / FACE PROTECTION:</b>	SAFETY GLASSES/GOGGLES TO PROTECT AGAINST DRY PARTICLES.
<b>SKIN PROTECTION:</b>	IMPERVIOUS AND ABRAISON RESISTANT.
<b>RESPIRATORY PROTECTION:</b>	NONE IF TLV NOT EXCEEDED.
<b>OTHER PROTECTIVE CLOTHING OR EQUIPMENT:</b>	NONE
<b>WORK HYGIENIC PRACTICES:</b>	NONE ESTABLISHED

## **Section 9 Physical and Chemical Properties**

<b>APPEARANCE:</b>	FLEXIBLE, SOFT SHEETS OR DOUGHY COMPOUND, PUNGENT ODOR. A SOFT, TACKY, FIBROUS MATERIAL OF VARIOUS COLORS.
<b>BOILING POINT:</b>	N/A
<b>EVAPORATION RATE BASIS (-1) :</b>	N/A
<b>EVAPORATION RATE:</b>	0.00
<b>FREEZING POINT:</b>	N/A
<b>MELTING POINT:</b>	N/A
<b>ODOR:</b>	CHARACTERISTIC ODOR OF STYRENE OR VINYL TOLUENE.
<b>PERCENT VOLATILE:</b>	1-20%
<b>REACTIVITY IN WATER:</b>	N/A
<b>SATURATED VAPOR CONCENTRATION:</b>	NOT AVAILABLE
<b>SOLUBILITY IN WATER:</b>	NEGLECTIBLE
<b>SPECIFIC GRAVITY OR DENSITY (WATER-1):</b>	1.7-2.2
<b>VAPOR DENSITY:</b>	3.6 (STYRENE)
<b>VAPOR PRESSURE:</b>	4.5 (STYRENE)

WEIGHT PER GALLON: N/A

ADDITIONAL INFORMATION: DENSITY: N/A

## **Section 10    Stability and Reactivity**

**STABILITY:** THE CHEMICAL IS STABLE UNDER NORMAL HANDLING AND STORAGE CONDITIONS.

**CONDITIONS TO AVOID:** HIGH TEMPERATURES WILL INDUCE NON-VIOLENT POLYMERIZATION.

**INCOMPATIBILITY WITH OTHER MATERIALS:** PEROXIDES AND POLYMERIZATION CATALYST. CARBON MONOXIDE & CARBON

**HAZARDOUS DECOMPOSITION PRODUCTS:** CO AND HYDROCARBONS

**HAZARDOUS POLYMERIZATION:** HAZARDOUS POLYMERIZATION NOT LIKELY UNDER NORMAL CONDITIONS.

**POLYMERIZATION CONDITIONS TO AVOID:** STRONG MINERAL ACIDS AND HIGH HEAT. POLYMERIZATION WILL OCCUR AT ELEVATED TEMPERATURES BUT IS NOT VIOLENT.

## **Section 11    Toxicological Information**

**TOXICOLOGICAL INFORMATION:** HAZARDS IDENTIFICATION. TOXICOLOGICAL INFORMATION ON THE OSHA REGULATED COMPONENTS OF THIS PRODUCT ARE AS FOLLOWS:

STYRENE HAS AN ACUTE ORAL LD<sub>50</sub> (RAT) OF 5 G/KG. THE INHALATION LC<sub>50</sub> (RAT) IS 24 MG/L FOLLOWING A 4-HOUR EXPOSURE. ACUTE OVEREXPOSURE TO STYRENE VAPOR MAY CAUSE MODERATE EYE AND NASAL IRRITATION AS WELL AS DROWSINESS, HEADACHE AND CENTRAL NERVOUS SYSTEM DEPRESSION. STYRENE IS A MODERATE SKIN AND EYE IRRITANT. STYRENE HAS BEEN SHOWN TO CAUSE LUNG TUMORS IN MICE. EPIDEMIOLOGICAL STUDIES OF STYRENE EXPOSURE IN HUMANS IS NOT CONCLUSIVE DUE TO THE INADEQUATE CONTROL OF VARIABLES.

ACUTE ORAL (RAT) AND DERMAL (RABBIT) LD (50) VALUES ARE ESTIMATED TO BE GREATER THAN 5,000 MG/ KG AND GREATER THAN 2,000 MG/KG, RESPECTIVELY. THE 4-HOUR INHALATION LC 50 (RAT) VALUE IS ESTIMATED TO BE GREATER THAN 20 MG/L. DIRECT CONTACT WITH THIS MATERIAL MAY CAUSE MINIMAL EYE AND SKIN IRRITATION. INHALATION OVEREXPOSURE MAY CAUSE IRRITATION OF THE RESPIRATORY TRACT AND EYES. REFER TO SECTION 11 FOR TOXICOLOGY INFORMATION ON THE OSHA REGULATED COMPONENTS OF THIS PRODUCT. INHALATION OVEREXPOSURE TO ZINC STEARATE, ALUMINA TRIHYDRATE, KAOLIN, CALCIUM METASILICATE, GLASS, MICA, FIBERGLASS, CELLULOSE, IRON OXIDE, CARBON BLACK, AND TALC MAY CAUSE RESPIRATORY CONGESTION AND IRRITATION.

## **Section 12    Ecological Information**

NO APPLICABLE INFORMATION WAS FOUND.

## **Section 13    Disposal Considerations**

### **DISPOSAL CONSIDERATIONS:**

THE INFORMATION OF RCRA WASTE CLASSIFICATION AND DISPOSAL METHODOLOGY PROVIDED BELOW APPLIES ONLY TO THE IDI PRODUCT, AS SUPPLIED. IF THE MATERIAL HAS BEEN ALTERED OR CONTAMINATED, OR IT HAS EXCEEDED ITS RECOMMENDED SHELF LIFE, THE GUIDANCE MAY BE INAPPLICABLE, HAZARDOUS WASTE CLASSIFICATION UNDER FEDERAL REGULATIONS (40 CFR PART 261 ET SEQ) IS DEPENDENT UPON WHETHER A MATERIAL IS A RCRA "LISTED HAZARDOUS WASTE" OR HAS ANY OF THE FOUR RCRA "HAZARDOUS WASTE CHARACTERISTICS". REFER TO 40 CFR PART 261.33 TO DETERMINE IF A GIVEN MATERIAL TO BE DISPOSED OF IS RCRA "LISTED HAZARDOUS WASTE"; INFORMATION CONTAINED IN SECTION 15 OF THIS MSDS IS NOT INTENDED TO INDICATE IF THE PRODUCT IS A "LISTED HAZARDOUS WASTE" OR HAS A RCRA HAZARDOUS WASTE CHARACTERISTIC. THERE ARE FOUR CHARACTERISTICS DEFINED IN 40 CFR SECTION 261.21-61.24: IGNITABILITY, CORROSIVITY, REACTIVITY, AND TOXICITY. TO DETERMINE IGNITABILITY, SEE SECTION 5 OF THIS MSDS (FLASH POINT). FOR CORROSIVITY, SEE SECTION 9 AND 14 (PH AND DOT CORROSIVITY). FOR REACTIVITY, SEE SECTION 10 (INCOMPATIBLE MATERIALS). FOR TOXICITY, SEE SECTION 2 (COMPOSITION). FEDERAL REGULATIONS ARE SUBJECT TO CHANGE. STATE AND LOCAL REQUIREMENTS, WHICH MAY DIFFER FROM OR BE MORE STRINGENT THAN THE FEDERAL REGULATION, MAY ALSO APPLY TO THE CLASSIFICATION OF THE MATERIAL IF IT IS TO BE DISPOSED. IDI ENCOURAGES THE RECYCLE, RECOVERY AND REUSE OF MATERIALS, WHERE PERMITTED, AS AN ALTERNATE TO DISPOSED AS A WASTE. IDI RECOMMENDS THAT ORGANIC MATERIAL CLASSIFIED AS RCRA PROVIDED THE FOREGOING FOR INFORMATION ONLY; THE PERSON GENERATING THE WASTE IS RESPONSIBLE FOR DETERMINING THE WASTE CLASSIFICATIONS AND DISPOSAL METHOD.

## **Section 14    Transport Information**

CONTACT THE MANUFACTURER FOR FURTHER DETAILS IF SHIPPING THIS MATERIAL BY AIR.

## **Section 15    Regulatory Information**

### **U.S. FEDERAL REGULATIONS:**


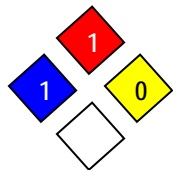
US TSCA: THIS PRODUCT IS MANUFACTURED IN COMPLIANCE WITH ALL PROVISIONS OF THE TOXIC SUBSTANCES CONTROL ACT, 15 U.S.C. 2601 ET. SEQ.

## **Section 16    Other Information**

### **NFPA CODES:**

<b>HEALTH:</b>	1
<b>FLAMMABILITY:</b>	1
<b>REACTIVITY:</b>	0
<b>OTHER:</b>	0

### **Other Information:**

WHMIS (Canada)	FPA (USA)	HMIS (USA)	Protective Clothing								
	<div>Fire</div> <div>Health</div> <div>Reactivity</div> <div>Specific Hazard</div> 	<table><tr><td>Health Hazard</td><td>1</td></tr><tr><td>Fire Hazard</td><td>1</td></tr><tr><td>Reactivity</td><td>0</td></tr><tr><td>Personal Protection</td><td>X</td></tr></table>	Health Hazard	1	Fire Hazard	1	Reactivity	0	Personal Protection	X	Safety Glasses/Goggles Impervious Gloves
Health Hazard	1										
Fire Hazard	1										
Reactivity	0										
Personal Protection	X										