

<b>BioCR1B Wall System</b>		
<b>Proper Name</b>	<b>Use within System</b>	<b>Name on General MSDS List</b>
Polyurethane adhesive	Panel adhesive	9500 polyurethane adhesive
Dow 999 A Caulk	Caulking for batten	Caulks_all
NG liner	Batten Material	NG liner
BioCr Panel	Wall Panel	BioCr 1 Panel

**Bio/CR-1B**  
GridLock® Panel (walls and ceilings)

**General Description:**

Bio/CR-1B panel system is part of the GridLock Biocontainment /Clean Room product line. The panels used in this system are 12 mm thick (.477") and are made of polymer, metal and fiberglass composite that form a durable composite panel. The exposed face is composed of a 090 FRP with a consistent smooth face (no fiberglass print through). The FRP surface finish is glossy and ASTM E 84 Class A for smoke and flame spread.

The panel will be supplied in standard 47" x 10' sizes. The vertical edge is square and is designed for direct fastening to the wall studs. The joint that results from butting the two square edges is filled with sealant and covered with a flat batten having the same surface characteristics as the panel face. The final surface is dense, stain resistant, chemical resistant and impervious to water. It is non-generating for particulate matter and as such is ideal for animal holding, research laboratories and technical/pharmaceutical production spaces.

The Bio/CR-1B system is designed specifically as a biocontainment and clean room application that is applicable to several industries for both walls and ceilings. Further the ability to mount these panels directly on studs reduces construction time and eliminates painting or repainting. The panel system is applicable to ceilings as well mounting to either metal studs or hat channel.

**Cleaning:** GridLock Panels can withstand daily surface washing, wet wiping, dusting and vacuuming. They can withstand routine high-pressure washing and chemical disinfection and fumigation. The resinous finish will not support the growth of bacteria or mold. Ask your LSP Representative for more detailed maintenance instructions.

The panels have the following properties:

**Recycle Content:** Minimum 50%  
**Fire Rating:** Class 1 ASTM E 84 for flame spread of 25 or less  
**Light Reflectance @ 85:** 94.3  
**Minimum Weight:** 3.1 lbs. per square foot  
**Finish:** Polyester gel coat smooth  
**Standard Sizes:** 47" x 10'  
**Panel thickness:** 12 mm  
**Color:** White  
**Finish:** Gloss  
**Hardness:** ASTM D-785 46 Barcol  
**Flexural Mod ASTM D-790-07 :** 657,693  
**Flexural Strength-ASTM D 790-07:** 6751 psi  
**Water Vapor Transmission ASTM E-96:** < 0.0001 perms  
**Air Permeance ASTM E-2178 (L/s/m<sup>2</sup>):** 0.00001 @ 300 pa  
**STC Rating ASTM E-90:** 32  
**Tensile Strength: ASTM D-638:** 3672 psi  
**Tensile Mod ASTM D-638:** 581,000  
**Coefficient of Linear Thermal Expansion CLTE (mm mm C) ASTM D-696:** 4.30 E - 05  
**Compressive Strength ASTM D- 695:** 5364 psi  
**Modulus: ASTM D695:** 49,873 psi

<b>Chemical Resistance</b>	20% Acetic Acid	Occasional Spill
	50% Citric Acid	Good
	20% Nitric Acid	Occasional Spill
	30% Hydrochloric Acid	Occasional Spill
	10% Hydrofluoric Acid	Occasional Spill
	Hydrogen Peroxide	Good
	40% Potassium Hydroxide	Good
	40% Sodium Hydroxide	Good
	50% Sulfuric Acid	Good
	Urea	

The joint adhesive/sealant has the following properties:

<b>Hardness Shore D</b>	<b>ASTM D-1706</b>	<b>70 - 80</b>
<b>Tensile Strength</b>	<b>ASTM D-638</b>	<b>3,000 psi min.</b>
<b>Flexural Strength</b>	<b>ASTM D-790</b>	<b>4,000 psi min.</b>
<b>Thermal Shock</b>	<b>Mil F-52505</b>	<b>No cracking or loss of adhesion</b>
<b>Abrasion Resistance (Taber Abrader, CS-17 Wheels, 1000 gm. load, 1000 cycles)</b>	<b>ASTM D-4060</b>	<b>.035 gm loss</b>
<b>Ultimate Elongation</b>	<b>ASTM D-638</b>	<b>20% min.</b>



**SECTION 1 Product and Company Information**

<b>PRODUCT NAME:</b> BioCR1B Panels	Chemtrec
<b>GENERIC NAME:</b> Fiberglass Reinforced Plastic and Polymetal with batten	24 Hour Emergency Number 1-800-424-9300
	Information Number: 1-800-666-6216
DISTRIBUTOR: LSP Performance Resins	CRM# CCN722733
124 Speer Road	
Chestertown, MD 21620	
Comments: To the best of our knowledge, this Material Safety Data Sheet conforms to the requirements of US OSHA 29 CFR1910.1200, 91/155/ECC and Canadian Hazardous Products Act	

**SECTION 2 Hazards Identification**

<p>Emergency Overview</p> <p><b>This product contains no hazardous ingredients as defined under the criteria of the federal OSHA Hazard Communication Standard 29 CFR 1910.1200. Dust and other particulates generated during cutting, shaping or forming may cause eye, skin and respiratory tract irritation. This SDS contains information on the safe handling and proper use of the product. MSDS should be available for any person(s) in use of this product.</b></p> <p>Emergency Overview: Not expected to cause any adverse health effects when handled as recommended.</p>	<p>Potential Health Effects</p> <p>Eyes: Dusts and particulates may cause eye irritation          Skin: Dusts and particulates may cause skin irritation          Ingestion: Not likely a route of exposure under normal product usage          Inhalation: Dusts and particulates may cause respiratory tract irritation</p>										
<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:30%;">Carcinogenicity: Not listed by NTP Not Listed by IARC Not Listed by OSHA</td> <td style="width:70%;">Not listed Reproductive Effects : Not Available Teratogenic Effects: No evidence of mutagenetic effects</td> </tr> </table>	Carcinogenicity: Not listed by NTP Not Listed by IARC Not Listed by OSHA	Not listed Reproductive Effects : Not Available Teratogenic Effects: No evidence of mutagenetic effects	Signs and Symptoms of Overexposure:								
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<b>GHS LABEL ELEMENTS, INCLUDING PRECAUTIONARY STATEMENTS</b>											
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	Health	Environmental	Physical								
Eye Irritant	None Known	Not Classified	Not Classified								
Skin Irritant											
Respiratory Irritant											
Pictogram:											

**SECTION 3 Composition / Information on Ingredients**

Fiberglass Reinforced Plastic panels are solid sheets composed of glass, calcium carbonate, titanium dioxide, alumina and pigment embedded in a cured polymerized, styrenated/acrylated polyester.	Polymetal component contains (CAS#)
	Aluminium 7429-90-5
	Polyethylene 9002-88-4
	Magnesium 7439-95-4
	Manganese 7439-96-5
	Silicon 7440-21-3
	Iron 7439-89-6
	Chromium 7440-47-3
	Coatings

**SECTION 4 First Aid Measures**

Inhalation:	Remove person to fresh air. If other respiratory symptoms develop, or person is breathing irregular, seek medical attention immediately.
Skin Contact:	Immediately flush with large amounts of water. For itching, wash the skin with soap and water. Remove any contaminated clothing. If irritation, continues, seek medical attention.
Eye Contact:	Immediately flush eyes with plenty of water and seek medical advice. Eye injuries from glass particles should be treated by a physician immediately.
Ingestion:	Get immediate medical attention or advice Do not induce vomiting.

**SECTION 5 Fire Fighting Measures**

FLAMMABILITY:                               SEE SECTION 9 FOR FLAMMABILITY PROPERTIES – NO FIRE HAZARDS ANTICIPATED.  
 FLASH POINT:                                HIGHER THAN PAPER, 451 F  
 AUTO IGNITION TEMP: No DATA  
 EXTINGUISHING MEDIA: DRY CHEMICAL, CO2, WATER SPRAY  
 SPECIAL EXPOSURE:   REMOVE ALL PERSONS FROM THE AREA OF INCIDENT. ISOLATE THE SCENE AND ONLY ALLOW SUITABLE PERSONAL TO TAKE ACTION.  
 HAZARDOUS THERMAL: COMBUSTION MAY YIELD CO, CO2, ALIPHATIC AND AROMATIC HYDROCARBONS AND HALOGENATED COMPOUNDS. TESTS SHOW COMBUSTION GASES TO BE LESS TOXIC THAN THOSE FROM WOOD. .  
 SPECIAL FIRE FIGHTING: USE MEDIA BEST SUITED FOR FIRE ENVIRONMENT. USE SELF CONTAINED BREATHING APPARATUS FOR LARGE SCALE FIRE FIGHTERS SHOULD WEAR FULL PROTECTIVE GEAR.

**SECTION 6 Accidental Release Measures**

No special containment and clean up procedures required. No evacuation procedures required.

**SECTION 7 Handling and Storage**

Storage: No special storage requirements  
 Handling: Avoid dust generation. See Section 8 for personal protection.

**SECTION 8 Exposure Controls / Personal Protection**

EXPOSURE GUIDELINES and Limits

NAME	ACGIH	OSHA	NIOSH
Aluminum	1mg/m3 TWA	1mg/m3 TWA total dust 5mg/m3 TWA (respirable fraction)	10 mg/m3 TWA (total dust); 5mg/m3 TWA (respirable dust)
Manganese	.2 mg/m3 TWA	1mg/m3 TWA (Fume); 3mg/m3 STEL; 5 mg/m3 Ceiling	1mg/m3 TWA (Fume); 3mg/m3 STEL;
Silicon		10 mg/m3 TWA (total dust); 5mg/m3 TWA (Respirable fraction)	10 mg/m3 TWA (total dust); 5mg/m3 TWA (Respirable dust)
Chromium	.5 mg/m3 TWA	1mg/m3 TWA	.5 mg/m3 TWA

**PROTECTIVE CLOTHING:**                       **PROTECTIVE GLOVES.**  
**RESPIRATORY PROTECTION:**               **USE MSHA-NIOSH APPROVED RESPIRATOR SUCH AS 3M 8710 WHEN GENERATING DUSTS**  
**RESPIRATOR SHOULD BE CHOSEN BASED ON EXPOSURE LEVELS.**  
**EYE PROTECTION:**   **SAFETY GLASSES WITH SIDE SHIELDS ARE RECOMMENDED TO AVOID SPLASHES, MISTS OR DUSTS.**  
**HYGIENE PROTECTION:** **AN EYE WASH STATION AND EMERGENCY SHOWER IN WORK AREA IS RECOMMENDED. WASH SKIN WITH SOAP AND WATER AFTER HANDLING. APPROPRIATE TECHNIQUES SHOULD BE USED TO REMOVE ANY CONTAMINATED CLOTHING AND CLOTHING SHOULD BE WASHED BEFORE REUSING.**  
**VENTILATIONS:**               **VENTILATION IS NOT NORMALLY REQUIRED EXCEPT TO CONTROL DUST. DURING CUTTING, DRILLING, ETC, DUST TO BE CONTROLLED AND KEPT PARTICULATE NOT TO EXCEED 30M PPCF**  
**EATING AND DRINKING ARE NOT TO BE DONE IN THE AREA OF FABRICATING.**

**SECTION 9 Physical and Chemical Properties**

Appearance	
Form	Rigid sheet
Color	varies
pH	N/A
Melting/Freezing Temperature	N/A
Boiling Point	N/A
Ignition Temperature	Not determined
Autoignition Temperature	Not applicable
Lower explosive limit; na	
Vapor Pressure	Not applicable
Vapor Density (air=1)	Not applicable

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Date Printed: 3/24/2015	

Specific Gravity (water=1 @39.2F)	446-1.8
Evaporation Rate (Bac=1)	N/P
Odor	None
Odor threshold	
Water Solubility	insoluble

<b>SECTION 10 Stability and Reactivity</b>	
<b>REACTIVITY:</b>	<b>PRODUCT IS STABLE.</b>
<b>CONDITIONS TO AVOID:</b>	<b>AVOID DUST GENERATION</b>
<b>INCOMPATIBLE MATERIALS:</b>	<b>ALKALI, STRONG MINERAL ACIDS, HYDROFLORIC ACIDS. MAY REACT WITH STRONG OXIDIZING AGENTS.</b>
<b>HAZARDOUS</b>	
<b>POLYMERIZATION:</b>	<b>WILL NOT OCCUR UNDER NORMAL CONDITIONS.</b>
<b>HAZARDOUS</b>	
<b>DECOMPOSITION:</b>	<b>WILL NOT OCCUR UNDER NORMAL CONDITIONS. FIRE MAY PRODUCE CO<sub>2</sub>, CO, ALIPHATIC AND AROMATIC COMPOUNDS, HALOGENATED COMPONENTS LESS TOXIC THAN WOOD.</b>

<b>SECTION 11 Toxicological Information</b>	
Fiberglass Reinforced Plastic United States:	Polymetal LD50/LC 50 Polyethylene – Inhalation LC50 Mouse 12 g/m <sup>3</sup> 30 Min Magnesium - Oral LD50 rat 230 mg/kg Manganese - Oral LD50 rat 9 g/kg Iron - Oral LD50 rat 984 mg/kg Silicon – Oral LD50 Rat 3160 mg/kg Carcinogenicity Aluminum – ACGIH - A4 Not classified as human carcinogen Polyethylene – IARC- Supplement 7 Monograph 19 Chromium- ACGIH A4 Not classifiable as a huma carcinogen IARC – Monograph 49 Supplement 7
Acute Toxicity – Not Available Chronic Toxicity – Not Available Irritation/Corrosion – Not Available Sensitizer – Not Available Carcinogenicity – Not Available Mutagenicity – Not Available Teratogenicity – Not Available Reproductive Toxicity – Not Available	

<b>SECTION 12 Ecological Information</b>	
Biodegradability:	Not determined
Aquatic Ecotoxicity: Iron - 96 HR LC50 Monroe saxatilis – 13.6 mg/L (static) 96 HR LC 50 Cyprinus carpio .56 Mg/l (semi-static)	
Specific ecotoxicological data is not available for this product.	

<b>SECTION 13 Disposal Considerations</b>	
<b>Waste Disposal</b>	
Component Waste level- Chromium RCRA- 5.0 mg/L regulatory level	
Disposal must comply with all Federal, State and Local regulations. See section 7 and 8 for handling and protection.	

<b>SECTION 14 Transport Information</b>	
<b>Not classified as hazardous for transport.</b>	<b>DOT Classification: Not Regulated</b> <b>TDG Classification: Not Regulated</b>

<b>SECTION 15 Regulatory Information</b>	
U.S. Federal Regulations:	
Component Analysis- This material contains one or more of the following chemicals required to be identified under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65) and/or CERCLA (40 CFR 302.4)	



Aluminum (7429-90-5) SARA 313: 1.0% de minimus concentration (dust or fume only)

Manganese (7439-96-5) SARA 313: 1.0% de minimus concentration

Chromium (7440-47-3) CERCLA: 5000 lb final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is larger than 100 micrometers) 2270 kg final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is larger than 100 micrometers)

#### State Regulations

##### Component Analysis – State-

Component	CAS	CA	MA	MN	NJ	PA	RI
Aluminum	7429-90-5	Yes	Yes	Yes	Yes	Yes	Yes
Magnesium	7439-95-4	Yes	Yes	No	Yes	Yes	Yes
Manganese	7439-96-5	Yes	Yes	Yes	Yes	Yes	Yes
Iron	7439-89-6	Yes	No	No	No	No	No
Silicon	7440-21-3	No	Yes	Yes	Yes	Yes	Yes
Chromium	7440-47-3	Yes	Yes	Yes	Yes	Yes	Yes

Component Analysis – WHMIS-DL The following components are identified under the Canadian Hazardous Products Act Ingredients Disclosure Act

Component	CAS	Minimum Concentration
Aluminum	7429-90-5	1%
Manganese	7439-96-5	1%
Chromium	7440-47-3	0.1%

#### Additional Regulatory Information

##### Component Analysis – Inventory

Component	CAS	TSCA	CAN	EEC
Aluminum	7429-90-5	Yes	DSL	EINECS
Magnesium	7439-95-4	Yes	DSL	No
Manganese	7439-96-5	Yes	DSL	EINECS
Iron	7439-89-6	Yes	DSL	EINECS
Silicon	7440-21-3	Yes	DSL	EINECS
Chromium	7440-47-3	Yes	DSL	EINECS

#### SECTION 16 Other Information

Revised to be in compliance with new GHS regulations due by 12/1/2013.

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