

BioCR1B Wall System		
Proper Name	Use within System	Name on General MSDS List
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/m²): 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

Chemical Resistance	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:

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

SECTION 1 Product and Company Information

PRODUCT NAME: BioCR1B Panels	Chemtrec
GENERIC NAME: 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>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.</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	<p>Signs and Symptoms of Overexposure:</p>								
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										
GHS LABEL ELEMENTS, INCLUDING PRECAUTIONARY STATEMENTS											
<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:25%;"></th> <th style="width:25%;">Health</th> <th style="width:25%;">Environmental</th> <th style="width:25%;">Physical</th> </tr> </thead> <tbody> <tr> <td>Eye Irritant</td> <td rowspan="3" style="text-align: center;">None Known</td> <td rowspan="3" style="text-align: center;">Not Classified</td> <td rowspan="3" style="text-align: center;">Not Classified</td> </tr> <tr> <td>Skin Irritant</td> </tr> <tr> <td>Respiratory Irritant</td> </tr> </tbody> </table>			Health	Environmental	Physical	Eye Irritant	None Known	Not Classified	Not Classified	Skin Irritant	Respiratory Irritant
	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

Material Safety Data Sheet		BIOCR 1B Panels	
Effective Date: 01/01/2015	Previous Revision date: 00/00/0000	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

SECTION 10 Stability and Reactivity	
REACTIVITY:	PRODUCT IS STABLE.
CONDITIONS TO AVOID:	AVOID DUST GENERATION
INCOMPATIBLE MATERIALS:	ALKALI, STRONG MINERAL ACIDS, HYDROFLORIC ACIDS. MAY REACT WITH STRONG OXIDIZING AGENTS.
HAZARDOUS	
POLYMERIZATION:	WILL NOT OCCUR UNDER NORMAL CONDITIONS.
HAZARDOUS	
DECOMPOSITION:	WILL NOT OCCUR UNDER NORMAL CONDITIONS. FIRE MAY PRODUCE CO₂, CO, ALPHAIC AND AROMATIC COMPOUNDS, HALOGENATED COMPONENTS LESS TOXIC THAN WOOD.

SECTION 11 Toxicological Information	
Fiberglass Reinforced Plastic United States:	Polymetal LD50/LC 50 Polyethylene – Inhalation LC50 Mouse 12 g/m3 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	

SECTION 12 Ecological Information	
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.	

SECTION 13 Disposal Considerations	
Waste Disposal	
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.	

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

SECTION 15 Regulatory Information	
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.

DISCLAIMER: The above information is provided on the data available to us and believed to be true and accurate. The information contained herein is offered in good faith and no warranty, expressed or implied, are made regarding the accuracy of this data since conditions or use is beyond our control. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. LSP, Inc. assumes no responsibilities for the use of handling of this product.

The information contained herein is based on data considered accurate. However, no warranty is expressed or implied regarding the accuracy of this data or results to be obtained from the user thereof. LSP Performance Resins assumes no responsibility for personal injury or property damage to vendees, such vendees or users assume all risks associated with the use of the material.