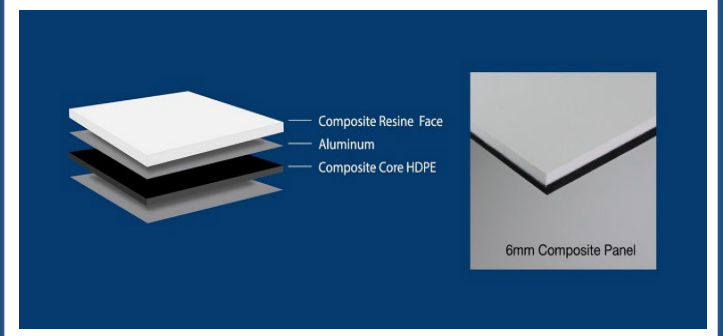
BioCR 4 Wall System		
Proper Name	**Use within System**	**Name on General MSDS List**
Polyurethane adhesive	Panel adhesive	9500 polyurethane adhesive
BioCR 4 Panel	Wall Panel	BioCR 4 Panel
BioCR Sealant A	Sealant (Part one of two)	BioCR A
BioCR Seant B	Sealant (Part two of two)	BioCR B

Bio/CR-4 Seamless Wall System



Bio/CR-4 Breaks The Cycle of Re-Coating Walls Every few Years.

Provides up to 10 times the useful life of coatings or paint. Ideal for Clean Rooms, Bio-Containment and Vivarium facilities,

Bio/CR-4 Features:

- *Smooth High Gloss Face is both Chemical Resistant and easy to Clean*
- *Excellent Impact Resistance*
- *Impervious to Moisture*
- *Class "A" Fire-Rated*
- *Installs over Gypsum to Eliminate the need for coatings and paint.*
- *Ends the Cycle of Repairing and Re-Coating Wall Surfaces. Extends surface life by as much as 10X over paints and coatings.*
- *Delivers a Sealed & Seamless "Wall System" Barrier for the Interior Envelope*
- *LEED Information – 40% Recycled Materials*

Life Science Products, Inc.
124 Speer Road, Chestertown, MD 21620
800-638-9874 | www.lspinc.com | info@lspinc.com

Bio/CR-4 General Description:

The Bio/CR-4 Wall Panel System is part of the LSP Bio-Containment/Clean Room product line. The panels are an aggregate of a Reinforced High Gloss Resin Face, over multiple layers of Aluminum and Polymer to provide a rigid and structurally sound composite. The panels are 6mm thick and are available in 4'x 8', 4'x9', 4'x10' sizes. The Bio/CR-4 is Class "A" Fire Rated based on the ASTM E-84 test. Edges are generally routed and sealed using a LEED compliant, 100% solids, gloss finish urethane compound, resulting in a seamless installed system. The smooth, glossy white surface is impervious to moisture, and is highly stain, chemical, and impact resistant. The Bio/CR-4 is designed to withstand routine high-pressure washing, chemical disinfection, and fumigation. By installing the Bio/CR-4 over gypsum, facilities can extend the useful life of their wall surfaces by as much as 10X over coatings and paint. The Bio/CR-4 can also be used as a ceiling panel in a "hard lid" ceiling application.

Details and Physical Properties:

Color: White **Finish:** Glossy
Panel Thickness: 6mm (approximately1/4")
Edges: Routed for a consistent width joint
Fire Rating: Class "A" (1), per ASTM E-84
Weight: 1.7 pounds per square foot
Hardness: ASTM D2583 – 88 Barcol
Compressive Strength: ASTM D695 – 9,236 PSI
Flexural Strength: ASTM D790 – 8,976 PSI
Flexural Modulus: ASTM D790 – 1,020,000 PSI
Modulus of Elasticity: ASTM D695-495,800 PSI
Coefficient of Linear Expansion:
ASTM D696 – 1.66 (E-05)
Tensile Modulus of Elasticity:
ASTM D638 – 372,800 PSI
Tensile Strength: ASTM D638 – 6,668 PSI

LSP Products have been in demand by these and other highly respected institutions.

Cleveland Clinic	Emory University
Dana Farber	M.D. Anderson
Harvard University	Northwestern University

Surface Chemical Resistance:

Acetic Acid - Excellent
Acetone - Good
Benzene - Good
Citric Acid (10%)- Excellent
Chlorine/Water - Excellent
Hydrofluoric Acid (10%)- Good
Hydrogen Peroxide (28%) - Excellent
Mineral Spirits - Excellent
Nitric Acid (40%) - Excellent
Potassium Chloride – Excellent
Propyl Alcohol - Excellent
Sodium Chloride (10%) - Excellent
Sodium Hydroxide (10%)- Excellent
Sodium Hypochlorite (5%) – Excellent
Standard Soap Solution - Excellent
Sulfuric Acid (30%) - Good
Urea- Good

Excellent = No Surface Effect. No Yellowing
Good = Slight Change to Surface Opacity. No Yellowing

Correlation of test results with actual performance is dependent upon the similarity between testing and in-use conditions. LSP recommends you test our surface in your specific conditions before use of any chemical cleaning agent. Always follow manufacturer instructions for use procedures and removal of chemical agents. None of the above should be construed as a recommendation for use.

The following test results were self-performed by LSP on common commercial chemicals used in the Bio-Medical research industry.

Beta-Dyne - Good
Denatured Alcohol - Excellent
Hydroxy Acetic Acid - Excellent
Phosphoric Acid - Good
Potassium Hydroxide - Excellent
Sodium Hypochlorite Alkaline - Excellent

Novartis	Pfizer	Bristol Meyer Squib
Walter Reed	Regerneron	Yale University
Ohio State U.	N.I.H.	Children's Mercy
CalTech Univ.	F.D.A.	Princeton University

Material Safetv Data Sheet	BIOCR 4 Panels	
Effective Date: 01/01/2015	Previous Revision date: 00/00/0000	Date Printed: 3/19/2015

SECTION 1 Product and Company Information

PRODUCT NAME: BioCR4 Panels
GENERIC NAME: Fiberglass Reinforced Plastic and Polymetal

DISTRIBUTOR: LSP Performance Resins
124 Speer Road
Chestertown, MD 21620

Chemtrec
24 Hour Emergency Number 1-800-424-9300
Information Number: 1-800-666-6216
CRM# CCN722733

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

Emergency Overview

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.

Emergency Overview: Not expected to cause any adverse health effects when handled as recommended.

Potential Health Effects
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

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:

GHS LABEL ELEMENTS, INCLUDING PRECAUTIONARY STATEMENTS

Health		Environmental	Physical
Eye Irritant Skin Irritant Respiratory Irritant	None Known	Not Classified	Not Classified

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 shold 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, ALPHAIC 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 FIREFIGHTERS 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 faction)	10 mg/m3 TWA (total dust; 5mg/m3TWA (respiranble 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

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: 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

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

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 Regultory 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 micometers) 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 incompliance 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.

LSP PERFORMANCE RESINS 124 Speer Road Chestertown, MD 21620
800.638.9874 FAX 410.778.3625 web www.lspinc.com

Material Safety Data Sheet

May be used to comply with
OSHA's Hazard Communication Standard
29 CFR 1910. 1200 Standard must be
consulted for specific requirements

U.S. Department of Labor
Occupational Safety and Health Administration
(Non-Mandatory Form)
Form Approved
OMB No. 1218-0072

IDENTITY (As Used on Label and List)	Note: Blank spaces are not permitted. If any item is not applicable, or no Information is available, the space must be marked to indicate that
Kal-Lite	

Section I

Manufacturer's Name	Emergency Telephone Number
Kal-Lite Sales Division	(603) 627-3861
Address (Number, Street, City, State and ZIP Code)	Telephone Number for Information
1111 Candia Road	(603) 627-3861
P.O. Box 237	Date Prepared 12-2013
Manchester, N.H. 03105	Signature of Preparer (Optional) MC

Section II – Hazardous Ingredients/ Identity Information

Hazardous Components (Specific Chemical Identity: Common Names(s))	OSHA PEL	ACGIH TLV	Other Limits Recommended	% (optional)

Kal-Lite (F.R.P.) panels are solid sheets composed of glass, calcium carbonate, titanium dioxide, alumina and pigment embedded in a cured polymerized, styrenated/ acrylated polyester.

* Not listed in NTP, LARC, OSHA

Section III – Physical Characteristics

Boiling Point	Specific Gravity (H2O = 1)
N/A	446-1.8
Vapor Pressure (mm Hg.) N/A	Melting Point N/A
Vapor Density (AIR =1) N/A	Evaporation Rate (Butyl Acetate = 1) N/A

Solubility in Water
Insoluble

Appearance and Odor
Rigid Sheet, No Odor

Section IV – Fire and Explosion Hazard Data

Flash Point (Method Used)	Flammable Limits N/A	LEL N/A	UEL N/A
Ignition temperature higher than paper, 451 F			

Extinguishing Media
Water, CO 2, Dry Chemical

Special Fire Fighting Procedure
Use media belt suited for fire environment. Use self-contained breathing apparatus for large scale fire

Unusual Fire and Explosion Hazard
Combustion may yield CO, CO2, aliphatic and aromatic hydrocarbons and halogenated compounds.

Tests show combustion gases to be less toxic than those from wood.

Section V – Reactivity Data

Stability			Conditions to avoid N/A
	Unstable	N/A	
	Stable	XX	

Incompatibility (Materials to Avoid)

Alkali, strong mineral acids, hydrofluoric acids

Hazardous Decomposition of Byproducts

Combustion may yield CO, CO2, aliphatic and aromatic compounds, halogenated compounds less toxic than wood

Hazardous Polymerization			Conditions to Avoid N/A
	May Occur	N/A	
	Will Not Occur	N/A	

Section V1 – Health Hazard Data

Route(s) of Entry — Inhalation? X — Skin? N/A — Ingestion? N/A

Health Hazards (Acute and Chronic)

Fabricating, cutting, drilling ect. of Kal-Lite sheet may produce dust. Dust should be controlled and partuculate level not to exceed 30M ppcf.

Carcinogenicity	NTP?	IARC Monographs ?	OSHA Regulated?
	N/A	N/A	N/A

Signs and Symptoms of Exposure

Inhalation of dust in excess of TLV may result in possible irritation of upper respiratory tract.

Medical Conditions

Generally Aggravated by Exposure — Any condition generally aggravated by mechanical irritants in the air, or on the skin.

Emergency or First Aid Procedures

Prolonged skin contact: To reduce itching, wash with soap and warm water.

Eye Contact: Flush with running water for at least 15 minutes.

Section VII – Precautions for Safe Handling and Use

Steps to be Taken in Case Material is Released or Spilled

N/A

Waste Disposal Method

Dispose of as solid waste, as directed by an appropriate local, state or federal authority

Precautions to be Taken in Handling and Storing

Store away from open flame and/ or torch. Wash skin with soap and water after handling. Wash dusty work clothes separately.

Other Precautions

Eating & drinking should not be done in the fabricating area

Section VIII – Control Measures

Respiratory Protection

Use NIOSH/ MSHA approved respirator as 3M8710, When machining, cutting or drilling.

Ventilation		
	Local Exhaust: Use adequate ventilation to control dust	Special N/A
	Mechanical (General) N/A	Other N/A

Protective Gloves	Eye Protection
When fabricating, ect…	When fabricating, tooling, cutting, ect…

Other protective clothing or Equipment N/A

Work/ Hygienic Practices

Keep dust particles to a minimum and keep work area clean.

USA SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product name: **LORD 7555 E**
Product Use/Class: **Adhesive / Sealant**

LORD Corporation
111 LORD Drive
Cary, NC 27511-7923 USA

Telephone: 814 868-3180
Non-Transportation Emergency: 814 763-2345
Chemtrec 24 Hr Transportation Emergency No.
800 424-9300 (Outside Continental U.S. 703 527-3887)

EFFECTIVE DATE: 08/05/2016

2. HAZARDS IDENTIFICATION

GHS CLASSIFICATION:

All components of this product have either not been classified according to GHS or are below the threshold concentration required for classification. Please refer to section 2-Other Hazards for possible hazards associated with this product.

Hazard Statements

Refer to Section 2; Other Hazards.

Precautionary Statements

Prevention

Refer to Section 6 of this SDS.

Response

Refer to Section 4 of this SDS.

Storage

Refer to Section 7 of this SDS.

Disposal:

Dispose of contents/container in accordance with waste/disposal laws and regulations of your country or particular locality.

Other Hazards:

This product contains component(s) which have the following warnings; however based on the GHS classification criteria of your country or locale, the product mixture may be outside the respective category(s).

Acute: Eye contact may cause slight irritation. May cause mild skin irritation. Harmful if swallowed. Ingestion is not an expected route of entry in industrial or commercial uses.

Chronic: IARC has designated titanium dioxide (TiO2) as Group 2B possibly carcinogenic to humans in dust form. However, a number of long term animal studies and human epidemiology studies evaluating TiO2 and workplace exposure show insufficient evidence for carcinogenic effects. EPA, NTP and OSHA do not designate TiO2 as a carcinogen and ACGIH designates TiO2 as A4 - not classifiable as a human carcinogen. Mortality from other chronic diseases, including other respiratory diseases, was not associated with exposure to TiO2 dust. TiO2 is not present in this product as a dust and no airborne exposure is expected during application.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS Number	Range
Titanium dioxide	13463-67-7	5 - 10 %

Any "PROPRIETARY" component(s) in the above table is considered trade secret, thus the specific chemical and its exact concentration is being withheld.

4. FIRST AID MEASURES

FIRST AID - EYE CONTACT: Flush eyes immediately with large amount of water for at least 15 minutes holding eyelids open while flushing. Get prompt medical attention.

FIRST AID - SKIN CONTACT: Flush contaminated skin with large amounts of water while removing contaminated clothing. Wash affected skin areas with soap and water. Get medical attention if symptoms occur.

FIRST AID - INHALATION: This material is not likely to be hazardous by inhalation. However, if exposed to excessive levels of vapor or mist, remove to fresh air, give oxygen if breathing is difficult, and get immediate medical attention.

FIRST AID - INGESTION: If swallowed, do not induce vomiting. Call a physician or poison control center immediately for further instructions. Never give anything by mouth if victim is rapidly losing consciousness, unconscious or convulsing.

5. FIRE-FIGHTING MEASURES

SUITABLE EXTINGUISHING MEDIA: Carbon Dioxide, Dry Chemical, Foam, Water Fog
UNSUITABLE EXTINGUISHING MEDIA: Not determined for this product.

SPECIFIC HAZARDS POSSIBLY ARISING FROM THE CHEMICAL: Keep containers tightly closed. Closed containers may rupture when exposed to extreme heat. Use water spray to keep fire exposed containers cool. During a fire, irritating and/or toxic gases and particulate may be generated by thermal decomposition or combustion.

SPECIAL PROTECTIVE EQUIPMENT AND PRECAUTIONS FOR FIRE-FIGHTERS: Wear full firefighting protective clothing, including self-contained breathing apparatus (SCBA). If water is used, fog nozzles are preferable.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT, AND EMERGENCY PROCEDURES: Avoid contact. Avoid breathing vapors.

ENVIRONMENTAL PRECAUTIONS: Do not contaminate bodies of water, waterways, or ditches, with chemical or used container.

METHODS AND MATERIALS FOR CONTAINMENT AND CLEANUP: Keep non-essential personnel a safe distance away from the spill area. Notify appropriate authorities if necessary. Avoid contact. Before attempting cleanup, refer to hazard caution information in other sections of the SDS form. Contain and remove with inert absorbent material.

7. HANDLING AND STORAGE

HANDLING: Keep closure tight and container upright to prevent leakage. Avoid skin and eye contact. Wash thoroughly after handling. Do not handle until all safety precautions have been read and understood. Empty containers should not be re-used. Use with adequate ventilation.

STORAGE: Store only in well-ventilated areas. Keep container closed when not in use.

INCOMPATIBILITY: Acids, caustics, amines, ammonia, halogens, and isocyanates.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

COMPONENT EXPOSURE LIMIT

Chemical Name	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL-CEILING	Skin
Titanium dioxide	10 mg/m3	N.E.	15 mg/m3	N.E.	N.A.

N.A. - Not Applicable, N.E. - Not Established, S - Skin Designation

Engineering controls: Provide adequate general ventilation where this product is used.

PERSONAL PROTECTION MEASURES/EQUIPMENT:

RESPIRATORY PROTECTION: Respiratory protection is not required under normal working conditions where adequate ventilation is present.

SKIN PROTECTION: Use neoprene, nitrile, or rubber gloves to prevent skin contact.

EYE PROTECTION: Use safety eyewear including safety glasses with side shields and chemical goggles where splashing may occur.

OTHER PROTECTIVE EQUIPMENT: Remove and wash contaminated clothing before reuse.

HYGIENIC PRACTICES: Wash hands before eating, smoking, or using toilet facility. Do not smoke in any chemical handling or storage area. Food or beverages should not be consumed anywhere this product is handled or stored. Wash thoroughly after handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

Typical values, not to be used for specification purposes.

ODOR:	Slight	**VAPOR PRESSURE:**	N.D.
APPEARANCE:	White	**VAPOR DENSITY:**	Heavier than Air
PHYSICAL STATE:	Paste	**LOWER EXPLOSIVE LIMIT:**	Not Applicable
FLASH POINT:	≥ 201 °F, 93 °C Setaflash Closed Cup	**UPPER EXPLOSIVE LIMIT:**	Not Applicable
BOILING RANGE:	N.A.	**EVAPORATION RATE:**	Not Applicable
AUTOIGNITION TEMPERATURE:	N.D.	**DENSITY:**	1.2 g/cm3 - 10.00 lb/gal
DECOMPOSITION TEMPERATURE:	N.D.	**VISCOSITY, DYNAMIC:**	N.D.
ODOR THRESHOLD:	N.D.	**VISCOSITY, KINEMATIC:**	N.D.
SOLUBILITY IN H2O:	Insoluble	**VOLATILE BY WEIGHT:**	0.00 %
pH:	N.A.	**VOLATILE BY VOLUME:**	0.00 %
FREEZE POINT:	N.D.	**VOC CALCULATED:**	0 lb/gal, 0 g/l
COEFFICIENT OF WATER/OIL DISTRIBUTION:	N.D.		

LEGEND: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

10. STABILITY AND REACTIVITY

HAZARDOUS POLYMERIZATION: Hazardous polymerization will not occur under normal conditions.

STABILITY: Product is stable under normal storage conditions.

CONDITIONS TO AVOID: High temperatures.

INCOMPATIBILITY: Acids, caustics, amines, ammonia, halogens, and isocyanates.

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide, carbon dioxide, Metal oxides

11. TOXICOLOGICAL INFORMATION

EXPOSURE PATH: Refer to section 2 of this SDS.

SYMPTOMS: Refer to section 2 of this SDS.

TOXICITY MEASURES:

Chemical Name	LD50/LC50
Titanium dioxide	Oral LD50: Rat > 10,000 mg/kg Dermal LD50: rabbit > 5,000 mg/kg GHS LC50 (vapour): Acute toxicity point estimate 55 mg/l

Germ cell mutagenicity: No classification proposed

Carcinogenicity: No classification proposed

Reproductive toxicity: No classification proposed

12. ECOLOGICAL INFORMATION

ECOTOXICITY:

Chemical Name	Ecotoxicity
Titanium dioxide	N.D.

PERSISTENCE AND DEGRADABILITY: Not determined for this product.

BIOACCUMULATIVE: Not determined for this product.

MOBILITY IN SOIL: Not determined for this product.

OTHER ADVERSE EFFECTS: Not determined for this product.

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: Disposal should be done in accordance with Federal (40CFR Part 261), state and local environmental control regulations. If waste is determined to be hazardous, use licensed hazardous waste transporter and disposal facility.

14. TRANSPORT INFORMATION

This product is NOT REGULATED for non-bulk US DOT Road, IATA Cargo or IMDG shipments. For the most accurate shipping information, refer to your transportation/compliance department regarding changes in package size, mode of shipment or other regulatory descriptors.

15. REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS: AS FOLLOWS:

SARA SECTION 313
This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372.:

NONE

TOXIC SUBSTANCES CONTROL ACT:

INVENTORY STATUS
The chemical substances in this product are on the TSCA Section 8 Inventory.

EXPORT NOTIFICATION
This product contains the following chemical substances subject to the reporting requirements of TSCA 12(B) if exported from the United States:

NONE

16. OTHER INFORMATION

Under HazCom 2012 it is optional to continue using the HMIS rating system. It is important to ensure employees have been trained to recognize the different numeric ratings associated with the HazCom 2012 and HMIS schemes.

HMIS RATINGS - HEALTH: 1 FLAMMABILITY: 1 PHYSICAL HAZARD: 0
* - Indicates a chronic hazard; see Section 2

Revision: Section 1

Effective Date: 08/05/2016

DISCLAIMER

The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by use of this material. It is the responsibility of the user to comply with all applicable federal, state and local laws and regulations.

PREMIER BUILDING SOLUTIONS, INC..

Version: 1.2
Revision Date: 01/07/2014

XTRABOND 9500 MODIFIED POLYURETHANE SEALANT WHITE

1. CHEMICAL PRODUCT & COMPANY IDENTIFICATION

Product Brand Name: XtraBond 9500 Modified Hybrid Sealant
Product Use: Sealant & Adhesive
Proper DOT Shipping: Caulking & Glaziers, NOI
DOT Hazard Classification: NONE
Molecular Formula: Mixture

NFPA Profile: Health 2 Flammability 1 Instability/Reactivity 0

Note: NFPA = National Fire Protection Association

Company Contact Information

Premier Building Solutions, Inc.
480 Nova Drive
Massillon, OH. 44646

Emergency Telephone Number

CHEMTREC: 800-424-9300 (24 hours)
Telephone: 866-512-4583

2. HAZARDS IDENTIFICATION

POTENTIAL HEALTH EFFECTS

Acute Effects

Eye: Direct contact may cause moderate irritation. Symptoms include stinging, tearing, redness, and swelling of eyes.

Skin: May cause moderate irritation. Symptoms may include redness and burning of skin.

Inhalation: Irritates respiratory passages very slightly. Vapor overexposure may be harmful and cause drowsiness.

Oral: Swallowing large amounts may cause drowsiness.

Prolonged/Repeated Exposure Effects

Skin: Repeated or prolonged contact may cause defatting and drying of skin which may result in skin irritation and dermatitis. Overexposure by skin absorption may injure the following organ(s): Liver.

Inhalation**:** Overexposure by inhalation may injure the following organ(s): Liver.

Oral: Overexposure by ingestion may injure the following organ(s): Liver.

Signs and Symptoms of Overexposure

No known applicable information.

Medical Conditions Aggravated by Exposure

Eye or skin disease.

The above listed potential effects of overexposure are based on actual data, results of studies performed upon similar compositions, component data and/or expert review of the product. Please refer to Section 11 for the detailed toxicology information.

3. COMPOSITION/INFORMATION ON INGREDIENTS

CAS Number	Wt %	Component Name
1317-65-3	<50%	Calcium Carbonate
----------	<50%	Proprietary Polymers
13463-67-7	<10%	Titanium Dioxide

The above components are hazardous as defined in 29 CFR 1910.1200.

4. FIRST AID MEASURES

Eye: Immediately flush the contaminated eye(s) with lukewarm, gently flowing water for 15 – 20 minutes while holding the eyelid(s) open. If contact lens is present, DO NOT delay irrigation or attempt to remove the lens. Take care not to rinse contaminated water into the unaffected eye or onto the face. Immediately obtain medical attention.

Skin: Remove contaminated clothing, shoes and leather goods (e.g. watchbands, belts). Quickly and gently blot or brush away excess chemical. Flush with lukewarm gently flowing water for 15 minutes. If irritation persists, repeat flushing. If irritation persists, obtain medical advice.

Inhalation: Material is not likely to present an inhalation hazard at ambient conditions. If material is heated or vapor is generated, care should be taken to prevent inhalation. In case of exposure to vapor, move to fresh air.

Oral: Never give anything by mouth if victim is rapidly losing consciousness or convulsing. DO NOT INDUCE VOMITING. Have victim drink 2 to 8 oz. (60 to 240 mL) of water. If vomiting occurs naturally, have victim lean forward to reduce the risk of aspiration. Have victim rinse mouth with water again. Obtain medical attention.

Note to Physician: Treat according to person's condition and specifics of exposure.

5. FIRE FIGHTING MEASURES

Flash Point:	> 212F/100C (Closed Cup)
Autoignition Temperature:	Not determined.
Flammability Limits in Air:	Not determined.
Extinguishing Media:	On large fires use fog, foam or water spray. On small fires use carbon dioxide (CO2), dry chemical or foam. Water can be used to cool fire exposed containers.
Fire Fighting Measures:	Self-contained breathing apparatus and protective clothing should be worn in fighting large fires involving chemicals. Determine the need to evacuate or isolate the area according to your local emergency plan. Use water spray to keep fire exposed containers cool.
Unusual Fire Hazards:	None.

6. ACCIDENTAL RELEASE MEASURES

Containment/Clean up:	Ventilate area. Observe all personal protection equipment recommendations described in Sections 5 and 8. Wipe up or scrape up and contain for salvage or disposal. Clean area as appropriate since spilled materials, even in small quantities, may present a slip hazard. Final cleaning may require use of steam, solvents or detergents. Dispose of saturated absorbent or cleaning materials appropriately, since spontaneous heating may occur. Local, state and federal laws and regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which federal, state and local laws and regulations are applicable. Sections 13 and 15 of this MSDS provide information regarding certain federal and state requirements.

Note: See Section 8 for Personal Protective Equipment for Spills.

7. HANDLING AND STORAGE

Use with adequate ventilation to keep area below established exposure levels. Avoid eye contact. Avoid skin contact. Avoid breathing vapor. Keep container closed. Do not take internally.

Use reasonable care and store away from acidic and oxidizing materials. Keep container closed and store away from water or moisture.

8. EXPOSURE CONTROLS & PERSONAL PROTECTION

Component Exposure Limits

CAS Number	Component Name	Exposure Limits
1317-65-3	Calcium Carbonate	OSHA PEL 15 mg/m^3, ACGIH TLV 10 mg/m^3
13463-67-7	Titanium Dioxide	OSHA PEL 15 mg/m^3, ACGIH TLV 10 mg/m^3

Exposure limits are provided for information only. These chemicals are not in a respirable form in this product.

Engineering Controls

Local Ventilation: Recommended.

General Ventilation: Recommended.

Personal Protective Equipment for Routine Handling

Eyes: Use proper protection - safety glasses as a minimum.

Skin: Wash at mealtime and end of shift. Contaminated clothing and shoes should be removed as soon as practical and thoroughly cleaned before reuse. Chemical protective gloves are recommended.

Suitable Gloves: Avoid skin contact by implementing good industrial hygiene practices and procedures. Select and use gloves and/or protective clothing to further minimize the potential for skin contact. Consult with your glove and/or personnel protective equipment manufacturer for selection of appropriate compatible materials.

Inhalation: Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines. IH personnel can assist in judging the adequacy of existing engineering controls.

Suitable Respirator: Respiratory protection is not needed under ambient conditions. If vapor is generated when material is heated or handled, the following is advised. General and local exhaust ventilation is recommended to maintain vapor exposures below recommended limits. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators.

Personal Protective Equipment for Spills

Eyes:	Use full face respirator.
Skin:	Wash at mealtime and end of shift. Contaminated clothing and shoes should be removed as soon as practical and thoroughly cleaned before reuse. Chemical protective gloves are recommended.
Inhalation/Suitable Respirator:	Respiratory protection recommended. Follow OSHA Respirator Regulations (29 CFR 1910.134) and use NIOSH/MHSA approved respirators. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstance where air purifying respirators may not provide adequate protection.
Precautionary Measures:	Avoid eye contact. Avoid skin contact. Avoid breathing vapor. Keep container closed. Do not take internally. Use reasonable care.

Note: These precautions are for room temperature handling. Use at elevated temperature or aerosol/spray applications may require added precautions.

9. PHYSICAL & CHEMICAL PROPERTIES

Physical Form:	Paste
Color:	N/A
Odor:	Mild
Specific Gravity @ 25°C:	~1.3 – 1.7
Viscosity:	Not determined.
Freezing/Melting Point:	Not determined.
Boiling Point:	Not determined.
Vapor Pressure @ 25°C:	Not determined.
Vapor Density:	Not determined.
Solubility in Water:	Slightly soluble
pH:	Not determined.
Flash Point:	> 212F/100C (Closed Cup)
Autoignition Temperature:	Not determined.
Flammability Limits in Air:	Not determined.

VOLATILE ORGANIC COMPOUNDS (VOC): Product complies with State and Federal regulations for VOC content.

Note: The above information is not intended for use in preparing product specifications.

10. STABILITY AND REACTITY

Chemical Stability: Stable.

Hazardous Polymerization: Hazardous polymerization will not occur.

Conditions to Avoid: Avoid temperatures above 120 °F.

Materials to Avoid: Acidic and oxidizing material can cause a reaction.

Hazardous Decomposition Products

Thermal breakdown of this product during fire or very high heat conditions may evolve the following decomposition products: Carbon oxides and traces of incompletely burned carbon compounds. Formaldehyde. Metal oxides. Nitrogen oxides.

11. TOXICOLOGICAL INFORMATION

Component Toxicology Information

For Product

Not Established

For Titanium Dioxide

Trochimowicz, et al.c J. Appl. Tox., 8, 383-385 (1988)

Oral LD (rat) >25g/kg
Dermal LD (rabbit) >10 g/kg
Inhalation LC (rat) >6.82 mg/l (4 hr)

Special Hazard Information on Components

None

12. ECOLOGICAL CONSIDERATIONS

Environmental Fate and Distribution

Complete information is not yet available.

Environmental Effects

Complete information is not yet available.

Fate and Effects in Waste Water Treatment Plants

Complete information is not yet available.

Ecotoxicity Classification Criteria

Hazard Parameters (LC50 or EC50)	High	Medium	Low
Acute Aquatic Toxicity (mg/L)	<=1	>1 and <=100	>100
Acute Terrestrial Toxicity	<=100	>100 and <=2000	>2000

This table is adapted from "Environmental Toxicology and Risk Assessment", ASTM STP 1179, p.34, 1993.

This table can be used to classify the ecotoxicity of this product when ecotoxicity data is listed above. Please read the other information presented in the section concerning the overall ecological safety of this material.

13. DISPOSAL CONSIDERATIONS

RCRA Hazard Class (40 CFR 261)

When a decision is made to discard this material, as received, is it classified as a hazardous waste? No

State or local laws may impose additional regulatory requirements regarding disposal.

14. TRANSPORT INFORMATION

DOT Road Shipment Information (49 CFR 172.101)

Not subject to DOT.

Ocean Shipment (IMDG)

Not subject to IMDG code.

Air Shipment (IATA)

Not subject to IATA regulations.

15. REGULATORY INFORMATION

Contents of this MSDS comply with the OSHA Hazard Communication Standard 29 CFR 1910.1200.

This material is considered hazardous.

TSCA Status: All chemical substances in this material are included on or exempted from listing on the TSCA Inventory of Chemical Substances.

EPA SARA Title III Chemical Listings

Section 302 Extremely Hazardous Substances (40 CFR 355):

None.

Section 304 CERCLA Hazardous Substances (40 CFR 302):

None.

Section 311/312 Hazard Class (40 CFR 370):

Acute:	Yes
Chronic:	No
Fire:	No
Pressure:	No
Reactive:	No

Section 313 Toxic Chemicals (40 CFR 372):

None present or none present in regulated quantities.

Note: Chemicals are listed under the 313 Toxic Chemicals section only if they meet or exceed a reporting threshold.

XTRABOND 9500 MODIFIED POLYURETHANE SEALANT WHITE

Work Place Hazardous Material Information Sysytems (CRP Section 33)

This product has been classified according to the hazard criteria of the Controlled Products Regulation and the MSDS contains all required information.

3 Controlled Product: Classification: D2B

Supplemental State Compliance Information

California

To the best of our knowledge, this product contains no levels of chemicals listed by the State of California under the Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65) as being known to cause cancer, birth defects or other reproductive harm.

Massachusetts

CAS Number	Wt %	Component Name
13463-67-7	<10%	Titanium Dioxide

Minnesota

CAS Number	Wt %	Component Name
13463-67-7	<10%	Titanium Dioxide

New Jersey

CAS Number	Wt %	Component Name
13463-67-7	<10%	Titanium Dioxide (SN 1861)

Pennsylvania

CAS Number	Wt %	Component Name
13463-67-7	<10%	Titanium Dioxide

Rhode Island

CAS Number	Wt %	Component Name
13463-67-7	<10%	Titanium Dioxide

XTRABOND 9500 MODIFIED POLYURETHANE SEALANT WHITE

WHMIS Classification.....……..D2

NOTE: THE PRODUCT LISTED ON THIS MSDS HAS BEEN CLASSIFIED IN ACCORDANCE WITH THE HAZARD CRITERIA OF THE CANADIAN CONTROLLED PRODUCTS REGULATIONS. THIS MSDS CONTAINSALL INFORMATION REQUIRED BY THOSE REGULATIONS.

16. OTHER INFORMATION

Note: The responsibility to provide a safe workplace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and regulations.

http://www.xtrabond.com