



## SUBMITTAL REVIEW

H&A JN: 1614.03  
Project: MSBA Accelerated Repair Program  
Halifax Elementary School – Windows, Doors & Siding Replacement  
464 Plymouth Street  
Halifax, MA 02338

SUBMITTAL  
07 9200-12 Joint Sealants

### ITEMS:

1. Backer Rod Technical Service Bulletin
2. Tremco Spectrem Safety Data sheet
3. Tremco Sealant Certifications and Validations
4. Tremco Sealant Warranty
5. Spectrem 3 Standard Color Chart
6. Tremco Spectrem 3 Product Information
7. Tremco Spectrem 3 Sealant Color Samples

### COMMENTS:

1. Manufacturers sealant warranty should be 10 years minimum per specification.
2. GC to coordinate sealant compatibility with new painted surfaces. Interior sealant should be paintable.
3. Sealant color to be Tremco "White" at the exterior.

HABEEB & ASSOCIATES ARCHITECTS INC. 150 LONGWATER DRIVE NORWELL, MA 02061	
NO EXCEPTIONS TAKEN	
NOTE MARKINGS RESUBMITTAL NOT REQ'D	X
NOTE MARKINGS RESUBMITTAL REQ'D	
REJECTED	
This review is given for design concept only and does not relieve the contractor from meeting the provisions of the contract, drawings and specifications. The Contractor is responsible for verifying all dimensions, schedules, quantities and field conditions.	
DATE 03-23-18	BY SB

**To:** **Habeeb & Associates Architects**  
150 Longwater Drive  
Norwell, MA 02061

**Contractor:** **Lambrian Construction Corporation**  
384 Washington Street  
Westwood, MA 02090  
Tel: (781) 461-1100 Fax: (781) 461-9885

<b>Submittal No:</b>	12
<b>Date Submitted:</b>	3/19/2018
<b>Manufacturer:</b>	Tremco
<b>Product Name:</b>	Spectrem 3 Sealant
<b>Specification Section:</b>	07 9200 - Part 2
<b>Approved By:</b>	RS
<b>Description:</b>	Joint Sealants

**COMMENTS:**

**PROJECT:** Halifax Elementary School  
**LAMBRIAN CONSTRUCTION CORP.**  
Approved by: RS.

**WINDOWS, DOORS & SIDING REPLACEMENT**  
**HALIFAX ELEMENTARY SCHOOL**  
**464 PLYMOUTH STREET**  
**HALIFAX, MASSACHUSETTS 02338**

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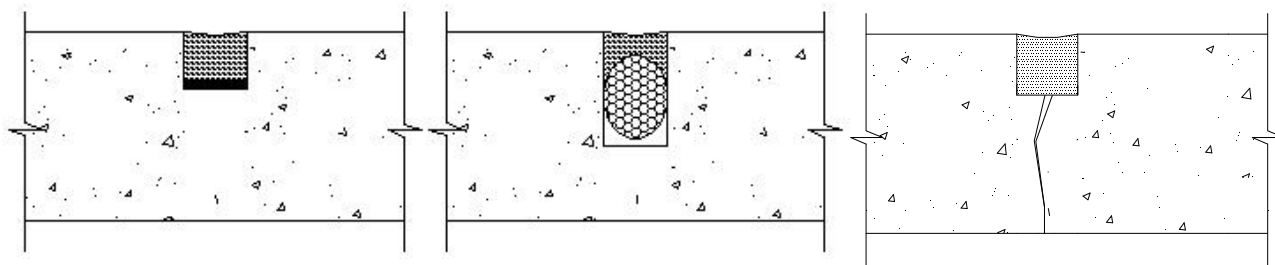
## Technical Service Bulletin

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### Backer Rod Selection Guide

Backer Rod is an integral component of sealant joints, it provides three main functions that allow the sealant joint to perform.

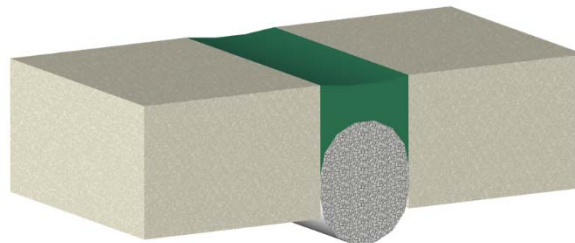
1. The backer rod most importantly acts as a bond breaker, preventing what is commonly referred to as three sided adhesion. This is when the sealant is adhered to the bottom and both sides of the joint. In this configuration the sealant cannot move nearly as well as when it is only bonded to the sides of the joint.



2. The backer rod supports tooling so after installation of material the sealant can be pushed to the bond line with a spatula, ensuring wet-out of the sealant to the substrate.



3. The final main feature of the backer rod is that it promotes an hour glass shape. This maximizes the bond area but keeps the depth of sealant consistent in the middle allowing for movement.



The backer rod comes in three main types, closed cell, open cell, and a hybrid that has closed outer

cells but open interior cells. Each one of these types of backer rod has its own niche that it thrives in.

- Open cell backer rod is great in terms of application, it is very easy to compress and it can even help facilitate the cure of the sealant from both sides instead of an outside to inside direction, or top down. Typically sealants will cure through a reaction with atmospheric moisture or evaporation. Using a permeable backer rod will allow the sealant to react with atmospheric moisture to cure on the interior side. Open cell backer rod should not be used in flat or horizontal joints that can have water ponding on them as they can wick moisture to the underside of the sealant.
- The closed cell backer rod is best in horizontal or flat joints as its closed cell structure keeps moisture from wicking through it. It is much more robust which can make installation more challenging when compressing the backer rod into joints. This backer rod should be installed carefully because if it is punctured and then sealant installed directly over top a void is created. That void, filled with air, will then expand as it is heated through typical day to day temperatures and sunlight causing unsightly bubbles. This is commonly referred to as outgassing.
- The hybrid style backer rod is easy to install with the internal open cell structure it can compress easily. Since the backer rod has a closed cell exterior it can be installed in horizontal or flat work because it won't wick moisture through itself.

As mentioned previously each backer rod has its own niche that it excels in and this information should be considered when selecting your backer rod for your next sealant project. Should you have any further questions or concerns please consult your local Tremco representative or Technical Services in Beachwood, Ohio for assistance.

# SAFETY DATA SHEET

## 1. Identification

**Material name:** SPECTREM 3 LIMESTONE - 30 CTG  
**Material:** 998805 323

**Recommended use and restriction on use**

**Recommended use:** Sealant  
**Restrictions on use:** Not known.

**Manufacturer/Importer/Supplier/Distributor Information**

Tremco U.S Sealants  
3735 Green Road  
Cleveland OH 44122  
US

**Contact person:** EH&S Department  
**Telephone:** 216-292-5000  
**Emergency telephone number:** 1-800-424-9300 (US); 1-613-996-6666 (Canada)

## 2. Hazard(s) identification

### Hazard Classification

#### Health Hazards

Respiratory sensitizer	Category 1
Carcinogenicity	Category 1A
Toxic to reproduction	Category 1B

#### Unknown toxicity - Health

Acute toxicity, oral	1.53 %
Acute toxicity, dermal	3.96 %
Acute toxicity, inhalation, vapor	99.78 %
Acute toxicity, inhalation, dust or mist	99.89 %

### Environmental Hazards

Acute hazards to the aquatic environment	Category 1
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#### Unknown toxicity - Environment

Acute hazards to the aquatic environment	45.61 %
Chronic hazards to the aquatic environment	100 %

### Label Elements

**Hazard Symbol:**



<b>Signal Word:</b>	Danger
<b>Hazard Statement:</b>	May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause cancer. May damage fertility or the unborn child. Very toxic to aquatic life.
<b>Precautionary Statement:</b>	
<b>Prevention:</b>	Avoid breathing dust/fume/gas/mist/vapors/spray. [In case of inadequate ventilation] wear respiratory protection. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Avoid release to the environment.
<b>Response:</b>	If inhaled: If breathing is difficult, remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER/doctor. If exposed or concerned: Get medical advice/attention. Collect spillage.
<b>Storage:</b>	Store locked up.
<b>Disposal:</b>	Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.
<b>Other hazards which do not result in GHS classification:</b>	None.

### 3. Composition/information on ingredients

#### Mixtures

Chemical Identity	CAS number	Content in percent (%)*
Calcium carbonate	471-34-1	40 - 70%
Butyl benzyl phthalate	85-68-7	7 - 13%
Calcium oxide	1305-78-8	1 - 5%
Titanium dioxide	13463-67-7	1 - 5%
Stearic acid	57-11-4	0.5 - 1.5%
Tosyl isocyanate	4083-64-1	0.1 - 1%
Hydrotreated heavy naphthenic distillate	64742-52-5	0.1 - 1%

\* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

### 4. First-aid measures

<b>Ingestion:</b>	Call a POISON CENTER/doctor/.../if you feel unwell. Rinse mouth.
<b>Inhalation:</b>	Call a physician or poison control center immediately. If breathing stops, provide artificial respiration. Move to fresh air. If breathing is difficult, give oxygen.
<b>Skin Contact:</b>	Wash skin thoroughly with soap and water. If skin irritation occurs: Get medical advice/attention.

**Eye contact:** Any material that contacts the eye should be washed out immediately with water. If easy to do, remove contact lenses. If eye irritation persists: Get medical advice/attention.

**Most important symptoms/effects, acute and delayed**

**Symptoms:** May cause skin and eye irritation.

**Indication of immediate medical attention and special treatment needed**

**Treatment:** Symptoms may be delayed.

<b>5. Fire-fighting measures</b>
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**General Fire Hazards:** No unusual fire or explosion hazards noted.

**Suitable (and unsuitable) extinguishing media**

**Suitable extinguishing media:** Use fire-extinguishing media appropriate for surrounding materials.

**Unsuitable extinguishing media:** Do not use water jet as an extinguisher, as this will spread the fire.

**Specific hazards arising from the chemical:** During fire, gases hazardous to health may be formed.

**Special protective equipment and precautions for firefighters**

**Special fire fighting procedures:** No data available.

**Special protective equipment for fire-fighters:** Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

<b>6. Accidental release measures</b>
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**Personal precautions, protective equipment and emergency procedures:** Ventilate closed spaces before entering them. Evacuate area. See Section 8 of the SDS for Personal Protective Equipment. Keep upwind. Keep unauthorized personnel away.

**Methods and material for containment and cleaning up:** Collect spillage in containers, seal securely and deliver for disposal according to local regulations.

**Notification Procedures:** In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

**Environmental Precautions:** Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so. Avoid release to the environment.

## 7. Handling and storage

**Precautions for safe handling:** Ventilate well, avoid breathing vapors. Use approved respirator if air contamination is above accepted level. Use mechanical ventilation in case of handling which causes formation of dust. Do not handle until all safety precautions have been read and understood. Obtain special instructions before use. Use personal protective equipment as required. Do not breathe dust/fume/gas/mist/vapors/spray.

**Conditions for safe storage, including any incompatibilities:** Store locked up.

## 8. Exposure controls/personal protection

### Control Parameters

#### Occupational Exposure Limits

Chemical Identity	type	Exposure Limit Values	Source
Calcium carbonate - Total dust.	PEL	15 mg/m <sup>3</sup>	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
Calcium carbonate - Respirable fraction.	PEL	5 mg/m <sup>3</sup>	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
Calcium oxide	TWA	2 mg/m <sup>3</sup>	US. ACGIH Threshold Limit Values (2011)
	PEL	5 mg/m <sup>3</sup>	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
Titanium dioxide	TWA	10 mg/m <sup>3</sup>	US. ACGIH Threshold Limit Values (2011)
Titanium dioxide - Total dust.	PEL	15 mg/m <sup>3</sup>	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
Stearic acid	TWA	10 mg/m <sup>3</sup>	US. ACGIH Threshold Limit Values (2011)
Hydrotreated heavy naphthenic distillate - Inhalable fraction.	TWA	5 mg/m <sup>3</sup>	US. ACGIH Threshold Limit Values (03 2014)
Hydrotreated heavy naphthenic distillate	PEL	500 ppm      2,000 mg/m <sup>3</sup>	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
Hydrotreated heavy naphthenic distillate - Mist.	PEL	5 mg/m <sup>3</sup>	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)



Chemical name	type	Exposure Limit Values	Source
Calcium carbonate - Total dust.	STEL	20 mg/m <sup>3</sup>	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Calcium carbonate - Respirable fraction.	TWA	3 mg/m <sup>3</sup>	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Calcium carbonate - Total dust.	TWA	10 mg/m <sup>3</sup>	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Calcium carbonate - Total dust.	TWA	10 mg/m <sup>3</sup>	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)
Diisodecyl phthalate	TWAEV	5 mg/m <sup>3</sup>	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)
Calcium oxide	TWA	2 mg/m <sup>3</sup>	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Calcium oxide	TWAEV	2 mg/m <sup>3</sup>	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)
Calcium oxide	TWA	2 mg/m <sup>3</sup>	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)
Titanium dioxide - Total dust.	TWA	10 mg/m <sup>3</sup>	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Titanium dioxide - Respirable fraction.	TWA	3 mg/m <sup>3</sup>	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Titanium dioxide	TWAEV	10 mg/m <sup>3</sup>	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)
Titanium dioxide - Total dust.	TWA	10 mg/m <sup>3</sup>	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)
Vinyltrimethoxysilane	STEL	10 ppm 60 mg/m <sup>3</sup>	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)

Hydrotreated heavy naphthenic distillate - Mist.	TWA	0.2 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (05 2013)
	TWA	1 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (05 2013)
Hydrotreated heavy naphthenic distillate - Mist.	TWAEV	5 mg/m3	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)
	STEL	10 mg/m3	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)
Hydrotreated heavy naphthenic distillate - Mist.	TWA	5 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)
	STEL	10 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)

#### Appropriate Engineering Controls

Mechanical ventilation or local exhaust ventilation may be required. Observe good industrial hygiene practices. Observe occupational exposure limits and minimize the risk of inhalation of dust.

#### Individual protection measures, such as personal protective equipment

<b>General information:</b>	Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. Supplementary local exhaust ventilation, closed systems, or respiratory and eye protection may be needed in special circumstances, such as poorly ventilated spaces, heating, evaporation of liquids from large surfaces, spraying of mists, mechanical generation of dusts, drying of solids, etc.
<b>Eye/face protection:</b>	Wear safety glasses with side shields (or goggles).
<b>Skin Protection</b>	
<b>Hand Protection:</b>	Use suitable protective gloves if risk of skin contact.
<b>Other:</b>	Wear suitable protective clothing.
<b>Respiratory Protection:</b>	If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Air-purifying respirator with an appropriate, government approved (where applicable), air-purifying filter, cartridge or canister. Contact health and safety professional or manufacturer for specific information.
<b>Hygiene measures:</b>	Observe good industrial hygiene practices. Wash hands before breaks and immediately after handling the product. Do not handle until all safety precautions have been read and understood. Obtain special instructions before use.

## 9. Physical and chemical properties

### Appearance

Physical state:	solid
Form:	Paste
Color:	Gray
Odor:	Mild sharp
Odor threshold:	No data available.
pH:	No data available.
Melting point/freezing point:	No data available.
Initial boiling point and boiling range:	No data available.
Flash Point:	No data available.
Evaporation rate:	Slower than Ether
Flammability (solid, gas):	No
<b>Upper/lower limit on flammability or explosive limits</b>	
Flammability limit - upper (%):	No data available.
Flammability limit - lower (%):	No data available.
Explosive limit - upper (%):	No data available.
Explosive limit - lower (%):	No data available.
Vapor pressure:	No data available.
Vapor density:	Vapors are heavier than air and may travel along the floor and in the bottom of containers.
Relative density:	1.42
<b>Solubility(ies)</b>	
Solubility in water:	Practically Insoluble
Solubility (other):	No data available.
Partition coefficient (n-octanol/water):	No data available.
Auto-ignition temperature:	No data available.
Decomposition temperature:	No data available.
Viscosity:	No data available.

## 10. Stability and reactivity

Reactivity:	No data available.
Chemical Stability:	Material is stable under normal conditions.
Possibility of hazardous reactions:	No data available.
Conditions to avoid:	Avoid heat or contamination.
Incompatible Materials:	Alcohols. Strong acids. Avoid contact with oxidizing agents (e.g. nitric acid, peroxides and chromates). Strong bases. Water, moisture.
Hazardous Decomposition Products:	Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors.

**11. Toxicological information****Information on likely routes of exposure**

<b>Ingestion:</b>	May be ingested by accident. Ingestion may cause irritation and malaise.
<b>Inhalation:</b>	In high concentrations, vapors, fumes or mists may irritate nose, throat and mucus membranes.
<b>Skin Contact:</b>	May be harmful in contact with skin. Causes mild skin irritation.
<b>Eye contact:</b>	Eye contact is possible and should be avoided.

**Information on toxicological effects****Acute toxicity (list all possible routes of exposure)**

<b>Oral</b>	
<b>Product:</b>	ATEmix: 71,592.21 mg/kg
<b>Dermal</b>	
<b>Product:</b>	ATEmix: 4,664.63 mg/kg
<b>Inhalation</b>	
<b>Product:</b>	No data available.

<b>Repeated dose toxicity</b>	
<b>Product:</b>	No data available.

<b>Skin Corrosion/Irritation</b>	
<b>Product:</b>	No data available.

<b>Serious Eye Damage/Eye Irritation</b>	
<b>Product:</b>	No data available.

<b>Specified substance(s):</b>	
Calcium carbonate	in vivo (Rabbit, 24 - 72 hrs): Not irritating
Butyl benzyl phthalate	in vivo (Rabbit, 24 - 72 hrs): Not irritating
Calcium oxide	in vivo (Rabbit, 1 hrs): Irritating
Titanium dioxide	in vivo (Rabbit, 24 - 72 hrs): Not irritating
Stearic acid	in vivo (Rabbit, 27 - 72 hrs): Not irritating
Hydrotreated heavy naphthenic distillate	in vivo (Rabbit, 24 hrs): Not irritating

<b>Respiratory or Skin Sensitization</b>	
<b>Product:</b>	May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause sensitization by inhalation.

**Carcinogenicity****Product:** No data available.**IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:**

Titanium dioxide Overall evaluation: Possibly carcinogenic to humans.

Hydrotreated heavy Overall evaluation: Not classifiable as to carcinogenicity to humans. Overall  
naphthenic distillate evaluation: Carcinogenic to humans.**US. National Toxicology Program (NTP) Report on Carcinogens:**Hydrotreated heavy Known To Be Human Carcinogen.  
naphthenic distillate**US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):**

No carcinogenic components identified

**Germ Cell Mutagenicity****In vitro****Product:** No data available.**In vivo****Product:** No data available.**Reproductive toxicity****Product:** May damage fertility or the unborn child.**Specific Target Organ Toxicity - Single Exposure****Product:** No data available.**Specific Target Organ Toxicity - Repeated Exposure****Product:** No data available.**Aspiration Hazard****Product:** No data available.**Other effects:** No data available.**12. Ecological information****Ecotoxicity:****Acute hazards to the aquatic environment:****Fish****Product:** No data available.**Specified substance(s):**Calcium carbonate LC 50 (Western mosquitofish (*Gambusia affinis*), 96 h): > 56,000 mg/l

	Mortality
Butyl benzyl phthalate	LC 50 (Fathead minnow ( <i>Pimephales promelas</i> ), 96 h): 1.39 - 3.88 mg/l Mortality
Titanium dioxide	LC 50 (Mummichog ( <i>Fundulus heteroclitus</i> ), 96 h): > 1,000 mg/l Mortality
<b>Aquatic Invertebrates</b>	
<b>Product:</b>	No data available.
<b>Specified substance(s):</b>	
Butyl benzyl phthalate	EC 50 (Water flea ( <i>Daphnia magna</i> ), 48 h): > 10 mg/l Intoxication EC 50 (Opossum shrimp ( <i>Americamysis bahia</i> ), 48 h): > 0.9 mg/l Mortality EC 50 (Water flea ( <i>Daphnia magna</i> ), 24 h): > 10 mg/l Intoxication EC 50 (Water flea ( <i>Daphnia magna</i> ), 21 d): > 0.76 mg/l Intoxication EC 50 (Water flea ( <i>Daphnia magna</i> ), 14 d): > 0.76 mg/l Intoxication
Titanium dioxide	EC 50 (Water flea ( <i>Daphnia magna</i> ), 48 h): > 1,000 mg/l Intoxication

#### Chronic hazards to the aquatic environment:

<b>Fish</b>	
<b>Product:</b>	No data available.
<b>Specified substance(s):</b>	
Butyl benzyl phthalate	NOAEL ( <i>Pimephales promelas</i> , 126 d): 64.6 - 67.5 µg/l experimental result
Calcium oxide	NOAEL ( <i>Oncorhynchus mykiss</i> , 60 d): 307 mg/l interpreted
Titanium dioxide	LC 0 ( <i>Coregonus autumnalis migratorius</i> G., 30 d): 3 mg/l experimental result
Hydrotreated heavy naphthenic distillate	NOAEL ( <i>Oncorhynchus mykiss</i> , 14 d): >= 1,000 mg/l QSAR

<b>Aquatic Invertebrates</b>	
<b>Product:</b>	No data available.

<b>Toxicity to Aquatic Plants</b>	
<b>Product:</b>	No data available.

#### Persistence and Degradability

<b>Biodegradation</b>	
<b>Product:</b>	No data available.

<b>BOD/COD Ratio</b>	
<b>Product:</b>	No data available.

#### Bioaccumulative Potential Bioconcentration Factor (BCF)

<b>Product:</b>	No data available.
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**Specified substance(s):**

Butyl benzyl phthalate      Bluegill (*Lepomis macrochirus*), Bioconcentration Factor (BCF): 772 (Flow through)

**Partition Coefficient n-octanol / water (log Kow)**

**Product:**      No data available.

**Specified substance(s):**

Butyl benzyl phthalate      Log Kow: 4.91

Stearic acid      Log Kow: 8.23

**Mobility in Soil:**      No data available.

**Other Adverse Effects:**      Very toxic to aquatic organisms.

**13. Disposal considerations**

**Disposal instructions:**      Dispose of waste at an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

**Contaminated Packaging:**      No data available.

**14. Transport information****TDG:**

Not Regulated

**CFR / DOT:**

Not Regulated

**IMDG:**

UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Butyl Benzyl Phthalate), 9, PG III, MARINE POLLUTANT

**Further Information:**

The above shipping description may not be accurate for all container sizes and all modes of transportation. Please refer to Bill of Lading.

**15. Regulatory information****US Federal Regulations****TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**

None present or none present in regulated quantities.

**US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)**

None present or none present in regulated quantities.

**CERCLA Hazardous Substance List (40 CFR 302.4):**

<b><u>Chemical Identity</u></b>	<b><u>Reportable quantity</u></b>
Butyl benzyl phthalate	100 lbs.
Dibutyl phthalate	10 lbs.
Methanol	5000 lbs.
Cyclohexane	1000 lbs.
Acetic acid	5000 lbs.

**Superfund Amendments and Reauthorization Act of 1986 (SARA)****Hazard categories**

Delayed (Chronic) Health Hazard

**SARA 302 Extremely Hazardous Substance**

None present or none present in regulated quantities.

**SARA 304 Emergency Release Notification**

<b><u>Chemical Identity</u></b>	<b><u>Reportable quantity</u></b>
Butyl benzyl phthalate	100 lbs.
Diisodecyl phthalate	
Dibutyl phthalate	10 lbs.
Diisodecyl phthalate (mixed Is)	
Methanol	5000 lbs.
Cyclohexane	1000 lbs.
Acetic acid	5000 lbs.

**SARA 311/312 Hazardous Chemical**

<b><u>Chemical Identity</u></b>	<b><u>Threshold Planning Quantity</u></b>
Calcium carbonate	500 lbs
Butyl benzyl phthalate	500 lbs
Calcium oxide	500 lbs
Titanium dioxide	500 lbs
Stearic acid	500 lbs
Tosyl isocyanate	500 lbs
Hydrotreated heavy naphthenic distillate	500 lbs

**SARA 313 (TRI Reporting)**

None present or none present in regulated quantities.

**Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3)**

None present or none present in regulated quantities.

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):**

None present or none present in regulated quantities.

**US State Regulations****US. California Proposition 65**

This product contains chemical(s) known to the State of California to cause cancer and/or to cause birth defects or other reproductive harm.



**US. New Jersey Worker and Community Right-to-Know Act****Chemical Identity**

Calcium carbonate  
Butyl benzyl phthalate  
Calcium oxide  
Titanium dioxide  
Hydrotreated heavy naphthenic distillate

**US. Massachusetts RTK - Substance List****Chemical Identity**

Calcium carbonate  
Butyl benzyl phthalate  
Calcium oxide  
Titanium dioxide  
Crystalline Silica (Quartz)/ Silica Sand

**US. Pennsylvania RTK - Hazardous Substances****Chemical Identity**

Calcium carbonate  
Butyl benzyl phthalate  
Diisodecyl phthalate  
Calcium oxide  
Titanium dioxide

**US. Rhode Island RTK****Chemical Identity**

Butyl benzyl phthalate  
Diisodecyl phthalate

**Other Regulations:**

<b>Regulatory VOC (less water and exempt solvent):</b>	13 g/l
<b>VOC Method 310:</b>	0.90 %

**Inventory Status:**

Australia AICS:	One or more components in this product are not listed on or exempt from the Inventory.
Canada DSL Inventory List:	All components in this product are listed on or exempt from the Inventory.
EINECS, ELINCS or NLP:	One or more components in this product are not listed on or exempt from the Inventory.
Japan (ENCS) List:	One or more components in this product are not listed on or exempt from the Inventory.
China Inv. Existing Chemical Substances:	One or more components in this product are not listed on or exempt from the Inventory.
Korea Existing Chemicals Inv. (KECI):	One or more components in this product are not listed on or exempt from the Inventory.

Canada NDSL Inventory:	One or more components in this product are not listed on or exempt from the Inventory.
Philippines PICCS:	One or more components in this product are not listed on or exempt from the Inventory.
US TSCA Inventory:	All components in this product are listed on or exempt from the Inventory.
New Zealand Inventory of Chemicals:	All components in this product are listed on or exempt from the Inventory.
Japan ISHL Listing:	One or more components in this product are not listed on or exempt from the Inventory.
Japan Pharmacopoeia Listing:	One or more components in this product are not listed on or exempt from the Inventory.

<b>16. Other information, including date of preparation or last revision</b>
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<b>Revision Date:</b>	10/19/2015
<b>Version #:</b>	1.0
<b>Further Information:</b>	No data available.
<b>Disclaimer:</b>	For Industrial Use Only. Keep out of Reach of Children. The hazard information herein is offered solely for the consideration of the user, subject to their own investigation of compliance with applicable regulations, including the safe use of the product under every foreseeable condition.



# Sealant Certifications and Validations

Sealant Certifications and Validations																													
Description		ASTM C920	TYPE- Single/Multi-Component	GRADE- Pourable or Non-Sag	CLASS- Cyclic Movement +/-	USE	ASTM C834	ASTM C1248	ASTM C1382	ASTM E84	Federal Spec TT-S-001543A	Federal Spec TT-S-00230C	Federal Spec TT-S-00227E	TYPE I Self-Leveling	TYPE II Non-Sag	CLASS A 50%max, B 25%max	MCG-1-25-B-N	MCG-2-40-B-N	CAN/CGSB-19.13-M87	CAN/CGSB 19-GP-17M	AAMA VCL Listed	COLA Approval, City of LA	ULC Registered	EIMA Test 300.01	USDA	CFIA Approved	SWRI Validated Product	GREENGUARD Gold	
Vulkem 116 ▲	Polyurethane, for vertical/horizontal	●	S	NS	25	NT,T,M,A,O,I (Class 2)					●			●	A			●			●	●			●	●			
Vulkem 45SSL ◆	Polyurethane, semi-self-leveling (up to 6% slope)	●	S	P	35*	NT,T,M,A,O,I (Class 2)					●		●			●		●							●	●			
Dymonic 100	Polyurethane with high performance & high movement	●	S	NS	50	NT,T,M,A,O,I				●	●		●	A				●				●			●		●	●	
Vulkem 445SSL ◆	Polyurethane, semi-self-leveling (up to 6% slope)	●	M	P	35	NT,T,M,A,O,I (Class 2)					●		●			●		●							●				
Dymeric 240FC	Epoxidized Polyurethane fast cure	●	M	NS	50*	NT,T,M,A,O,I						●		●	A					●					●	●			
THC 901	Polyurethane, semi-self-leveling (up to 10% slope)	●	M	P	25	NT,T,M,O						●	●		A										●				
Dymonic FC	Polyurethane Hybrid	●	S	NS	35	NT,M,A,O		●			●			●	A			●			●				●	●		●	
Spectrem 1	Silicone neutral cure, ultra low modulus	●	S	NS	100/50	NT,M,A,O,G		●	●	●	●	●		●	A		●	●				●		●	●		●	●	
Spectrem 2	Silicone neutral cure, medium modulus, for two-sided, structural glazing	●	S	NS	50	NT,M,A,O,G		●			●	●		●	A			●			●	●			●	●	●	●	
Spectrem 3	Silicone neutral cure, low modulus matte finish	●	S	NS	50*	NT,M,A,O,G		●	●		●	●		●	A			●					●	●				●	
Spectrem 4-TS	Silicone neutral cure, low modulus matte finish	●	M	NS	50*	NT,M,A,O,G		●	●		●	●		●	A			●					●	●				●	
Spectrem 800	Silicone neutral cure, low modulus for traffic & highway	●	S	NS	100/50	NT,T,M,A,O					●	●		●	A			●											
Spectrem 900SL	Silicone neutral cure, self-leveling, low modulus, for traffic & highway	●	S	P	100/50	NT,T,M,A,O					●	●	●		A			●											
Spectrem Simple Seal	Silicone, preformed low modulus sheet extrusion, for bridge joints																											●	
Tremsil 200	Silicone acetoxycure, with fungicide	●	S	NS	25	NT,A,O,G					●	●		●	A			●							●			●	
Tremsil 600	Silicone neutral cure, medium modulus	●	S	NS	25	NT,A,O,G					●	●		●	A			●			●				●			●	
Proglaze SSG	Silicone, neutral cure, high modulus, fast cure, four-sided structural glazing	●	S	NS	25	NT,A,G					●	●		●	A			●			●	●			●			●	
Proglaze II	Silicone, high modulus, 2-part structural glazing	●	M	NS	25	NT,A,G						●		●	A						●				●			●	
Proglaze	Silicone acetoxycure, for glazing applications	●	S	NS	25	NT,A,O,G					●	●		●	A										●	●		●	
Tremflex 834	Acrylic Latex, ideal for interior applications		S	NS	12.5		●			●										●					●	●		●	
Butyl Sealant	Butyl, curtainwall, bedding joints, secondary glazing seals		S	NS	12.5	Fed Spec TT-S-001657 Type 1, ASTM C1311										CAN/CGSB 19-GP-14M													
Acoustical Sealant	Butyl, non-curing/non-skinning, sound dampening sealant		S	NS												CAN/CGSB 19.21 M87													
Tremco 830	Thermoplastic, exterior grade, non-structural glazing/sliding		S	NS	12.5																								
illmod 600	Polyurethane, preformed, pre-compressed, impregnated foam tape			NS					●																			●	

▲ These materials are also available with quick-cure catalyst.     ♦ These materials can be water catalyzed. Please contact Technical Services for more info.     \* Modified ASTM C719 test.



## Tremco Incorporated

3735 Green Road • Beachwood, Ohio 44122 • 216-292-5000 www.tremcosealants.com



Warranty No: \*\*\*\*\*  
Today's Date: \*\*\*\*\*  
Exp: \*\*\*\*\*

**Commercial Sealants & Waterproofing**

### Silicone Sealant Material Warranty

**PROJECT  
NAME**

**APPLICATOR**

**ARCHITECT/  
ENGINEER**

**GENERAL  
CONTRACTOR**

**OWNER**

**DATE OF  
SUBSTANTIAL  
COMPLETION**

**PRODUCT(S)**

**TYPE  
OF WORK**

Tremco Incorporated ("Tremco") hereby warrants to the Owner, subject to the terms, conditions and limitations stated herein, that the Tremco Sealant specified above is free of manufacturing defects and conforms to published physical properties and quality control standards in force at the time product was purchased and, when installed in accordance with Tremco's written Application Instructions and in applications approved by Tremco as suitable for the Product, will have a useful life under normal service conditions for a period of /#year(s) from the date of substantial completion.

In the event the Product is proven not to have performed in accordance with the Warranty during the warranty period, the Owner shall immediately notify Tremco and confirm such notice in writing within thirty (30) days. Tremco's sole responsibility under this Warranty shall be, at its option, either to refund the purchase price of or provide sufficient replacement material to replace the non-conforming product, and such refund or replacement shall constitute the limit of the Company's liability and obligation. During the term of this Warranty, agents or employees of Tremco shall be afforded opportunities to inspect any such areas at such time as Tremco may reasonably request.

Tremco makes no warranty with respect to appearance or color.

Tremco's obligations under this Warranty are expressly conditioned upon receipt of full payment for the Product and the Owner's compliance with each of its responsibilities described in this Warranty document. Any delay in full payment to Tremco shall not extend the Warranty Period.

No representative of Tremco has the authority to make any representations or provisions except as stated herein. This Warranty is issued to the above-named Owner and is transferable with the written consent of Tremco.

THE ABOVE WARRANTY IS IN LIEU OF ANY AND ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE OR MERCHANTABILITY, EXCEPT AS EXPRESSLY PROVIDED HEREIN. TREMCO SHALL NOT BE LIABLE FOR DAMAGE TO THE PROJECT STRUCTURE OR INTERIOR CONTENTS OR FOR ANY OTHER CONSEQUENTIAL, SPECIAL OR OTHER DAMAGES ARISING FROM OR RELATED TO, DIRECTLY OR INDIRECTLY, THIS WARRANTY OR THE PERFORMANCE OF THE MATERIALS COVERED BY THIS WARRANTY, WHETHER BASED ON BREACH OF WARRANTY, NEGLIGENCE OR OTHER THEORY OF LIABILITY.

**TREMCO INCORPORATED**  
**Commercial Sealants & Waterproofing**

**Michael J. Soeder, VP Sales, NA**

TO EXPEDITE PROCESSING, THIS DOCUMENT WILL BE COMPLETED AND DELIVERED IN ELECTRONIC FORM ONLY. AN ELECTRONIC SIGNATURE FROM A TREMCO REPRESENTATIVE ON A COMPLETED WARRANTY DOCUMENT IS VALID AND BINDING AND IS ENFORCEABLE TO THE SAME EXTENT AS A PENNED SIGNATURE.

# ***Spectrem® 3***

## **Standard Colors**

Colors shown are approximate and may not reflect the shade precisely. Different lighting conditions can influence color appearance, for truer color please view in daylight. Colors are not stocked in all available package types. Minimum order quantities will apply for custom colors and alternative packaging. For more information, please contact Tremco Customer Service.

	PRECAST WHITE
	ANODIZED ALUMINUM
	IVORY
	GRAY
	OFF WHITE
	LIMESTONE
	SANDSTONE
	BUFF
	DUSTY ROSE
	ADOBE TAN
	CHAMPAGNE
	ALUMINUM STONE
	LIGHT BRONZE
	RUSTIC BRICK
	CHARCOAL
	HARTFORD GREEN
	BRONZE
	DARK BRONZE
	BLACK
	WHITE

**TREMCO®**

**Spectrem® 3**

# **Spectrem® 3**

## **Single-Component, Non-Staining Sealant with Advanced Silicone Technology**

Spectrem® 3 is a single-component, neutral-cure, low-modulus, construction grade sealant with Advanced Silicone Technology. Spectrem 3 is non-staining and has low polar attraction to dirt.

### **Applicable Standards**

ASTM C 920 Type S, Grade NS, Class 50\*, Use NT, M, G, A, and O; ASTM C1248; ASTM C1382;  
CAN/CGSB-19.13-M87; U.S. Federal Specification TT-S-001543A Class A;  
U.S. Federal Specification TT-S-00230 Class A, Type II; EIMA Test Method 300.01.

\*Modified ASTM C719 test

### **Tremco Commercial Sealants & Waterproofing**

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1451 Jacobson Avenue, Ashland, OH 44805 // Phone: 419.289.2050 // 800.321.6457

1117/SPEC3DS-ST

## Spectrem® 3

Single-Component, Non-Staining Sealant with Advanced Silicone Technology

### Product Description

Spectrem® 3 is a single-component, neutral-cure, low-modulus, construction grade sealant with patented advanced silicone technology. Non-staining and low polar attraction to dirt increases aesthetic appearance.

### Basic Uses

Spectrem 3 has a patented chemistry that has been specifically formulated to seal porous stone, EIFS, metal panels, masonry and pre-cast concrete joints.

### Features and Benefits

- A 20-yr non-stain warranty when pre-approved and tested by Tremco in accordance with ASTM C1248.
- Low polar attraction to dirt makes buildings easier to clean and maintain.
- Low-modulus and low Shore A hardness reduce chance of EIFS substrate failures when compared to applications with medium-modulus sealants.
- Primerless adhesion to most porous substrates.
- Extended tooling time and workability in high temperatures.
- Ease of use reduces the risk of application failure.
- Matte finish affords an aesthetically pleasing appearance with EIFS and stone substrates.
- No cure inhibition with Spectrem 1, Spectrem 2, Dymonic® FC when applied "wet-to-wet," minimizing the chance of leakage when sealants abut at glazing and other façade intersects.
- Low-VOC and zero-solvent content satisfies the LEED Indoor Environmental Criteria.
- Greenguard Gold certification ensures safety for use in the most sensitive indoor environments including hospitals and schools.

### Availability

Immediately available from your local Tremco Sales Representative, Tremco Distributor or Tremco Warehouse.

### Packaging

10.1-oz (300-mL) cartridges

20-oz (600-mL) sausages

All colors are not available in all package sizes. Special colors and packaging available upon request. Minimum order requirements exist. Contact Tremco Customer Service for more information.

### Colors

Adobe Tan, Aluminum Stone, Anodized Aluminum, Black, Bronze, Buff, Champagne, Charcoal, Dark Bronze, Dusty Rose, Gray, Hartford Green, Ivory, Light Bronze, Limestone, Off White, Precast White, Rustic Brick, Sandstone, White.

### Limitations

- Do not apply to damp or contaminated surfaces.
- Use with adequate ventilation.
- Not intended for continuous water immersion.

### Substrate Preparation

Surfaces must be sound, clean, and dry. Contact surfaces should be free of loose dirt, dust, oils, and any other contaminants. Tremco recommends that air temperatures be 40 °F (5 °C) or above before applying any sealant. If colder weather is imminent, please refer to the Tremco Guide for Cold Weather Applications at [www.tremcosealants.com](http://www.tremcosealants.com).

### Applicable Standards

Spectrem 3 meets or exceeds the requirements of the following specifications:

- ASTM C920 Type S, Grade NS, Class 50\*, Use NT, M, G, A and O
- ASTM C1248
- ASTM C1382
- U.S. Federal Specification TT-S-001543A Class A
- U.S. Federal Specification TT-S-00230, Type II Class A
- CAN/CGSB 19.13-M87
- EIMA Test Method 300.01

### Application

Spectrem 3 is easy to apply with conventional caulking equipment. Fill joint completely and tool. At 75 °F (23.9 °C), 50% RH, tooling time is 1 hr. Please visit [www.tremcosealants.com](http://www.tremcosealants.com) for complete application instructions.

### Priming

If priming is deemed necessary use Tremco® Silicone Porous Primer for porous substrates and Tremco Silicone Metal Primer for non-porous substrates.

### Joint Design

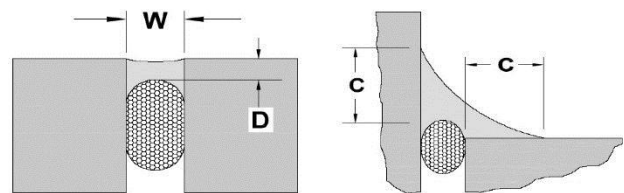
May be used in joints designed in accordance with accepted architectural/engineering practices. Joint width should be 4 times anticipated movement, but not less than 1/4" (6 mm) wide.

### Joint Backing

Closed-cell polyethylene backer rods are preferred as a joint backing material to control depth of sealant bead. Where depth of joint will prevent use of joint backing, an adhesive-backed polyethylene tape should be installed to prevent three-sided adhesion. Joint backing must be dry at the time of sealant application.

### Sealant Dimensions

W = Sealant width, D = Sealant depth, C = Contact area.



**Expansion Joints-** The minimum width and depth of any sealant application should be 1/4" x 1/4" (6 mm x 6 mm). The depth (D) of sealant may be equal to width (W) of joints less than 1/2" wide. For joints from 1/2" to 1" (13 mm to 25 mm) wide, the sealant depth should be approximately one-half of the joint width. The maximum depth (D) of any sealant application should be 1/2" (13 mm). For Joints that are wider than 1" (25 mm) contact Tremco Technical Services or your local Tremco Sales Representative.

**Window Perimeter-** For fillet beads, or angle beads around windows and doors, the sealant should exhibit a minimum surface contact area [C] of 1/4" (6 mm) onto each substrate, with provisions for release at the heel of the angle using backer rod or bond breaker tape.

### Clean Up

Tooling is recommended immediately after application to ensure firm, intimate contact with the joint interface. Dry tooling is preferred. Cleaning can be accomplished with solvents such as IPA, MEK, Toluene or Xylol while sealant is in an uncured state.

## Spectrem® 3

Single-Component, Neutral-Cure, Non-Staining Silicone Sealant

### Warranty

Tremco warrants its Products to be free of defects in materials, but makes no warranty as to appearance or color. Since methods of application and on-site conditions are beyond our control and can affect performance, Tremco makes no other warranty, expressed or implied including warranties of MERCHANTABILITY and FITNESS FOR A PARTICULAR PURPOSE, with respect to Tremco Products. Tremco's sole obligation shall be, at its option, to replace, or refund the purchase price of the quantity of Tremco Products proven to be defective and Tremco shall not be liable for any loss or damage.

Please refer to our website at [www.tremcosealants.com](http://www.tremcosealants.com) for the most up-to-date Product Data Sheets.

NOTE: All Tremco Safety Data Sheets (SDS) are in alignment with the Globally Harmonized System of Classification and Labelling of Chemicals (GHS) requirements.

## TYPICAL PHYSICAL PROPERTIES

PROPERTY	TEST METHOD	TYPICAL VALUES
<b>As Supplied:</b>		
Tack free time	ASTM C679	2 hr
Tooling Time	Skin Formation	40 min
<b>As Cured: After 14 days at 77 °F (25 °C), 50%RH</b>		
Joint Movement Capability Extension Compression	ASTM C719	±50%*
Hardness (shore A)	ASTM C661	15
Peel Strength Aluminum and Glass	ASTM C794	25 to 35 pli minimum
<b>Application Temperature Range</b>		-40 to 300 °F (-40 to 149 °C)
Stain & Color Change	ASTM C510 TT-S-001543A	No Stain
Staining of Porous Substrates White Marble Primed & Unprimed	ASTM C1248	No Stain
Tear strength, die ("C")	ASTM D624	25 to 30 pli minimum
Tensile Strength at Max Elongation	ASTM D412	155 psi
Tensile Strength at Max Elongation 100% Modulus	ASTM D412	55 psi
Tensile Strength at Max Elongation 50% Modulus		40 psi
Tensile Strength at Max Elongation 25% Modulus		25 psi

\*Modified ASTM C719 test



**1017/SPEC3DS-ST** Please refer to our website at [www.tremcosealants.com](http://www.tremcosealants.com) for the most up-to-date Product Data Sheets.

### Tremco Commercial Sealants & Waterproofing

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1445 Rue de Coulomb  
Boucherville QC J4B 7L8  
514.521.9555



**TREMCO**



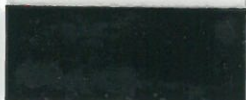
Adobe Tan



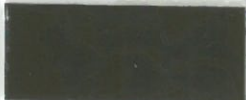
Aluminum Stone



Anodized Aluminum



Black



Bronze



Buff



Clear



Champagne



Charcoal



Dark Bronze



**TREMCO**



Dusty Rose



Gray



Ivory



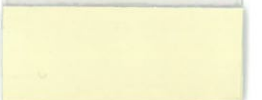
Light Bronze



Limestone



Off White



Precast White



Rustic Brick



Sandstone



White