

Tremco Butyl Sealant

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Tremco® Butyl Sealant

General Purpose Butyl Sealant

Product Description

Tremco Butyl Sealant is formulated from a blend of butyl rubber and polyisobutylene to form an economical, flexible sealant.

Basic Uses

Tremco Butyl Sealant is used for sealing joints in applications such as curtainwall joints, metal panel joining, bedding thresholds, secondary glazing seals, and areas where a seal is required against Tremco Neoprene or EPDM gaskets.

Features and Benefits

- Excellent primerless adhesion to most common substrates such as wood, metal, glass, concrete, and masonry surfaces.
- Up to 10% movement capability
- Good exterior grade, weather resistant caulk
- Economical flexible sealant

Colors

White, Aluminum Stone, Black

Packaging

10.1-oz (300-ml) cartridges

Availability

Tremco Butyl Sealant is immediately available through Tremco distributors throughout the United States, Canada, and overseas.

Coverage Rate

35 linear feet of joint per 10.1 oz (300 mL) cartridge for a 1/4" x 1/4" joint. For specific coverage rates that include joint size, and usage efficiencies, visit our website usage calculator at tremcosealants.com.

Applicable Standards

Tremco Butyl Sealant meets or exceeds the requirements of the following specifications

- Conforms to U.S. Federal Specification TT-S-001657, Type 1
- ASTM C1311
- CAN/CGSB 19-GP-14M, QPL 81002

Joint design

Tremco Butyl Sealant may be used in any vertical or horizontal joint designed in accordance with accepted architectural/engineering practices. Joint width should be 4 times anticipated movement, but not less than 1/4" (6.4 mm).

Joint backing

Closed cell or reticulated polyethylene backer rod is recommended as joint backing to control sealant depth and to ensure intimate contact of sealant with joint walls when tooling. Where depth of joint will prevent the use of backer rod, an adhesive backed polyethylene tape (bond breaker tape) should be used to prevent three-sided adhesion. All backing should be dry at time of sealant application.

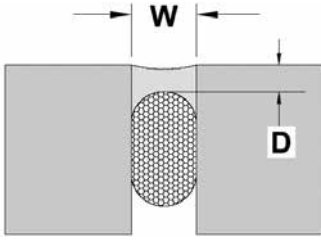
TYPICAL PHYSICAL PROPERTIES

The following results are based on most recent testing performed.

Bubble Formation (TT-S-001657)	Pass
Tenacity (TT-S-001657)	Pass
Slump (TT-S-001657)	Pass
Extrudability (TT-S-001657)	1.5 to 3.0 s/mL
Tack Free Time (TT-S-001657)	Pass, <24 hr
Shrinkage	5 to 10%

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 the width (W) of joints that are less than 1/2" wide. For joints ranging from 1/4 to 1" (6 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 1/2" (13 mm). For joints that are wider than 1" (25 mm) contact Tremco's Technical Service Department, or your local Tremco field representative.

WINDOW PERIMETERS – 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.

Surface preparations

Surfaces must be sound, clean, and dry. All release agents, existing waterproofing, dust, loose mortar, laitance, paints, or other finishes must be removed. This can be accomplished with a thorough wire brushing, grinding, sandblasting, or solvent washing, depending on the contamination.

Tremco recommends that surface temperatures be 40 °F (5 °C) or above at the time the sealant is applied. If sealant must be applied in temperatures below 40 °F, please refer to the Tremco Guide for Applying Sealants in Cold Weather that can be found on our website at www.tremcosealants.com.

Priming

Tremco Butyl Sealant adheres to common construction substrates without primers; however, Tremco always recommends that a mock-up or field adhesion test on the actual materials being used on the job be conducted to verify adhesion. The field adhesion test can be found in appendix X1 of ASTM C1193, Standard Guide for Use of Joint Sealants.

Application

Apply Tremco Butyl Sealant with conventional caulking equipment filling the joint from the bottom first. Immediately tool the sealant with a spatula to ensure intimate contact with the joint walls. Dry tooling is always preferred, although xylene can be used in limited amounts to slick the spatula if needed. For window and door perimeter fillet bead applications, a 1/4" (6 mm) minimum surface area is recommended.

Cure time

Tremco Butyl Sealant generally cures at a rate of 1/16" per day at 75 °F (24 °C) and 50% RH. It will be tack free in one day. The cure time will increase as temperatures and/or humidity decrease. A good rule of thumb is one additional day for every 10 °F decrease in temperature.

Clean up

Excess sealant and smears adjacent to the joint interface can be carefully removed with xylene or mineral spirits before the sealant cures. Any utensils used for tooling can also be cleaned with xylene or mineral spirits.

Limitations

- Do not apply Tremco Butyl Sealant over damp or contaminated surfaces.
- Do not apply to joints where movement will exceed $\pm 10\%$.
- Always utilize the accompanying MSDS for information on Personal Protective Equipment (PPE) and health hazards.

Warranty

Tremco warrants its sealants 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 sealants. Tremco's sole obligation shall be, at its option, to replace, or refund the purchase of the quantity of Tremco sealant proven to be defective and Tremco shall not be liable for any loss or damage.





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SECTION 1 - PRODUCT IDENTIFICATION / PREPARATION INFORMATION

Product Information

Trade name : BUTYL BLACK
 Product code : 982802 323

 Supplier : Tremco Canada division
 220 Wicksteed Avenue
 Toronto, ON M4H 1G7
 Telephone : (416) 421-3300
 Emergency Phone: : (613) 996-6666

 Product use : Sealant

Preparation Information

Prepared by: : Sewnauth Raghunandan
 Date: : 07/07/2012
 Telephone : (416) 421-3300

SECTION 2 - HAZARDS IDENTIFICATION

Emergency Overview

Black. Non-sag gunnable paste. No serious effects anticipated under normal conditions of use. Vapor may irritate respiratory tract. Leave area to breathe fresh air. Avoid further overexposure. If symptoms persist, get medical attention.

Acute Potential Health Effects/ Routes of Entry

Inhalation : No serious effects anticipated under normal conditions of use. Vapor may irritate respiratory tract.
 Eyes : Slightly irritating.
 Ingestion : May cause irritation to the mouth, throat and stomach. May cause gastrointestinal irritation, nausea, and vomiting.
 Skin : Irritant effect may be delayed.

Aggravated Medical Conditions

Pre-existing eye, skin, liver, kidney, and respiratory disorders may be aggravated by exposure.

Chronic Health Effects

Prolonged or repeated exposure to xylene may cause defatting, drying, and irritation of the skin, dermatitis, central nervous system (CNS) effects, heart muscle sensitization and arrhythmia, hearing loss, and brain, liver, kidney damage. Xylene overexposure may affect fetal development. Carbon black is classified by IARC to be a known animal carcinogen and a possible human carcinogen (Group 2B). Carbon black is encapsulated by resin and not expected to have adverse effects unless made airborne. Inhalation of crystalline silica (quartz) can cause cancer based on animal data, and IARC concludes sufficient evidence in humans (Group 1). Prolonged and repeated overexposure to free crystalline silica dust above the TLV level may cause scarring of the lungs with cough and shortness of breath. A delayed lung injury, silicosis may result from breathing free silica. The International Agency for Research on Cancer (IARC) has evaluated ethylbenzene and classified it as a possible human carcinogen (Group 2B) based on sufficient evidence for carcinogenicity in experimental animals, but inadequate evidence for cancer in exposed humans. Prolonged and repeated exposure to excessive airborne concentrations of talc can result in scarring of the lungs (pneumoconiosis) or the covering of the lungs (pleural thickening). Fillers are encapsulated and not expected to be released from product under normal conditions of

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use. Prolonged or repeated exposure to mineral spirits (petroleum naphtha or stoddard solvent) may cause defatting, drying, and irritation of the skin, dermatitis, central nervous system (CNS) effects, and adverse liver, kidney, and lung effects.

SECTION 3 : HAZARDOUS INGREDIENTS

Chemical Name	CAS-No.	Weight % Range
Stoddard solvent (Mineral Spirits)	8052-41-3	10.0 - 30.0
Xylene	1330-20-7	1.0 - 5.0
Carbon Black	1333-86-4	1.0 - 5.0
1,2,4-Trimethylbenzene	95-63-6	0.5 - 1.5
Ethylbenzene	100-41-4	0.5 - 1.5
Crystalline Silica (Quartz)/ Silica Sand	14808-60-7	0.1 - 1.0

The ingredients listed above are hazardous as defined in the controlled products regulation. (CPR).

SECTION 4 - FIRST AID MEASURES

Get immediate medical attention for any significant overexposure.

Inhalation	:	Leave area to breathe fresh air. Avoid further overexposure. If symptoms persist, get medical attention.
Eye contact	:	Flush with water for 15 minutes. If irritation persists, get medical attention.
Skin contact	:	Clean area of contact thoroughly using soap and water. If irritation, rash or other disorders develop, get medical attention immediately.
Ingestion	:	Do not induce vomiting unless advised by a physician. Call nearest Poison Control Center or Physician immediately.

SECTION 5: FIRE / EXPLOSION HAZARDS

Flash point	:	Not available.
Method	:	Not available.
Burning rate	:	Non-flammable solid
Lower explosion limit	:	Not available.
Upper explosion limit	:	Not available.
Autoignition temperature	:	Not available.
Extinguishing media	:	If water fog is ineffective, use carbon dioxide, dry chemical or foam.
Hazardous combustion products	:	Smoke, fumes. Carbon monoxide and carbon dioxide can form.
Protective equipment for firefighters	:	Use accepted fire fighting techniques. Wear full firefighting protective clothing, including self-contained breathing apparatus (SCBA).
Fire and explosion conditions	:	This product not expected to ignite under normal conditions of use.

SECTION 6 - SPILLS / LEAKS / ACCIDENTAL RELEASE MEASURES

Use appropriate protective equipment. Avoid contact with material. Scrape up and transfer to appropriate



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container for disposal.

SECTION 7 - HANDLING AND STORAGE

Prevent inhalation of vapor, ingestion, and contact with skin eyes and clothing. Keep container closed when not in use. Precautions also apply to emptied containers. Handle in compliance with common hygienic practices. Clean hands thoroughly after handling. Do not use in confined or poorly ventilated areas. Store in sealed containers in a cool, dry, ventilated warehouse location.

SECTION 8 - PREVENTIVE MEASURES/EXPOSURE CONTROLS/PERSONAL PROTECTION

Personal protection equipment

- Respiratory protection : Not required under normal conditions of use. Wear appropriate, properly fitted NIOSH/MSHA approved organic vapor or supplied air respirator when airborne contaminant level(s) are expected to exceed exposure limits indicated on the MSDS. Follow manufacturer's directions for respirator use.
- Hand protection : Use suitable impervious rubber or vinyl gloves and protective apparel to reduce exposure.
- Eye protection : Wear appropriate eye protection.
- Skin and body protection : Prevent contact with shoes and clothing.
- Protective measures : Use professional judgment in the selection, care, and use.
- Engineering measures** : General ventilation is sufficient.

Exposure Limits

Chemical Name	CAS Number	Regulation	Limit	Form
Stoddard solvent (Mineral Spirits)	8052-41-3	Ontario TWAEV: ACGIH TWA:	525 mg/m3 100 ppm	
Xylene	1330-20-7	Ontario TWAEV: Ontario STEV: ACGIH TWA: ACGIH STEL:	435 mg/m3 650 mg/m3 100 ppm 150 ppm	
Carbon Black	1333-86-4	Ontario TWAEV: ACGIH TWA:	3.5 mg/m3 3.5 mg/m3	
1,2,4-Trimethylbenzene	95-63-6	Ontario TWAEV: ACGIH TWA:	123 mg/m3 25 ppm	
Ethylbenzene	100-41-4	Ontario TWAEV: Ontario STEV: ACGIH TWA: ACGIH STEL:	435 mg/m3 540 mg/m3 100 ppm 125 ppm	
Crystalline Silica (Quartz)/ Silica Sand	14808-60-7	Ontario TWAEV: ACGIH TWA:	0.10 mg/m3 0.025 mg/m3	Respirable fraction. Respirable fraction.

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SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Physical State	: Solid
Form	: Non-sag gunnable paste
Color	: Black
Odor	: Ester
pH	: Not available.
Vapour pressure	: Not available.
Vapor density	: Heavier than air
Melting point/range	: Not available.
Freezing point	: Not available.
Boiling point/range	: Not available.
Water solubility	: Negligible
Evaporation Rate:	: Not available.
Specific Gravity	: 1.569
% Volatile Weight	: 14 %

SECTION 10 - REACTIVITY / STABILITY

Substances to avoid	: Oxidizing agents.
Stability	: Material is stable under normal storage, handling, and use.
Hazardous polymerization	: Will not occur under normal conditions.

SECTION 11 - TOXICOLOGICAL INFORMATION

Xylene, CAS-No.: 1330-20-7	
Acute oral toxicity (LD-50 oral)	4,300 mg/kg (Rat) 1,590 mg/kg (Mouse) 6,670 mg/kg (Rat) 3,523 - 8,600 mg/kg (Rat) 5,627 mg/kg (Mouse)
Acute inhalation toxicity (LC-50)	6,350 mg/l for 4 h (Rat) 3,907 mg/l for 6 h (Mouse) 8,000 mg/l for 4 h (Rat)
Ethylbenzene, CAS-No.: 100-41-4	
Acute oral toxicity (LD-50 oral)	5,460 mg/kg (Rat) 3,500 mg/kg (Rat)
Acute dermal toxicity (LD-50 dermal)	17,800 mg/kg (Rabbit)

SECTION 12 - ECOLOGICAL INFORMATION

No Data Available

SECTION 13 - WASTE DISPOSAL CONSIDERATIONS

Disposal Method : Dispose as hazardous waste according to all local, state, federal and provincial

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regulations.

SECTION 14 - TRANSPORTATION / SHIPPING DATA

TDG:

Not Regulated

CFR / DOT:

Not Regulated

IMDG:

Not Regulated

SECTION 15 - REGULATORY INFORMATION

North American Inventories:

All components are listed or exempt from the TSCA inventory.

This product or its components are listed on, or exempt from the Canadian Domestic Substances List.

Canadian Regulations:

WHMIS Classification : D2A, D2B

This is a "controlled product" under the Canadian Workplace Hazardous Materials Information System (WHMIS).

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

Other Regulations:

Regulatory VOC (less water and exempt solvent) : 232 g/l

SECTION 16 - OTHER INFORMATION

HMIS Rating :

Health	2
Flammability	2
Reactivity	0
PPE	

0 = Minimum
 1 = Slight
 2 = Moderate
 3 = Serious
 4 = Severe

Further information:

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.



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Prepared by: Sewnauth Raghunandan

Legend

- | | |
|---|--|
| ACGIH - American Conference of Governmental Hygienists | OSHA - Occupational Safety and Health Administration |
| DOT - Department of Transportation | PEL - Permissible Exposure Limit |
| DSL - Domestic Substance List | RCRA - Resource Conservation and Recovery Act |
| EPA - Environmental Protection Agency | STEL - Short Term Exposure Limit |
| HMIS - Hazardous Materials Information System | TLV - Threshold Limit Value |
| IARC - International Agency for Research on Cancer | TSCA - Toxic Substances Control Act |
| MSHA - Mine Safety Health Administration | TWA - Time Weighted Average |
| NDSL - Non-Domestic Substance List | V - Volume |
| NIOSH - National Institute for Occupational Safety and Health | VOC - Volatile Organic Compound |
| NTP - National Toxicology Program | WHMIS - Workplace Hazardous Materials Information System |