

Chem-Caulk 2020

SEALANTS

One component advanced urethane sealant, architectural grade

PRODUCT USES

Chem-Caulk 2020 offers superior adhesion to vinyl siding, vinyl trim board and a variety of dissimilar surfaces. It is suitable for most building materials, including stone, masonry, wood, aluminium and a variety of other metals.

Recommended applications include : vinyl siding, vinyl trim board and other engineered woods, other perimeter sealing applications such as window and door.

Chem-Caulk 2020 has a non-sag consistency suitable for most vertical applications. Its physical properties remain unchanged throughout a wide temperature range : -20°C to +80°C.

Available in white, stone, bronze and tan colours.



PRODUCT BENEFITS

- Multi environmental use
- Non yellowing
- Solvent free
- Water free, cold weather friendly
- Low odor
- No washout properties

TYPICAL PHYSICAL PROPERTIES

- Skin time : approx. 60 minutes
 - Hardness, Shore A : 40 (ASTM D2240)*
 - Tensile strength : 220 psi (ASTM D412)*
 - Elongation : 700% (ASTM D412)*
 - Applicable standards :
 - ASTM C920, Type S, Grade NS, Class 50, Use NT, A and M
 - US Federal specification TT-S 00230C, Type II, Class A
 - Canadian Specification SAC/CGSB 19.13-M87
 - CARB and SCAQMD compliant
 - Meets VOC requirement for OTC regulation
 - Available colours : white, antique, white, beige, bronze, clay, cream, gray, blue gray, heather, maple, pearl, stone and tan
- * data given after 14 days cure at 25°C and 50% RH

APPLICATION

APPLICATION LIMITATIONS

- Construction substrate have become complex and diverse by nature and origin. Substrate chemistries and structures can interfere with adhesive performances of the sealant. Adhesion to Substrate Pretest (ASP) is therefore MANDATORY to assess any adhesion and sealing characteristics - see Adhesion to Substrates Pretest Section and see Installation Protocol section. This must be done pre-installation to avoid potential failures. Call Technical service for more information about surface preparation and possible priming.
- Do not apply over damp, contaminated, loose surfaces, (see installation protocol and surface preparation), old sealants, or other foreign substances that may impair the adhesion bond. Avoid air entrapment.
- Porous substrates such as, but not limited to, marble, limestone and granite might absorb components of the Chem-Caulk 2020 leading to staining of the substrate, ASP with sufficient aging is mandatory to assess this potential issue.
- The ultimate performance of Chem-Caulk 2020 depends on proper joints design and proper application with joint surfaces properly prepared (see Installation Protocol). Chem-Caulk 2020 is not recommended for joints with dimensions less than or greater than what is recommended below (see Installation Protocol, Joint Design section).
- Chem-Caulk 2020 must not be used to seal narrow joints, fillet joints and face nail holes.

- Smearing and feathering Chem-Caulk 2020 over joints is not recommended.
- Chem-Caulk 2020 is not recommended for horizontal joints or traffic-bearing joints where abrasion resistance is required (walkways, driveways, runways etc.). Please refer to Chem-Caulk 950 for this application.
- Chem-Caulk 2020 is not recommended for continuous immersion in water or any other fluid. When fully cured avoid exposure, even incidental to fuels, chlorinated, acid and alkaline solutions. Chem-caulk 2020 is not recommended for exterior or interior sealing below the waterline : please refer to Bostik 940 Fast Set for marine applications.
- Contact of Chem-Caulk 2020 with asphalts (ie back coating of window flashing etc...) and other filler compounds impregnated with oil, asphalt, tar, etc... may deteriorate the cohesive strength of the substrate and ultimately compromise the seal.
- During the curing of Chem-Caulk 2020, do not expose to curing silicone sealants, curing Bostik Chem-Caulk 2000, alcohol, acids or solvent-based materials.
- Lower relative humidity and temperature will significantly extend the curing time. Confined areas, deep joints and moisture barrier substrates may also affect the full cure time and extend it by many days.
- Until the sealant is fully cured, do not expose the sealant to any mechanical stress. Uncured sealant will not respond properly to cyclic expansion and contraction of the joint specified for the cured sealant only.
- Chem-Caulk 2020 may remain tacky for a few hours and attract dust and dirt from the jobsite, which may affect the appearance of the sealant. Check tack-free time to prevent dirt pickup.
- Chem-Caulk 2020 is not recommended for glazing applications. Bond line strength can be affected by UV rays through the clear material (glass, acrylic, glass, polycarbonate, etc...)
- Chem-Caulk 2020 is not an RTV silicone and therefore is suitable for painting with latex based paints. Paint chemistries and flexibility characteristics of the paint films over the sealant may affect wetting, adhesion and integrity of the paint layer ; and it is therefore mandatory to pretest the paint or other coating over the Chem-Caulk 2020 to ensure the successful compatibility between the sealant and the painting/coating after a sufficient amount of time. See your paint manufacturer for specifications or limitations and call our Technical Service for more information. In general, oil-based paints are not recommended because of their poor elastic properties and because of their potential interaction with the sealant chemistry, which may create non-curing conditions for the sealant. Do not paint over the polyurethane sealant until it has fully cured.

INSTALLATION PROTOCOL

Joint design :

In general, more joint movement can be accommodated in a thin bead of sealant than a thick bead. Chem-Caulk 2020 Advanced Polyurethane Sealant should be no thicker than 1/2" (12.7 mm) and no thinner than " (mm). In joints between 1/2" and 1/4", the ratio of sealant width to depth should be approximately 2:1. Sealants depth in joints between 1/4" and 1/2" should be 1/4" deep. Joints with dynamic movement should not be designed in widths less than 1/4".

Surface preparation :

See limitations about surface preparation. Surfaces must be structurally clean, dry (no frost) and structurally sound, free of contaminants, including, but not limited to, dust, loose particles, tar, asphalt, rust, mill oil, etc. If substrate is painted or coated, scrape away all loose and weakly bonded paint or coating. Any paint or coating that cannot be removed must be tested to verify adhesion of the sealant or to determine the appropriate surface preparation if needed (see ASP section for details).

To remove laitance and any other loose material, clean concrete, stone or other masonry materials with non-alcoholic based solvent by washing, grinding, sandblasting or wire brushing as necessary. Do not use water to clean substrates. Dust must be thoroughly removed after cleaning.

Backer Rods and Bond breaker tapes :

Bond breakers including, but not limited to, closed-cell polyethylene backer rods are used to control depth of the sealing bead, provide a firm tooling surface and avoid three-sided adhesion. Where the depth of joint prevents use of backer rods, a polyethylene strip or tape must be used as a bond breaker to prevent three-sided adhesion. Do not prime or damage the surface of the bond breaker. Refer to instructions given by rod and tape manufacturers for the correct backer rod and tape size related to joint size.

Priming :

In general, application of Chem-Caulk 2020 does not require priming the substrates. However, some substrates may require a Bostik primer. It is the user's responsibility to check adhesion of the cured sealant on typical test joints at the project site before and also during application as weather conditions may affect the adhesion results (see ASP section). Refer to Bostik Primer product data sheet or call our Technical Service for proper selection and application of Bostik Primers.

Tooling :

Chem-Caulk 2020 comes ready-to-use. Cut spout or tip to desired bead size. Apply moderate pressure to break seal inside the nozzle. Apply by using a professional caulking gun such as Bostik K410042TH. Use unopened cartridges and sausages the same day they are opened. Apply positive pressure to the bottom of the joint to properly fill and seal the joint. When applying, avoid air entrapment and overlapping. Tool the sealant before the skins form with adequate pressure to spread the sealant against the backup material at the bottom and sides of the joint. A dry tool with a concave profile is recommended for that operation. Do not use water or soapy water for this operation. Avoid smearing and feathering of the sealant to allow full performance of the cured seam. Excess sealant should be dry-wiped or joints should be properly taped.

Cleaning :

After dry-wiping uncured sealant from substrates and tools, remaining uncured sealant can be removed by using Xylene, Toluene or similar aromatic solvents. Please refer to the MSDS provided for these solvents before use. Bostik Hand and Tool towels, can also remove uncured sealant. Cured sealants is usually very difficult to remove without altering or damaging the surface to which the sealant had been misapplied. Cured sealant can be removed by abrasion or other mechanical means (scrapers, putty knives).

Curing time :

Chem-Caulk 2020 is a moisture cure, Advanced Polyurethane Sealant. On wood, with ambient air at 50% relative humidity and at 73°F, polyurethane sealants will generally skin within one hour and cure 1/16 of an inch per day. Lower temperature and lower relative humidity will significantly increase the skin time and cure time of a polyurethane sealant.

Painting and Coating :

Chem-Caulk 2020 is not an RTV silicone and therefore is suitable for painting with latex-based paints. Paint chemistries and flexibility characteristics of the paint films over the sealant may affect wetting, adhesion and integrity of the paint layer, and it is therefore mandatory to pretest the paint or other coating over the Chem-Caulk 2020 to ensure the successful compatibility between the sealant and the paint/coating after a sufficient amount of time. See your paint manufacturer for specifications or limitations and call our Technical Service for more information. In general, oil-based paints are not recommended because of their poor elastic properties and because of their potential interaction with the sealant chemistry, which may create non-curing conditions for the painted sealant. Do not paint over the polyurethane sealant until it has fully cured.

Maintenance :

If the sealant becomes damaged, replace the damaged portion by removing the old sealant completely, cleaning the surfaces and reapplying a fresh and appropriate amount of new sealant in accordance with the directions and information contained in this data sheet.

MANDATORY ADHESION TO SUBSTRATES PRETEST (ASP)

A hand pull test must be run before the job starts and at regular intervals during the job. It must be run on the job site after the sealant is fully cured, usually within 7 to 21 days (adhesion may develop fully after at least 14 days).

The hand pull test procedure is as follows :

- 1- Make a knife cut horizontally from one side of the joint to the other
- 2- Make 2 vertical cuts approximately 2 inches long, at the sides of the joint, meeting the horizontal cut at the top of the 2-inch cuts
- 3- Grasp the 2-inch piece of sealant firmly between the fingers and pull down at a 90° angle or more, and try to pull the uncut sealant out of the joint
- 4- If adhesion is sufficient, the sealant should tear cohesively in itself
- 5- Sealant may be replaced by applying more sealant in the same manner as it was originally applied. Care should be taken to ensure that the new sealant is in contact with the original, and that the original sealant surfaces are clean, so that a proper bond between the new and old sealant will be obtained.

SHELF LIFE

Shelf life of Chem-Caulk 2020 must be checked prior to using the product ; do not use past its shelf life. Caulk past its shelf life may not perform or adhere as described by this data sheet. High temperature and high relative humidity may reduce significantly the shelf life of polyurethane sealants. If you are unsure of the expiration date of your Bostik product, please call our Customer Service to check if the product is still within its shelf life.

PACKAGING

Code	Packaging	Quantity	Bar Code
A70210	300 ml White - Cartridge		
A71810	300 ml Stone - Cartridge		
A71710	300 ml Bronze - Cartridge		
A71910	300 ml Tan - Cartridge		

SAFETY

For more details, consult the safety data sheet on www.quick-fds.com, or ask us a copy by fax.

Recommendations for implementation are defined through commonly used standards which should imperatively be respected (or followed). However, in case of first use or special characteristics related to the material support, the site or the environment, prior tests are advised (or are not exempted).

It is recommended to follow our precautionary measures listed in the specification sheets.



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