



AU-1 COMMERCIAL CONSTRUCTION SEALANT

Installation Guide

7 07 92 00
Joint Sealants

DESCRIPTION

AU-1 is a one-part, low odor, gun-grade, elastomeric construction sealant. AU-1 is an ASTM C-920, Type S, Grade NS, Class 25 sealant. It is an aqueous-based urethane acrylic polymer and one of the first high performance sealants of its kind for the commercial building industry. The active ingredient in AU-1 is an Aqueous Polyurethane Dispersion. As an internally plasticized resin it requires no mixing or priming to bond molecularly to most construction materials. AU-1 is paintable with no shine through or plasticizer bleed, and is VOC compliant nationwide including all CARB and SCAQMD requirements and requires no additional job-site solvents for prep or cleanup. AU-1 is extremely UV resistant and maintains high elasticity in all climates.

APPLICATIONS

Interior and exterior	Curtain wall joints
Vertical and horizontal joints	Above grade
Expansion and control joints	Stucco
Concrete panel joints	Fascia
Tilt-wall joints	Parapets
Exterior Insulation and Finish Systems (EIFS)	Flashing
Siding— aluminum, wood and vinyl	Precast units
Window frames—aluminum, wood and vinyl	

SUBSTRATES

- Concrete
- Masonry
- Aluminum
- Wood
- Cement Board
- Clay & concrete roof tiles
- Natural stone
- Stucco
- Ceramic/Porcelain
- Galvanized
- Vinyl Siding
- Glass

Reference TCBSAT-30* for expanded detailed list of applicable AU-1 substrates

TESTING

Prior to any project, TOWER Sealants recommends testing or project mockup to be performed at the job-site, under the same conditions as the planned project. TOWER will provide compatibility and adhesion testing upon request, as well as field testing assistance and guidelines. Please contact TOWER for guidance on peel adhesion testing protocol for waterproofing projects.

STANDARDS

ASTM C-920, Type S, Grade NS, Class 25, Use NT, M, G, A & O

Exceeds TCBSAT-30*

PACKAGING

- 299ml (10.1 oz) cartridge, 12 cartridges per carton
- 600ml (20 oz) sausage packs, 12 per carton
- 2 gallon pails
- 5 gallon pails

COLORS

White, Almond, Off White, Stone, Limestone, Tan, Aluminum Gray, Redwood, Redwood Tan, Woodtone, Clay, Black and Bronze

Custom colors available

SHELF LIFE & STORAGE

24 months when properly stored in original, unopened containers away from heat and direct sunlight

VOC CONTENT

CARB Non-Chemically Curing Sealant

VOC (less exempt solvents): < 1.5%

SCAQMD VOC (less water and exempt compounds): <50 g/L

SURFACE PREPARATION

Surfaces to be sealed must be dry and free of all dirt, dust, oil, mildew, loose paint, old caulk, or other contaminants. Only apply AU-1 when sealant, surface, and air temperatures are above 40° F and rising. Do not apply on surfaces exceeding 140° F. Do not apply AU-1 to frozen substrates, prior to extreme weather, or before heavy rain. AU-1 is not for use in below-grade applications, or in areas where frequent water ponding may occur. For new construction, if the roof has not yet been installed, joints should be capped or protected at the top. The preferred method would include a water drainage system at the bottom of the joint. When applying on horizontal joints, areas receiving foot traffic should be avoided as AU-1 remains too flexible for heeled footwear.

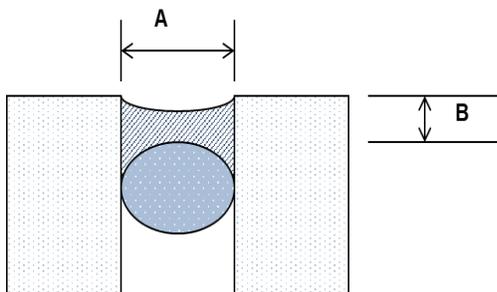
AU-1 does not require priming for most applications, including concrete, metals, and other porous and non-porous substrates. For substrates that are generally difficult to bond to, please contact TOWER for primer recommendations.

To retain substrate integrity, crumbling/powdering, friable or porous substrates should be primed with a penetrating primer prior to sealant application.

AU-1 does not require taping of the areas surrounding the joints, as uncured sealant may be removed with soap & water.

JOINT DESIGN

TOWER Sealants recommends designing joints in compliance with ASTM C1193 Standard Guide for use of Joint Sealants.

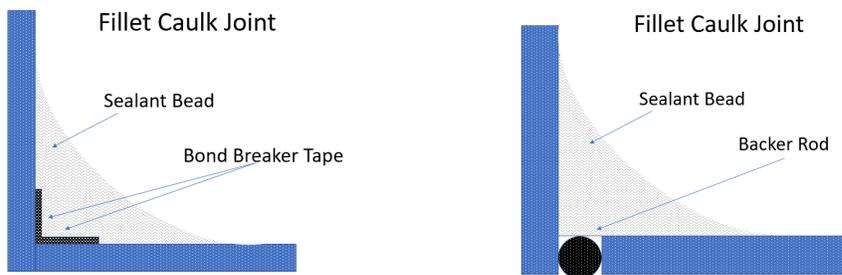


Proper Joint Design

- Properly designed joint not to exceed 2" in width (A)
- Ratio of A to B should be 2:1
- Backer rod must be used when joint depth is greater than 1/2" (B)
- Bond breaker tape is recommended to prevent 3 point adhesion (in joints not deep enough for backer rod installation)

Joint Width (A)	Sealant Depth (B)
1/4 to 1/2	1/4
1/2 to 3/4	1/4 to 3/8
3/4 to 1	3/8 to 1/2
1 to 1-1/2	1/2 to 3/4
2	1

90° Fillet joints for window openings should have a minimum bead size of 3/8" after tooling.



APPLICATION

Once the surface is confirmed as clean, dry and free of any loose material, a backing material should be installed to prevent 3-point adhesion in the joint. TOWER recommends an open or closed-cell, circular backer rod that fits the joint walls or when necessary, a bond breaker tape when joint depth is not great enough to allow for installation of a backer rod. If backer rod is painted preceding sealant application, rotating backer rod will reduce potential of 3-point adhesion.

After backing material is installed, AU-1 Construction Sealant can be applied to the joint. Complete all preparatory work before opening sausages, cartridges, or pail. AU-1 requires no mixing before use, the product is ready to be applied after the pails, sausage, or cartridge is opened. While dispensing the sealant through a cartridge or bulk applicator gun, it is important to ensure that the entire joint is being filled with the sealant, leaving no air in the joint, and that the sealant is in contact with both substrates through the entirety of the joint, ensuring a waterproof seal.

Once AU-1 Sealant is applied, tooling is recommended with a flat tool. AU-1 must be tooled within 15 minutes of application for best results. TOWER requires that the joint is tooled flat, or flush with the substrate. The flat tooling, along with AU-1's evaporative cure, will allow for an ideal hourglass-shaped joint.

After tooling, and prior to sealant curing, excess sealant on the substrates can be wiped clean with a cloth and water. AU-1 cannot be sanded. Tools can be cleaned with water, and soap if necessary.

CURING

The cure time of AU-1 varies with temperature and humidity. At 50% relative humidity, at 75° F, tack free time is 30 minutes. Most paints can be applied after 6-8 hours. In the case of lower temperatures and/or higher humidity, painting should be delayed until the sealant has time to skin. Do not apply AU-1 before heavy rain, as this can delay cure, wash sealant out if a skin has not formed, and further affect performance. For larger joints, AU-1 has a typical cure time of 21 days, and peel adhesion testing should not be performed until a full cure is reached. Please contact TOWER technical support for additional information on recommended cure time. After full cure, AU-1 has a service temperature range of -40°F - 180°F.

STORAGE

AU-1 should be stored in original, unopened containers, away from heat and direct sunlight. Product should be kept from freezing. When stored correctly, product will have a shelf life of 24 months.

***TCBSAT-30 or Tower Common Building Substrate Adhesion Test**

Sealant is applied to 30 common building substrates and tested in accordance with a modified version of ASTM C-719. The minimum adhesion values used in TCBSAT-30 are significantly higher than those required by ASTM C-920.

For more information on TCBSAT-30 contact Tower Sealants at tech@towersealants.com

SAFETY

See Material Safety Data Sheet for safety information or product label.

To request a Material Safety Data Sheet, visit our web site at www.towersealants.com or contact Tower Sealants at 866-897-7568.

For medical emergencies only, call ChemTrec 1-800-424-9300.

Make certain the most current versions of Technical Product Data Sheet and SDS are being used.

Call Customer Service (1-866-897-7568) to verify the most current versions.

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: **LIMITED WARRANTY:** Tower Sealants warrants that this product, provided it is properly :
: stored and applied, will never crack, peel, or separate. If a failure occurs, return proof of :
: purchase for replacement. Manufacturer shall not be held liable for damages in excess of the :
: purchase price. This is the sole and exclusive remedy and liability for defects or failure of this :
: product. THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, WRITTEN OR ORAL, :
: STATUTORY, EXPRESSED OR IMPLIED; INCLUDING WITHOUT LIMITATION ANY :
: IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS. :
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