

Sonneborn®**Sealant
Systems****SONOLASTIC®****ULTRA**

One-component aliphatic elastomeric polyurethane sealant with superior color integrity

**Where to Use Ultra**

- Concrete, masonry
- Granite, marble
- Brick
- Expansion wall joints
- Panel walls
- Precast units
- Aluminum and wood window frames
- Store fronts
- Curtain walls
- Plazas
- Prisons
- Schools
- Parking decks
- Stadiums
- Interior and exterior

Features

- Aliphatic polyurethane technology...
- High UV resistance...
- No surface tackiness...
- Medium modulus...
- Superior gunability and workability...
- Pick resistant...
- Movement capability \pm 25%...

Benefits

- Nonstaining, no yellowing, no chalking
- No UV discoloration
- No dirt pick up, self-cleaning surface
- Excellent puncture resistance
- Superior abrasion resistance
- Easy tooling
- Security applications
- Expands and contracts with joint movement

How to Apply Ultra

Joint Preparation

- 1 The number of joints and the joint width should be designed for a maximum of $\pm 25\%$ movement.
- 2 The depth of the sealant should be $1/2$ the width of the joint. The maximum depth is $1/2$ " (13 mm) and the minimum is $1/4$ " (6 mm).
- 3 In deep joints, the sealant depth must be controlled by Closed Cell Backer-Rod or Soft Backer-Rod. (Refer to Form Nos. SJ-403 and SJ-405.) Where the joint depth does not permit the use of backer-rod, a bond-breaker (polyethylene strip) must be used to prevent three-point bonding.
- 4 To maintain the recommended sealant depth, install backer-rod by compressing and rolling it into the joint channel without stretching it lengthwise. Closed Cell Backer-Rod should be about $1/8$ " (3 mm) larger in diameter than the width of the joint to allow for compression. Soft Backer-Rod should be approximately 25% larger in diameter than the joint width. Backer-Rod becomes an integral part of the joint. The sealant does not adhere to it, and no separate bond-breaker is required. Do not prime or puncture the backer-rod.

Surface Preparation

Surfaces must be structurally sound, fully cured, dry, clean, free of dirt, moisture, loose particles, oil, grease, asphalt, tar, paint, wax, rust, waterproofings, curing and parting compounds, and membrane materials.

Concrete, stone, and other masonry

Clean by grinding, sand-blasting, or wire brushing to expose a sound surface free of contamination and laitance.

Wood

New and weathered wood must be clean and sound. Scrape away paint to bare wood. Any coating that cannot be removed must be tested to verify adhesion of sealant or determine an appropriate primer.

Metal

Remove scale, rust, and coatings from metal to expose a bright white surface. Remove protective coatings as well as any chemical residue or film. Aluminum window frames are frequently coated with a clear lacquer that must be removed before the application of Ultra. Any coating that cannot be removed must be tested to verify adhesion of sealant or determine an appropriate primer. Remove any other protective coatings or fin-

ishes that could interfere with adhesion.

Priming

- 1 Ultra is generally considered a non-priming sealant, but special circumstances or substrates (e.g., certain protective coatings on aluminum) may require a primer. It is the user's responsibility to check the adhesion of the cured sealant on typical test joints at the project site before and during application. Refer to Technical Data Guide on Primer 733 or 766 (Form No. SW-431), and consult Sonneborn Technical Services for additional information.
- 2 Apply primer full strength with a brush or clean cloth. A light, uniform coating is sufficient for most surfaces. Porous surfaces require more primer; however, do not overapply.
- 3 Allow primer to dry before applying Ultra. Depending on temperature and humidity, primer will be tack free in 15 to 120 minutes. Priming and sealing must be done on the same work day.

Application

- 1 Ultra comes ready to use. Apply by professional caulking gun. Do not open cartridges, sausages, or pails

until preparatory work has been completed.

- 2 Fill joints from the deepest point to the surface by holding a properly sized nozzle against the back of the joint.
- 3 Dry tooling is recommended. DO NOT use soapy water or solvents when tooling. Tooling results in the correct bead shape, a neat joint, and maximum adhesion.

Clean Up

- 1 Immediately after use, clean equipment with Reducer 990 or xylene. Use proper precautions when handling solvents.
- 2 Remove cured sealant by cutting with a sharp-edged tool.
- 3 Remove thin films by abrading.

Curing Time

- The cure of Ultra varies with temperature and humidity. The following times assume 75°F (24°C), 50% relative humidity, and a joint $1/2$ " width by $1/4$ " depth (13 mm by 6 mm).
- Skins overnight or within 24 hours
 - Functional within 3 days
 - Full cure in approximately 1 week

For Best Performance

- All horizontal applications require the use of a primer.
- Protect unopened containers from heat and direct sunshine.
- In cool or cold weather, store container at room temperature for at least 24 hours before using.
- Ultra should not be used for continuous immersion in water. Call Sonneborn Technical Services for recommendations.
- Lower temperatures will extend curing times.
- Do not apply over freshly treated wood; treated wood must have weathered for at least 6 months.
- Substrates such as copper, stainless, and galvanized typically require the use of a primer; Primers 733 or 766 primers are acceptable. For Kynar coating use Primer 733 only. An adhesion test is recommended for any other questionable substrate.
- Ultra can be applied below freezing temperatures only if substrates are completely dry, free of moisture, and clean.
- Ultra should not come in contact with oil-base caulking, silicone sealants, polysulfides, or fillers impregnated with oil, asphalt, or tar.
- Do not apply polyurethane sealants in the vicinity of uncured silicone sealants.
- Do not allow uncured sealants to come into contact with alcohol-based materials or solvents.
- Make certain the most current version of this data guide is being used; call Customer Service (1-800-433-9517) to verify the most current version.
- Proper application is the responsibility of the user. Field visits by Sonneborn personnel are for the purpose of making technical recommendations only, and are not to supervise or provide quality control on the job site.

Technical Data

Compliances

- Federal Specification TT-S-00230C, Type II, Class A, when primed
- ASTM C 920, Type S, Grade NS, Class 25, Use NT, M, A, G, O, and T, when primed
- Corps of Engineers CRD-C-541, Type II, Class A
- USDA approved for use in meat and poultry areas
- Canadian approval for use in areas that handle food

Typical Properties

Properties

Service temperature range, °F (°C)	-40 (-40) to 180 (82)
Expected life	Up to 20 years
Shrinkage	None

Test Data

Property	Value (Average)	Test Method
100 % modulus, psi	160	ASTM D 412
Tensile strength, psi	600	ASTM D 412
Elongation at break, %	600	ASTM D 412
Tear strength, pit	100	ASTM D 1004
Shore A hardness	50 ± 5	ASTM C 661
Adhesion and peel, pli*		ASTM C 794
Primed dry		
Glass		37 CF**
Aluminum		34 CF**
Concrete		43 CF**
Primed wet		
Glass		32 CF**
Aluminum		31 CF**
Concrete		34 CF**
Bond durability (RT cycle ± 25%) primed	Passes	ASTM C 719
Stain and color	Passes	ASTM C 510
Extrusion, 3 seconds	Passes	ASTM C 603
Vertical/horizontal slump	0/0	ASTM C 639
Tack-free time	Less than 72 hours	ASTM C 679
Weight loss, after heat aging, %	9.2	ASTM C 792
Cracking and chalking after heat aging	None	ASTM C 792

* Primed for water immersion as indicated in ASTM C 920. Concrete and aluminum primed with 733; glass primed with 766.

** Cohesive failure

Test results are averages obtained under laboratory conditions. Reasonable variations can be expected.

Order Information

Packaging

Ultra

- 300 mL cartridges, 30 cartridges to a carton
- 20 U.S. fl. oz. (590 mL) ProPak sausage cartridges, 20 ProPaks to a carton

Shelf life is 1 year for cartridges and ProPaks and 4 months for pails when stored in unopened containers under normal conditions. Storing at elevated temperatures will reduce shelf life.

Colors

A complete line of standard colors is available, including white, limestone, stone, tan, aluminum gray, medium bronze, and black. Refer to colorcard Form No. SJ-419.

Coverage

Joint Depth (inches)	Linear Feet per Gallon*					
	1/4	3/8	1/2	5/8	3/4	7/8
1/4	308	205	154	122		
3/8			102	82	68	58
1/2					51	44
						38

*One gallon equals approximately 12 cartridges or 6 ProPaks.

Joint Depth (mm)	Linear Meters per Liter						
	6	10	13	16	19	22	25
6	24.8	16.5	12.4	9.8			
10			8.2	6.6	5.5	4.7	4.1
13					4.1	3.5	3.0

Warning

Ultra contains mineral spir- its, calcium oxide, talc, calcium carbonate, silicon dioxide, titanium dioxide, methylene bisdiisocyanate

Risks

May cause skin, eye and res- piratory irritation. May cause dermatitis and allergic responses. Potential skin and/or respiratory sensitizer. Ingestion may cause irrita- tion. Reports associate repeated or prolonged occu- pational overexposure to solvents with permanent brain, nervous system, liver and kidney damage. INTEN- TIONAL MISUSE BY DELIBER- ATELY INHALING THE CONTENTS MAY BE HARMFUL OR FATAL.

Precautions

KEEP OUT OF THE REACH OF CHILDREN. Use only with adequate ventilation. Keep container closed. Prevent contact with skin, eyes and clothing. Wash thoroughly after handling. Use impervi- ous gloves, eye protection and if the TLV is exceeded or used in a poorly ventilated area, use NIOSH/MSHA approved respiratory protec- tion in accordance with applicable federal, state and local regulations. All warn- ings must be observed until container is commercially cleaned or reconditioned.

First Aid

In case of eye contact, flush thoroughly with water for at least 15 minutes. SEEK IMMEDIATE MEDICAL ATTEN- TION. In case of skin contact, wash affected areas with soap and water. If irritation persists, SEEK MEDICAL ATTENTION. Remove and wash contaminated cloth- ing. If inhalation causes physical discomfort, remove to fresh air. If discomfort persists or any breathing difficulty occurs, or if swal- lowed, SEEK IMMEDIATE MEDICAL ATTENTION.

Refer to Material Safety Data Sheet (MSDS) for further information.

Proposition 65

This product contains materials which are listed by the state of California as known to cause cancer, birth defects or other reproductive harm.

This material has been determined to be a non- combustible solid by ASTM test methods.

VOC Content

Ranges from 112 g/L or 0.94 lbs. per gallon to 118 g/L or 0.99 lbs. per gallon, less water and exempt solvents.

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

Customer Service: 1/800/433-9517

Technical Services: 1/800/ChemRex (1/800/243-6739)

Web Site: www.chemrex.com

Limited Warranty Notice

Every reasonable effort is made to apply ChemRex Inc. exacting standards both in the manufacture of our products and in the information which we issue concerning these products and their use. We warrant our products to be of good quality and will replace or, at our election, refund the purchase price of any products proved defective. Satisfactory results depend not only upon quality products, but also upon many factors beyond our control. Therefore, except for such replacement or refund, CHEMREX INC. MAKES NO WARRANTY OR GUARANTEE, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF FITNESS FOR A PARTICULAR PURPOSE OR MERCHANTABILITY, RESPECTING ITS PRODUCTS, and CHEMREX INC. shall have no other liability with respect thereto. Any claim regarding product defect must be received in writing within one (1) year from the date of shipment. No claim will be considered without such written notice or after the specified time interval. User shall determine the suitability of the products for the intended use and assume all risks and liability in connection therewith. Any authorized change in the printed recommendations concerning the use of our products must bear the signature of the ChemRex Inc. Technical Manager.



Sonneborn[®]

ChemRex Inc.

889 Valley Park Drive; Shakopee, MN 55379

Manufacturing Plants: Minneapolis, MN; Fort Wayne, IN; Mattawan, MI; Brighton, CO.

Regional Warehouses: DeKalb, IL; Atlanta, GA; Hayward, CA; Fairfield, NJ; Dallas, TX; Ontario, CA; Brighton, CO; Brampton, ONT (Canada).