

PRODUCT DATA

7 07 92 00 **Joint Sealants**

SONOLASTIC® ULTRA

One-component, aliphatic, nonsag, elastomeric, polyurethane security sealant

Description

Ultra is a one-component, moisture-curing, aliphatic, nonsag, polyurethane sealant for security and institutional uses requiring elasticity and superior color integrity. Ultra is capable of withstanding $\pm 25\%$ movement in joints, yet has a high Shore A for security applications.

Yield

See page 3 for charts.

Packaging

300 ml (10.1 fl oz) cartridges, 30 per carton

20 U.S. fl oz (590 ml) ProPaks, 20 per carton

Color

White, limestone, and aluminum gray. Refer to the Sonneborn® Color Portfolio.

Shelf Life

Cartridges and ProPaks: 1 year when properly stored.

Storage

Store in original, unopened containers away from heat and direct sunshine. Storing at elevated temperatures will reduce shelf life.

Features

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

Benefits

- Nonstaining, no yellowing, no chalking
- Excellent for security applications, schools, and other public buildings
- Experiences no discoloration from sunlight
- No dirt pick up, self-cleaning surface
- Provides superior puncture and abrasion
- Tools easily
- Expands and contracts with joint movement
- Documented performance in wet areas

Where to Use

APPLICATION

- Expansion joints
- Curtain walls
- Panel walls
- Precast units
- Aluminum, vinyl, and wood window frames
- Prisons
- Schools
- Stadiums
- Parking decks
- Plazas
- Store fronts
- Wastewater treatment plants
- Dams
- Spillways and storm drains
- Wetwells and manholes

LOCATION

- Horizontal and vertical
- Interior and exterior
- Immersed in water

SUBSTRATE

- Concrete, masonry
- Granite, marble
- Brick

How to Apply

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). Maximum recommended joint width is 1-1/2" (38mm). Refer to Table 1.

TABLE 1

Joint Width and Sealant Depth

JOINT WIDTH, IN (MM)	SEALANT DEPTH AT MIDPOINT, IN (MM)
1/4 – 1/2 (6 – 13)	1/4 (6)
1/2 – 3/4 (13 – 19)	1/4 – 3/8 (6 – 10)
3/4 – 1 (19 – 25)	3/8 – 1/2 (10 – 13)
1 – 1-1/2 (25 – 38)	1/2 (13)

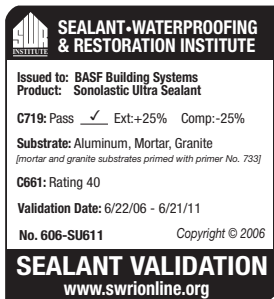
Technical Data

Composition

Sonolastic® Ultra is a one-component, moisture-curing aliphatic polyurethane.

Compliances

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



Typical Properties

PROPERTY	VALUE
Service temperature range, ° F (° C)	-40 to 180 (-40 to 82)
Shrinkage	None

Test Data

PROPERTY	RESULTS	TEST METHODS
Movement capability, %	±25	ASTM C 719
100 % modulus, psi (MPa)	160 (1.1)	ASTM D 412
Tensile strength, psi (MPa)	600 (4.1)	ASTM D 412
Rheological, (sag in vertical displacement), at 120° F (49° C)	No sag	ASTM C 639
Ultimate elongation at break, %	600	ASTM D 412
Tear strength, pit	100	ASTM D 1004
Extrudability, 3 seconds	Passes	ASTM C 603
Hardness, Shore A, at standard conditions	50 ±5	ASTM C 661
Weight loss, after heat aging, %	9.2	ASTM C 792
Cracking and chalking, after heat aging	None	ASTM C 792
Tack-free time, hrs	< 72	ASTM C 679
Stain and color change	Passes	ASTM C 510
Bond durability, on glass, aluminum, and concrete, ±25% movement	Passes	ASTM C 719
Adhesion in peel*, pli		ASTM C 794
Primed dry		
Glass	37 CF**	
Aluminum	34 CF**	
Concrete	43 CF**	
Water immersion, 122° F (50° C)	Passes 10 weeks with cycling	ASTM C 1247

* Primed for water immersion dictated by 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.

3. In deep joints, the sealant depth must be controlled by Closed-Cell Backer-Rod or Soft Backer-Rod. Where the joint depth does not permit the use of backer-rod, a bondbreaker (polyethylene strip) must be used to prevent three-sided adhesion.

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. The sealant does not adhere to it, and no separate bondbreaker 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, waterproofing or curing and parting compounds, and membrane materials.

CONCRETE, STONE, AND OTHER MASONRY

Clean by grinding, sandblasting, 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 loose paint to bare wood. Any coating that cannot be removed must be tested to verify adhesion of sealant or to 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 to determine an appropriate primer. Remove any other protective coatings or finishes that could interfere with adhesion.

Yield

LINEAR FEET PER GALLON*

JOINT DEPTH (INCHES)	JOINT WIDTH (INCHES)			JOINT WIDTH (INCHES)			
	1/4	3/8	1/2	5/8	3/4	7/8	1
1/4	308	205	154	122	–	–	–
3/8	–	–	–	82	68	58	51
1/2	–	–	–	–	51	44	38

*One gallon equals approximately 12 cartridges or 6 ProPaks

METERS PER LITER

JOINT DEPTH (MM)	JOINT WIDTH (MM)			JOINT WIDTH (MM)			
	6	10	13	16	19	22	25
6	24.8	16.5	12.4	9.8	–	–	–
10	–	–	–	6.6	5.5	4.7	4.1
13	–	–	–	–	4.1	3.5	3.0

Priming

1. Special circumstances or substrates 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 product data sheet on Primer 733 or 766 (Form No. 1017962) and consult Technical Service for additional information.
2. For immersion applications, Primer 733 must be used.
3. 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.
4. Allow primer to dry before applying Ultra. Depending on temperature and humidity, primer will be tack free in 15 – 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 or sausages until preparatory work has been completed. In cool or cold weather, store at room temperature for at least 24 hours before using.
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 by 6 mm).

Skins: overnight or within 24 hours

Functional: within 3 days

Full cure: approximately 1 week

Immersion service: 21 days

For Best Performance

- Do not allow uncured Ultra to come into contact with alcohol-based materials or solvents.
- Do not apply polyurethane sealants in the vicinity of uncured silicone sealants or uncured Sonolastic® 150 or 150 Tint Base.
- Ultra should not come in contact with oil-based caulking, silicone sealants, polysulfides, or fillers impregnated with oil, asphalt, or tar.
- All horizontal applications require the use of Primer 733.
- 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.
- When Ultra is to be used in areas subject to water immersion, cure for 21 days at 70° F (25° C) and 50% relative humidity. Allow longer cure time at lower temperatures and humidity.
- Do not use in swimming pools or other submerged conditions where the sealant will be exposed to strong oxidizers. Avoid submerged conditions where water temperatures will exceed 120° F (50° C).
- Lower temperatures will extend curing times.
- Do not apply over freshly treated wood; treated wood must have weathered for at least 6 months.

- Pursuant to accepted industry standards and practices, using rigid paints and/or coatings over flexible sealants can result in a loss of adhesion of the applied paint and/or coating, due to the potential movement of the sealant. However, should painting and/or coating be desired it is required that the applicator of the paint and/or coating conduct on-site testing to determine compatibility and adhesion.
- Substrates such as copper, stainless, and galvanized typically require the use of a primer; Primer 733 or 766 is 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. Contact Technical Service for more information.
- Do not use as a cap, heel, or toe bead for exterior glazing. Refer to the Sonolastic® 150 product data sheet (Form No. 1026309).
- 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 BASF personnel are for the purpose of making technical recommendations only and not for supervising or providing quality control on the jobsite.

Health and Safety

ULTRA

Warning

Ultra contains Stoddard solvent, methylene bis (4-cyclohexylisocyanate) and crystalline quartz silica.

Risks

May cause skin, eye and respiratory irritation. May cause dermatitis and allergic responses. Potential skin and/or respiratory sensitizer. Ingestion may cause irritation. Reports associate repeated or prolonged occupational overexposure to solvents with permanent brain, nervous system, liver and kidney damage. INTENTIONAL MISUSE BY DELIBERATELY 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 impervious gloves, eye protection and if the TLV is exceeded or used in a poorly ventilated area, use NIOSH/MSHA approved respiratory protection in accordance with applicable federal, state and local regulations. All warnings 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 ATTENTION. In case of skin contact, wash affected areas with soap and water. If irritation persists, SEEK MEDICAL ATTENTION. Remove and wash contaminated clothing. If inhalation causes physical discomfort, remove to fresh air. If discomfort persists or any breathing difficulty occurs, or if swallowed, 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.

VOC Content

118 g/L or 099 lbs/gal, less water and exempt solvents.

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

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