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SONOLASTIC® 150 VLM technology

Very low-modulus, nonsag, elastomeric, silyl-terminated polyether (hybrid) sealant

Description

Sonolastic® 150 with VLM Technology is a premium, very low-modulus, high movement, nonsag, fast-curing, ready to-use, silyl-terminated polyether sealant. It combines the best qualities of organic and silicone sealants to keep moving joints weather tight.

Yield

See page 3 for charts.

Where to use

Application

- For sealing a variety of building joints, particularly in EIFS, against water and air intrusion
- Joints with extreme movement
- In place of silicone sealants
- Curtain wall construction
- Expansion joints
- Panel walls
- Precast units
- Aluminium, vinyl, and wood window frames
- Fascia
- Parapets
- Sanitary applications

Location

- Vertical or horizontal
- Exterior or interior
- Above grade

Substrate

- EIFS
- Stucco
- Aluminium
- Concrete
- Masonry
- Wood
- Stone
- Vinyl
- Fiber cement siding

Packaging

300 ml cartridges, 30 cartridges per carton
590 ml ProPaks, 20 per carton
7.6 litres pails (special order)

Colours

White, off-white, salt box, limestone, tan, stone, aluminum gray, redwood tan, medium bronze, special bronze, marshfield wand black.

Shelf life

15 months when properly stored.

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Features	Benefits
• Superior Adhesion	Long term Bond – reduced call backs
• Very low modulus	Accommodates extreme joint movement (100% extension in EIFS joints with little stress on bond line)
• Compatible with non-rigid coatings	May be painted soon after installation
• Easy to gun and tool	Speeds application; makes neater joints
• Ready-to-use 1 component	Reduces labor; speeds application
• Wide temperature application range	Use in all climates
• Weather resistant	Provides long-lasting weather tight seals
• Fast curing	Speeds jobsite production
• Non staining	Use safely on stone and other sensitive substrates
• Mildew resistant	Does not support mildew growth; offers low-odor alternative for sanitary areas
• Available in ProPaks	Reduces jobsite waste; lowers disposal costs
• Very low VOC's (2 g/L)	Meets all State and Federal regulations

Test Data

Property	Results
Movement capability ASTM C719	+/- 50
Extension ASTM C 1382	100%
100% modulus, ASTM D 412	0.24 Mpa
Tensile strength, ASTM D 412	1.5Mpa
Tear strength, ASTM D 1004	7.1kg/cm
Ultimate elongation at break, % ASTM D 412	1,200
Rheological, (sag in vertical ASTM C 639 displacement), at 49° C	No sag
Extrudability, sec ASTM C 603	2 – 3
Hardness, Shore A, at standard conditions ASTM C 661	17
Weight loss, after heat aging, % ASTM C 792	< 10
Tack-free time, min ASTM C 679 (maximum 72 hours)	90
Stain and color change ASTM C 510	Passes (no visible stain)
Bond durability,* pli ASTM C 719 on glass, aluminum, and concrete, +/- 50% movement	Passes
Adhesion* in peel, ASTM C 794 (minimum [0.89 kg/cm])	
Aluminum	6.2kg/cm
Glass	5.8kg/cm
Concrete	6.4kg/cm
Adhesion in peel, ASTM C 794 after UV radiation through glass, (minimum [0.89 kg/cm])	5.8kg/cm
Artificial weathering, ASTM G 26 Xenon arc, 2, 000 hrs	No Cracking

*Concrete primed with Primer 2000 for water immersion as indicated in ASTM C 920.

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

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How to Apply

Joint Preparation

1. Design the number of joints and the joint width for a maximum of ±50% movement.
2. The depth of the sealant should be 1/2 the width of the joint. The maximum depth is 13mm and the minimum is 6mm. Refer to Table 1.
3. In deep joints, control the sealant depth by installing Closed-Cell Backer-Rod or Soft Backer-Rod (see Form No. 1026342).Where the joint depth does not permit the use of backer-rod, use a bondbreaker (polyethylene strip) 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 3mm 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. Because the sealant does not adhere to the backer-rod, no separate bondbreaker is required. Do not prime or puncture the backer-rod.

Table 1

Joint width and sealant depth

Joint width (mm)	Sealant depth at midpoint (mm)
6-13	6
13-19	6-10
19-25	10-13
25-38	13

Technical Data

Composition

Sonolastic® 150 is a solvent-free formulation based on silyl-terminated polyether polymer (STPe).

Compliances

- ASTM C 920, Type S, Grade NS, Class 50, Use NT, M, A, and O**
  - capable of +100/-50% movement under typical field conditions.
- ASTM C 1382 for use with EIFS wall systems at 100% Extension
- Federal Specification TT-S-001543A, Type II, Class A, Type Nonsag
- Federal Specification TT-S-00230C, Type II, Class A
- Corps of Engineers CRD-C-541, Type II, Class A
- USDA compliant for use in areas that handle meat and poultry

** Refer to substrates in **Where to Use.**

*Typical properties

Property	Value
Service temperature range	-40 to 104°C
Shrinkage	None

Surface Preparation

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

EIFS

1. Sonolastic® 150 should be applied to the system base coat for best adhesion and to

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avoid delamination of EIFS finish applied in the joint.
2. Base coat must be sound, well bonded, properly cured and of sufficient depth to comply with manufacturer's specifications.

Yield

Meter per litre

	Joint Depth (mm)						
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

* One liter equals approximately 3.33 cartridges or 1.7 ProPaks.

Concrete, Stone, and other Masonry

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

Wood

1. New and weathered wood must be clean and sound.
2. Scrape away loose paint to bare wood.
3. Test any coating that cannot be removed to verify adhesion of sealant or to determine an appropriate primer

Metal

1. Remove scale, rust, and coatings from metal to expose a bright white surface.
2. 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 Sonolastic® 150. Remove any other protective coatings or finishes that could interfere with adhesion.
3. Test any coating that cannot be removed to verify adhesion of sealant or to determine an appropriate primer.

Priming

1. Sonolastic® 150 is generally a non-priming sealant, but special circumstances or substrates may require a primer.
   - Porous materials subject to intermittent water immersion require priming. Use Primer 2000.
   - Certain architectural metal finishes may require priming with Primer 733.
   - 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 the technical data guides for Primer 2000 (Form No. 1017963) and Primer 733 (Form No. 1017962).
2. Apply primer full strength with a brush or clean cloth. A light, uniform coating is sufficient for most surfaces. Very porous surfaces may require a second coat of Primer 2000; however, do not over apply.
3. Allow primer to dry before applying Sonolastic® 150. Depending on temperature and humidity, primer will be tack free in 15 – 30 minutes. Priming and sealing must be done on the same work day.

Application

1. Sonolastic® 150 comes ready to use. Apply by professional caulking gun. Do not open cartridges, sausages, or pails until preparatory work has been completed.
   NOTE: Sonolastic® 150 is not a structural sealant.

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2. Fill joints from the deepest point to the surface by holding a properly sized nozzle against the back of the joint.
3. Proper tooling ensures the correct bead configuration and a neat joint. Equally important, it ensures maximum adhesion to the sides of the joint. For best results, dry tool. DO NOT use water or soapy water to tool. Avoid overtooling of sealant.
4. Best practices dictate that all caulking and sealing be done when temperatures are above 4°C to avoid application to moisture-laden surfaces. Moisture on substrates will adversely affect adhesion. Application may proceed as low as -6°C if there is certainty that substrates are completely dry, free of frost, and clean as described under Surface Preparation.

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 Sonolastic® 150 varies with temperature and humidity. The following times assume 24°C, 50% relative humidity, and a joint 13mm in width by 6mm in depth.

Skins: within 1 hour Functional: within 1–3 days
Full cure: approximately 1 week
Full adhesion development: 10–14 days per ASTM C 1521

For best performance

- In cool or cold weather, store container at room temperature for at least 24 hours before using.
- Do not use Sonolastic® 150 as a structural sealant.
- For proper sealing of joint edges, all window covers must be removed prior to application of sealant.
- Do not allow uncured Sonolastic® 150 to come into contact with alcohol-based materials or solvents.
- Sonolastic® 150 should not be applied adjacent to other uncured sealants and certain petroleum based products.
- Sonolastic® 150 can adhere to other residual sealants in restoration applications. For best results, always clean the joint as advised in the Surface Preparation section of this data guide. A product field adhesion test for Sonolastic® 150 within the specific application is always recommended to confirm adhesion and suitability of the application.
- Sonolastic® 150 should not be used for continuous immersion in water. Contact Technical Services for recommendations.
- When using Sonolastic® 150 in a traffic-bearing horizontal joint, use a firmer joint backing, such as neoprene rod or polyethylene foam block, and recess the surface of sealant 3–6 mm.
- Do not apply over freshly treated wood; treated wood must have weathered for at least 6 months.

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- Porous substrates may require the use of Primer 2000. An adhesion test is recommended for any questionable substrate. Allow sealant to cure 10 – 14 days prior to testing, depending on humidity.
- Do not use Primer 2000 on nonporous surfaces such as aluminum, steel, vinyl, or Kynar 500 based paints. Use Primer 733 on coated metals when testing dictates.
- Lower temperatures and humidity will extend curing times.
- Sonolastic® 150 can be painted over after a thin film or skin forms on the surface.
- 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.
- Make certain the most current versions of product data sheet and MSDS are being used; call Customer Service (+971-4-8090800) to verify the most current versions.
- 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
SONOLASTIC® 150 w/ VLM Technology

Caution
Sonolastic® 150 w/ VLM Technology contains silica and crystalline quartz.

Risks
May cause skin, eye and respiratory irritation. Ingestion may cause irritation.

Precautions
KEEP OUT OF THE REACH OF CHILDREN. Avoid contact with skin, eyes and clothing. Keep container closed when not in use. Use only with adequate ventilation. Wash thoroughly after handling. Avoid breathing vapors. DO NOT take internally. Use impervious gloves, eye protection and if the TLV is exceeded or product is used in a poorly ventilated area, use NIOSH/MSHA approved respiratory protection in accordance with applicable federal, state and local regulations.

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.

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Proposition 65

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

VOC Content

0.02 lbs/gal or 2. g/L, less water and exempt solvents.

Note

Field service, where provided, does not constitute supervisory responsibility. For additional information contact your local BASF representative. information contact your local BASF representative.

BASF reserves the right to have the true cause of any difficulty determined by accepted test methods.

Quality and care

All products originating from BASF's Dubai, UAE facility are manufactured under a management system independently certified to conform to the requirements of the quality, environmental and occupational health & safety standards ISO 9001, ISO 14001 and OHSAS 18001.

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* Properties listed are based on laboratory controlled tests.

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