

SILICONE SEALANT COMPARISON GUIDE

DOWSIL™ Contractors Silicone Sealants vs. the Competition

Contractors Concrete Sealant (CCS) and Contractors Weatherproofing Sealant(CWS)

Polyurethane							Silicone	
Tremco			Degussa		Sika		Tremco	
Dymeric® 240FC	Dymonic®	Vulkem® 116	Sonneborn® Sonolastic® NP 1	Sonneborn® Sonolastic® NP 2	Sikaflex® 1a	Sikaflex® 15 LM	Spectrem® 3	Spectrem® 4-TS

Proven Performance That Can't Be Beat

DOWSIL™ Contractors Weatherproofing Sealant and DOWSIL™ Contractors Concrete Sealant are one-part, neutral-cure sealants that deliver outstanding silicone performance at urethane-competitive prices.

For sealing tilt-up and other concrete and masonry walls joints, and for sealing EIFS joints, low-modulus DOWSIL™ Contractors Concrete Sealant can't be beat.

For frame-to-structure and perimeter weathersealing and sealing dynamically moving joints such as expansion and control and EIFS joints, medium-modulus DOWSIL™ Contractors Weatherproofing Sealant can't be beat.

- Superior silicone weathersealing performance – durability, adhesion, long-term flexibility and resistance to the sun's degrading UV rays – at a urethane-competitive price; out-performs many silicones
- Easy cold-weather gunnability till -20°F (-29°C), unlike urethanes, which are difficult to gun in cold weather
- Fast tack-free time – tack-free in 1 hour or less (some urethanes can remain tacky for 24 hours or more)
- Good movement capability (better than many urethanes at the same sealant depth)
- SWRI validation (*Sealant, Weatherproofing & Restoration Institute*)
- Available in 11 standard (CCS) and 20 standards plus 19 made-to-order (CWS) popular building colors (many urethane sealants require special color mixing to achieve comparable color options)
- One-part ease of use
- The assurance of a 5-Year Weatherseal Limited Warranty
- Backed by Dow Corporation, a global silicone technology leader with a reputation for superior technical support and one of the best warranty programs in the business



How does the competition compare? Turn the page and see for yourself ...



DOWSIL™ Contractors Silicone Sealants vs. the Competition¹

	DOWSIL™ CCS (Contractors Concrete Sealant)	DOWSIL™ CWS (Contractors Weatherproofing Sealant)	Tremco Dymeric® 240FC	Tremco Dymonic®	Tremco Vulkem® 116	Degussa Sonneborn® Sonolastic® NP 1	Degussa Sonneborn® Sonolastic® NP 2	Sika Sikaflex® 1a	Sika Sikaflex® 15 LM	Tremco Spectrem® 3	Tremco Spectrem® 4-TS
Type	One-part, moisture-cure silicone; amide cure system	One-part, moisture-cure silicone; methoxy cure system	Three-part, chemical-cure epoxidized polyurethane sealant (mixing required)	One-part, moisture-cure modified polyurethane	One-part, moisture-cure polyurethane	One-part, moisture-cure polyurethane	Multi-part, chemical-cure polyurethane (mixing required)	One-part, moisture-cure polyurethane	One-part, moisture-cure polyurethane	One-part, neutral-cure silicone	Multi-part, neutral-cure silicone
Movement Capability	± 50 %	± 40 %	± 50 %	Manufacturing claims product is “developed for sealing dynamically moving joints”; no movement capability data provided.	± 25 %	± 25 %	± 50 %	± 25 %	± 100 / -50 %	Manufacturing claims ±50 %, but failed ±25% when tested at Dow according to ASTM C-719.	± 50 %
ASTM C-920 Movement Class	50	35	50	25	25	25	25	25	25	50	50
SWRI Validation	Yes	Yes	No	No	No	Yes	No	Yes	No	No	No
Modulus	22 psi at 25 % extension 28 psi at 50 % extension (ASTM C-1135)	40 psi at 25 % extension 55 psi at 50 % extension (ASTM C-1135)	No data provided	No data provided	No data provided	No data provided	No data provided	35 psi at 25 % extension 60 psi at 50 % extension (ASTM D-412)	20 psi at 25 % extension 35 psi at 50 % extension (ASTM D-412)	16 psi at 100 % extension (ASTM D-412)	16 psi at 100 % extension (ASTM D-412)
Elongation, percent maximum (High elongation indicates high movement capability.)	1600 (ASTM D412)	550 (ASTM D412)	Not listed	Not listed	Not listed	800 (ASTM D412)	280 (ASTM D412)	500 (ASTM D412)	700 (ASTM D412)	Not listed on data sheet	Not listed on data sheet
Durometer, Shore A, points (Lower durometer is desirable in weatherproofing sealants.)	15 (ASTM C-661)	25 ±5 (ASTM C-661)	25-35 (ASTM C-920, TT-S-00227E)	25 (ASTM C-920, TT-S-00230C)	40 (ASTM C-920, TT-S-00227E)	25-30 (ASTM C-661)	25 (ASTM C-661)	40 (±5) (ASTM D-2240)	20 (±5) (ASTM D-2240)	15 (ASTM C-661)	15 (ASTM C-661)
Adhesion	Primerless adhesion to most porous substrates, including concrete block, poured and precast concrete, tilt-up concrete, brick, mortar, grout, plaster and ceramic tile; primer generally required on EIFS and metal.	Primerless adhesion to glass, alodine and anodized aluminum, EIFS, vinyl, plastics and many paints; primer generally required on concrete and masonry.	Manufacturing claims use on precast, masonry, EIFS, metal curtainwall and perimeter joints of doors and window frames; primer may be required depending on conditions and substrate.	Manufacturing claims product “exhibits tenacious adhesion”; tested on concrete; primer may be required depending on conditions and substrate.	Manufacturing claims does not require primer on most construction materials.	Manufacturing claims “generally considered a nonpriming sealant,” but copper, stainless and galvanized steel and Kynar® typically require primer. Does not equal the primerless adhesion of CWS on granite.	Manufacturing claims “generally considered a nonpriming sealant,” but copper, stainless and galvanized steel and Kynar typically require primer. Does not equal the primerless adhesion of CWS on granite. Dow tests indicate a need for primer on anodized and alodine aluminum and limestone.	Manufacturing claims bonds to most construction materials without primer. Dow tests indicate a need for primer on granite and some mill finish aluminum.	Manufacturing claims “priming is not usually necessary.” Dow tests indicate a need for primer on concrete, limestone, marble, brick, EIFS and some granite.	Manufacturing claims adhesion to aluminum, glass and concrete. Dow tests indicate a need for primer on concrete, limestone, marble, brick, EIFS and some granite.	Manufacturing claims does not require primer on most construction materials.
Stain-Free Performance	Passes ASTM C-510 on concrete and masonry, including brick.	Passes ASTM C-510 on concrete and masonry, including brick; less prone to discoloring than many other silicones.	Passes ASTM C-920	Passes ASTM C-920 and TT-S-00230C	Passes ASTM C-920 and TT-S-00230C.	Passes ASTM C-510, but manufacturing warns white sealant may discolor under exposure to UV light.	Passes ASTM C-510, but manufacturing warns that sealant may yellow in the presence of unvented artificial heat.	Manufacturing claims to be nonstaining.	Manufacturing claims to be nonleaching	Passes ASTM C-510 and TT-S-001543A	No data provided
Cold-Weather Gunability	Yes to -20°F (-29°C)	Yes to -20°F (-29°C)	No data provided; typical urethanes cannot be applied at low temperatures.	Rheological properties reported at 40°F (4°C) and 122°F (50°C) only.	Rheological properties reported at 40°F (4°C) and 122°F (50°C) only.	Must warm to room temperature before using. Can be applied below freezing temperatures only if substrates are completely dry, free of moisture and clean.	Application may proceed as low as 20°F (-6°C) only if substrates are completely dry, free of moisture and clean.	No, material must be conditioned to room temperature and applied at temperatures above 40°F (4°C).	No, material must be conditioned to room temperature and applied at temperatures above 40°F (4°C)	Yes – silicone	Yes – silicone
Tack-Free Time (Faster tack-free times reduce the potential for initial dirt pick-up)	1 hour	30 minutes	24 hours max.	72 hours max.	72 hours max.	72 hours max.	< 48 hours	4 hours	3 – 6 hours	90 minutes (tooling time)	45 – 60 minutes (tooling time)
Volatile Organic Content (VOC)	22 g/L	35 g/L	Not listed	Not listed	Not listed	93 g/L	Part A : 53 –80 g/L Part B : 8.09 g/L	Not listed	Not listed	Not listed	Not listed
Packaging Options	<ul style="list-style-type: none"> • Cartridges • Sausages • Pails 	<ul style="list-style-type: none"> • Cartridges • Sausages • Pails 	<ul style="list-style-type: none"> • Pails 	<ul style="list-style-type: none"> • Cartridges • Sausages • Pails • Drums 	<ul style="list-style-type: none"> • Cartridges • Sausages • Pails • Drums 	<ul style="list-style-type: none"> • Cartridges • Sausages • Pails 	<ul style="list-style-type: none"> • Pails 	<ul style="list-style-type: none"> • Cartridges • Sausages 	<ul style="list-style-type: none"> • Cartridges • Sausages • Pails and drums by special order 	<ul style="list-style-type: none"> • Cartridges • Sausages • Pails • Drums 	<ul style="list-style-type: none"> • Pails
Published Weatherseal Warranty	5 years	5 years	None	None	None	None	None	None	None	None	None

¹Based on manufacturers' 2002-2004 product data sheets, MSDS, other published data and Dow tests.

Product Shortcomings

COMPETITIVE POLYURETHANES:

Tremco Dymeric 240FC – Mixing required; no SWRI validation; suffers from organic sealant degradation after weathering; in a ¼- to ½-inch joint, a greater width-to-depth sealant ratio (1:1 for polyurethane vs. 2:1 for silicone) is required to compensate for sealant degradation; modulus increases significantly in cold temperatures (unlike silicones, which remain modulus-stable over a broad temperature range); lack of warranty.

Tremco Dymonic – No SWRI validation; suffers from organic sealant degradation after weathering; in a ¼- to ½-inch joint, a greater width-to-depth sealant ratio (1:1 for polyurethane vs. 2:1 for silicone) is required to compensate for sealant degradation; modulus increases significantly in cold temperatures (unlike silicones, which remain modulus-stable over a broad temperature range); poor gunnability in colder temperatures; lack of warranty.

Tremco Vulkem 116 – No SWRI validation; suffers from organic sealant degradation after weathering – hardens significantly; in a ¼- to ½-inch joint, a greater width-to-depth sealant ratio (1:1 for polyurethane vs. 2:1 for silicone) is required to compensate for sealant degradation; modulus increases significantly in cold temperatures (unlike silicones, which remain modulus-stable over a broad temperature range); poor gunnability in colder temperatures; lack of warranty.

Degussa Sonneborn Sonolastic NP 1 – Suffers from organic sealant degradation after weathering; in a ¼- to ½-inch joint, a greater width-to-depth sealant ratio (1:1 for polyurethane vs. 2:1 for silicone) is required to compensate for sealant degradation; modulus increases significantly in cold temperatures (unlike silicones, which remain modulus-stable over a broad temperature range); poor gunnability in colder temperatures; lack of warranty.

Degussa Sonneborn Sonolastic NP 2 – Mixing required; no SWRI validation; suffers from organic sealant degradation after weathering; in a ¼- to ½-inch joint, a greater width-to-depth sealant ratio (1:1 for polyurethane vs. 2:1 for silicone) is required to compensate for sealant degradation; modulus increases significantly in cold temperatures (unlike silicones, which remain modulus-stable over a broad temperature range); prone to revert in the presence of UV light; lack of warranty.

Sika Sikaflex 1a – Suffers from organic sealant degradation after weathering; in a ¼- to ½-inch joint, a greater width-to-depth sealant ratio (1:1 for polyurethane vs. 2:1 for silicone) is required to compensate for sealant degradation; modulus increases significantly in cold temperatures (unlike silicones, which remain modulus-stable over a broad temperature range); poor gunnability in colder temperatures.

Sika Sikaflex 15 LM – No SWRI validation; suffers from organic sealant degradation after weathering; in a ¼- to ½-inch joint, a greater width-to-depth sealant ratio (1:1 for polyurethane vs. 2:1 for silicone) is required to compensate for sealant degradation; lower modulus than Sikaflex 1a; however, modulus increases on weathering like other polyurethane sealants; poor gunnability in colder temperatures.

COMPETITIVE SILICONES:

Tremco Spectrem 3 – Poor tear resistance and movement capability; low specific gravity from use of low-density fillers and organic plasticizers; no SWRI validation; recommended 1:1 width-to-depth sealant ratio for up to ½-inch joints (vs. 2:1 for DOWSIL silicones) requires twice as much sealant; lack of warranty.

Tremco Spectrem 4-TS – Mixing required; poor tear resistance and movement capability; low specific gravity from use of low-density fillers and organic plasticizers; no SWRI validation; recommended 1:1 width-to-depth sealant ratio for up to ½-inch joints (vs. 2:1 for DOWSIL silicones) requires twice as much sealant; lack of warranty.

**For sealant performance that is everything it claims to be...
Put your trust in Contractors Silicone Sealant from DOWSIL™.**

Dow Corporation is the global silicone technology leader with six decades of silicone experience. Across the construction industry, worldwide, Dow is known for high-performance products, consistent quality, reliable supply and the ability to provide total building envelope solutions. It's a name you can trust.

For more information, visit
www.urethanebusters.com



LIMITED WARRANTY INFORMATION – PLEASE READ CAREFULLY

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