



Consumer Solutions

Innovative Silicone Technologies for Appliance Applications



New material solutions to meet your unique challenges

The development of new materials has helped increase the performance and efficiency of home appliances. But those materials also present unique challenges in assembly and sealing.

Two new DOWSIL™ brand products help meet those challenges. They are engineered to provide higher productivity, enhanced design options and cost in use savings.

DOWSIL™ 750 Plastic Surface Adhesive/Sealant

- Easy to use, neutral one-part sealant
- Excellent adhesion to low surface energy substrates

DOWSIL™ HM-2600 Silicone Assembly Sealant

- RTV silicone hot melt adhesive
- Excellent clarity
- Provides instant green strength for high-speed assembly



DOWSIL™ 750 Plastic Surface Adhesive/Sealant

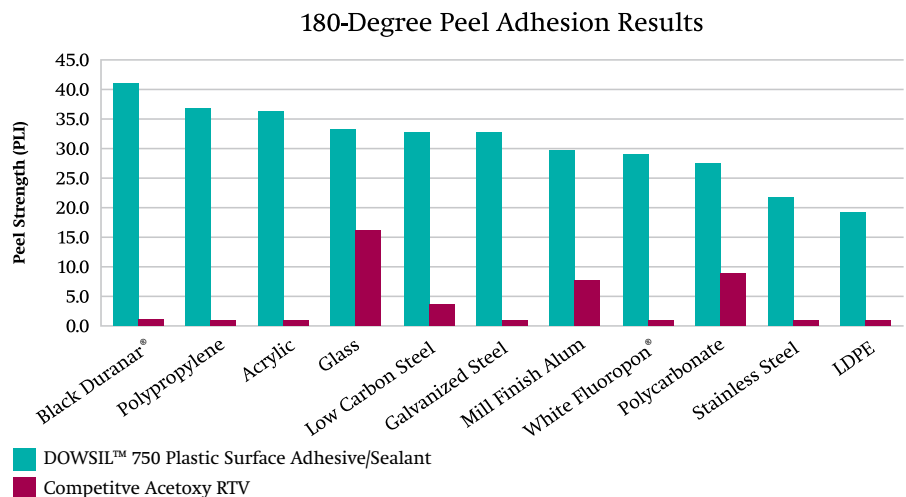
Strong adhesion to difficult surfaces

Low-surface-energy polymers such as polypropylene, polyethylene and fluoropolymers have traditionally been difficult substrates for adhesion. DOWSIL™ 750 Plastic Surface Adhesive/Sealant is designed specifically to adhere to these hard-to-bond surfaces. This makes it an excellent choice for bonding mechanical enclosures, sealing penetrations for plumbing, electrical lines or ducts, or adhering functional or decorative components to surfaces.

In testing, it shows adhesion far superior to acetoxy cured silicone sealant on a variety of substrates (Fig. 1).

DOWSIL™ 750 Plastic Surface Adhesive/Sealant can be used in a wide range of temperatures and offers excellent UV resistance and durability; it does not become brittle or crack. The one-part RTV neutral-cure sealant has a working time of approximately 15 minutes. Once applied, its adhesion builds as full cure is achieved within days; it is not recommended to handle the assembled parts for 24 hours.

FIGURE 1: 180-Degree Peel Adhesion Comparison - DOWSIL™ 750 Plastic Surface Adhesive/Sealant



DOWSIL™ HM-2600 Silicone Assembly Sealant

Instant green strength for high throughput

Silicone-based sealants and adhesives offer excellent performance properties for many appliance applications. With the introduction of new silicone hot melt sealants, Dow is helping to satisfy appliance manufacturers' needs for high-speed, high-volume production as an alternative to mechanical fasteners or pressure-sensitive tapes.

New DOWSIL™ HM-2600 Silicone Assembly Sealant offers you the moisture and UV resistance, adhesive strength, durability and flexibility of a silicone sealant – in a hot melt application that offers instant green strength and high throughput.

DOWSIL™ HM-2600 Silicone Assembly Sealant is suitable for use with XY tables, robots and other automatic dispensing and assembly methods. As compared to organic hot melt adhesives, it offers long open/working time before curing to a higher durometer. It offers excellent primerless adhesion to most common substrates, including many low-surface-energy polymers. DOWSIL™ HM-2600 Silicone Assembly Sealant is certified to UL94 HB and currently is being tested for food contact (FDA CFR 175.300) and drinking water contact (NSF 61).



FIGURE 2: DOWSIL™ HM-2600 Silicone Assembly Sealant is applied with automated equipment and offers immediate green strength

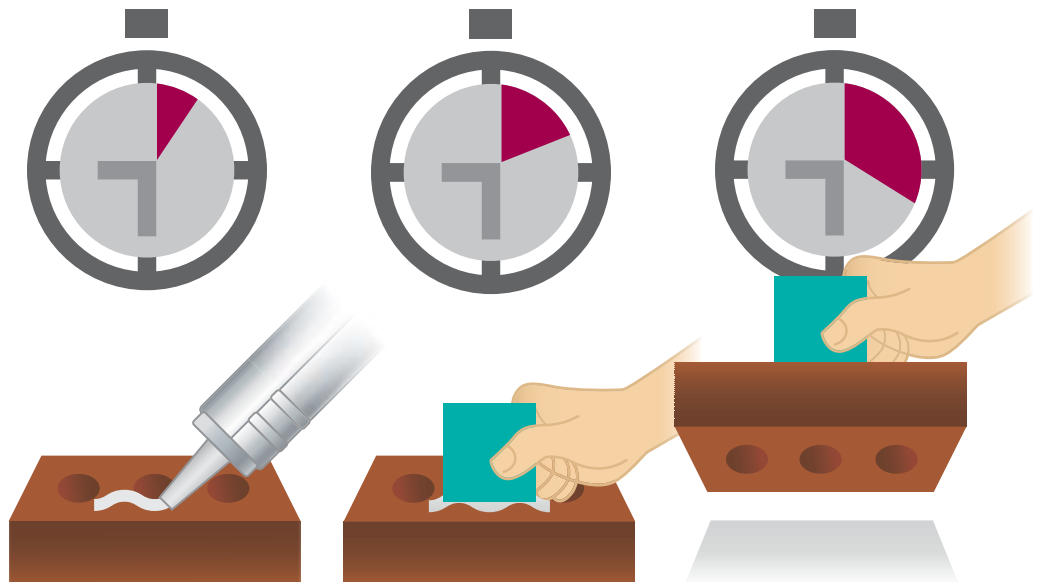


TABLE 1: Sealants and adhesives from Dow for appliance applications

	DOWSIL™ 736 Heat Resistant Sealant	DOWSIL™ 739 Plastic Adhesive	SILASTIC™ Q3-3636 Adhesive	DOWSIL™ 750 Plastic Surface Adhesive/Sealant	DOWSIL™ HM-2600 Silicone Assembly Sealant
Features	High-temperature resistance, up to 500°F (continuous) and 600°F (intermittent)	Plastic adhesive	Fast cure at room temperature, adhesion to wide variety of substrates, not humidity-cure-sensitive	Excellent adhesion to wide range of substrates, including low-surface-energy polymers, powder coatings and fluoropolymer coatings	High mechanical strength, good dispensability, excellent clarity
Uses	Sealing and bonding applications exposed to high temperatures	Adhering, bonding and sealing plastic and metal; making formed-in-place gaskets	Durable adhesive sealing of components exposed to difficult environments	Adhering, bonding and sealing a wide range of low-energy metallic and thermoplastic surfaces	Component bonding in high-speed automated assembly equipment
Applications	Fired heaters, flanged pipe joints, access doors, oven belts, industrial ovens and boilers, flues on gas appliances	Appliance trim and parts, bonding refrigeration gaskets, formed-in-place gaskets for compressors, gearboxes and pumps	Bonding lenses to housings, oven door and ceramic hob assembly and bonding glass to metal or plastic	Interior air sealing, bonding mechanical enclosures, adhering functional or decorative components to surfaces	Assembly of lenses, covers, housings, mechanical enclosures and decorative trim
Type	One-part room-temperature cure	One-part room-temperature cure	Two-part neutral cure	One-part RTV neutral cure	100% silicone moisture-reactive hot melt adhesive
Durometer, Shore A	26	37	32-35	28	60
Tensile	350 psi	225 psi	>261 psi	190 psi	6 MPa
Elongation	600	640	>300	785	1,500
Color	Red	Black, gray or white	Gray, black, special black	White	Clear

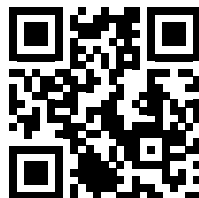
More innovative sealant solutions for appliance assembly

DOWSIL™ 750 Plastic Surface Adhesive/Sealant and DOWSIL™ HM-2600 Silicone Assembly Sealant are the two newest additions to our family of silicone-based solutions for appliance sealing and assembly.

Like all silicones, they offer:

- Stability over a wide temperature range
- Resistance to UV, weather and radiation, reducing hardening, cracking and crumbling
- Chemical stability, even under long-term exposure to many chemicals and atmospheric pollutants
- High bond strength to a wide range of substrates
- Excellent electrical properties, even when cycled over a large temperature range
- Low flammability

Table 1 (above) offers a brief comparison of the sealants from Dow suitable for appliances. You can learn more about these products and other solutions from Dow in our Selection Guide to Sealants and Foams for Industrial, Appliance and Maintenance, available at consumer.dow.com.



How can we help you today?

For more than 60 years, OEM designers and engineers have trusted the innovative silicone adhesive and sealant solutions and expertise from Dow to meet their unique challenges. To learn more about our products, talk to an expert about your needs, or find a local distributor, visit **consumer.dow.com**, or contact your local Dow representative.

Images: Cover – dow_40390833406; Page 2 – dow_40306943958; Page 3 – dow_40370607940

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Your exclusive remedy for breach of such warranty is limited to refund of purchase price or replacement of any product shown to be other than as warranted.

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