DOWSIL™ Silicone Sealants and Foams for Industrial, Appliance and Maintenance

DOWSIL™ Silicone Sealants

Silicon-based sealants from Dow last longer and are more versatile than most organic polymer sealants. They are durable RTV sealants; cure at room temperature to a tough, rubbery solid with exceptional performance characteristics; and meet a wide variety of your industrial bonding and sealing needs.

Benefits of DOWSIL™ silicone sealants include:

- **Stability Over a Wide Temperature Range**
  When properly cured, most of our products can be used at temperatures ranging from -56 to 177°C (204°C intermittent), with still others capable of higher thermal stability up to and exceeding 260°C (315°C intermittent).

- **Weather Resistance**
  High resistance to ultraviolet (UV) rays, radiation and weather prevents our products from hardening, cracking, crumbling, drying and becoming brittle.

- **Chemical Stability**
  Our sealants do not readily degrade, even under long-term exposure to many chemicals and atmospheric pollutants.

- **Good Bond Strength**
  Our products provide good adhesion to a wide variety of industrial materials, including glass, ceramics and wood masonry; painted surfaces; and many metals and plastics.

- **Electrical Properties**
  Designed for a variety of applications, our products can be used in various electrical and electronic applications, including devices that are thermally cycled over a wide temperature range.

- **Low Flammability**
  In fire conditions, silicone adhesives/sealants are reluctant to burn. Many products comply with UL flammability standards.

When you specify an assembly and maintenance product from Dow, you receive a solution backed by the world leader in silicone technology with more than 70 years of expertise and innovations.
Why Silicones?

For application versatility, durability, aesthetics and value, silicones outperform organics. Silicone sealants from Dow are unrivaled, delivering:

- Protection that typically lasts three times longer than organic materials in the same applications, thus avoiding premature and costly renovations
- Proven performance with successful track records in a range of diverse applications
- Outstanding life-cycle value
- All-weather application and performance, with resistance to UV exposure, ozone, rain, snow and extreme temperatures
- More durability than organic-based materials
- Continued flexibility and adhesion, even while being stretched or compressed
- Resistance to cracking, splits or tears without hardening or fading
- Easy application over a wide temperature range

Organics are prone to chemical reversion, a phenomenon in which organic polyurethane loses its cured properties and reverts to a substance with the softness of chewing gum. The differences between silicones and organics are the difference between long-term value and premature failure. Silicones prevail.
Which Silicone?

Silicone sealants from Dow are offered in a wide range of formulation options, including:

- **RTV (room-temperature-vulcanizing) sealants**
  These silicone polymers work with a condensation reaction in humidity at typical room conditions, but the cure can be accelerated by increasing temperature and humidity. RTV sealants are easy to install, and they offer relatively low cost and good adhesion.

- **Heat cure sealants**
  Delivering much shorter cure times than RTV sealants, these materials can be automatically dispensed to meet industrial equipment assembly requirements.

- **Hot-melt silicone sealants**
  Ideal for automated applications in the manufacturing of various components, these reactive hot-melt materials provide instant green strength, which can increase productivity, improve quality and reduce costs in industrial assembly applications.

- **One-part materials**
  Containing all the ingredients needed to produce a cured material, these sealants use external factors – such as moisture in the air, heat or the presence of UV light – to initiate, speed or complete the curing process. One-part sealant formulations are easy to use and typically have a low- or room-temperature cure, but moisture-curing materials may take 24 hours or more to fully cure.

- **Two-part materials**
  With the reactive ingredients separated to prevent premature initiation of the cure process, these materials often use the addition of heat to facilitate or accelerate cure. Two-part formulations typically offer longer shelf life, high-speed cure, and the ability to carefully control working/open time and cure time by manipulating the formulation, but they require mixing and may involve more sophisticated processes and application expertise.

- **Silicone foams**
  Ideal as compression gaskets or as “environmental seals” to protect against ambient air, splashed water, dust and moisture, these materials are a cost-effective sealing solution compared to preformed gaskets and foam tapes for use sealing high-tolerance gaps. Applied using automated robotic dispensing, these materials have a fast room-temperature or low-temperature cure.

**Sealant Chemistry**

Silicone sealants typically consist of an inorganic siloxane (Si-O-Si-O-Si) polymer and appropriate filler, crosslinker, catalyst, adhesion promoter, pigment and plasticizer.

To meet specific needs, silicone sealants are offered in a variety of chemistries and cure types, each with their own benefits. The following tables will assist you in selecting the right material to help meet your performance requirements.
## Table I: Sealant Chemistries

<table>
<thead>
<tr>
<th>Chemistry</th>
<th>Surface Cure</th>
<th>Green Strength</th>
<th>Primerless Adhesion</th>
<th>Shelf Life</th>
<th>Clear/Translucent</th>
<th>Features</th>
<th>Limitations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Acid Cure</strong></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Acetoxy (One-Part)</td>
<td>•••</td>
<td>•</td>
<td>•</td>
<td>••</td>
<td>•••</td>
<td>•</td>
<td>Competitively priced versus organics</td>
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<td></td>
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<td></td>
<td>•</td>
<td>Acidic; potentially corrosive to metals</td>
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<td>Clear</td>
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<td>•••</td>
<td>Adhesion durability</td>
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<td></td>
<td>•</td>
<td>Fast cure</td>
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<td></td>
<td>••</td>
<td>No-catalyst versions available</td>
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<td></td>
<td>Good shelf life</td>
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<td>Clear</td>
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<tr>
<td>Neutral Cure</td>
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<tr>
<td>Alkoxy (One-Part)</td>
<td>•</td>
<td>•</td>
<td>••</td>
<td>••</td>
<td>LA¹</td>
<td></td>
<td>Neutral cure</td>
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<td></td>
<td>Robust adhesion</td>
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<td>Economical; chalk filled</td>
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<td>Fast cure</td>
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<td>Economic; chalk filled</td>
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<td>Low VOC</td>
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<td>Oxime (One-Part)</td>
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<td>Fast cure</td>
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<td></td>
<td>Low-catalyst options possible</td>
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<td></td>
<td>Good silica versions with clear/translucent offerings</td>
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<td>Stability of silica system not robust, so achieving clarity is difficult</td>
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<td></td>
<td>High-temperature (40°C) storage causes discoloration</td>
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<td></td>
<td></td>
<td>Strong odor</td>
</tr>
<tr>
<td>Alkoxy (Two-Part)</td>
<td>••</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>NA</td>
<td></td>
<td>Fast cure/green strength; parts can be moved in under 4 hours</td>
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<td>Total VOC low when mixed</td>
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<td>Tunable cure profile based on mix ratio</td>
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<td></td>
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<td>Adhesion to many substrates</td>
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<tr>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>Dispensing equipment and maintenance</td>
</tr>
<tr>
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<td></td>
<td>Setting of components can be an issue</td>
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<tr>
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<td></td>
<td></td>
<td></td>
<td>Catalyst is flammable</td>
</tr>
<tr>
<td>Hot Melt (One-Part)</td>
<td>••</td>
<td>•</td>
<td>••</td>
<td>•</td>
<td>•</td>
<td></td>
<td>Instant green strength for immediate hold</td>
</tr>
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<td></td>
<td></td>
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<td></td>
<td>Instant assembly – no “hold time” requirement</td>
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<td>Worker friendly – low odor, nonhazardous</td>
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<td>Long pot life and long open time</td>
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<td></td>
<td>Proven neutral-cure 100% silicone chemistry</td>
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<td></td>
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<td>Aggressive adhesion to a variety of substrates</td>
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<td></td>
<td>Not intended for use when in total confinement (atmospheric moisture required for cure)</td>
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<td>Not intended for continuous water immersion</td>
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<td></td>
<td></td>
<td>Not intended for use on surfaces that might bleed oils, plasticizers or solvents</td>
</tr>
<tr>
<td>Platinum (Two-Part)“Silicone Foams”</td>
<td>•</td>
<td>–</td>
<td>–</td>
<td>•</td>
<td>NA</td>
<td>•</td>
<td>Fast-curing products available in heat cure and room temperature cure options</td>
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<tr>
<td></td>
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<td></td>
<td>Provides environmental sealing versus elements</td>
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<td>Low sealing force/modulus</td>
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<td>Ideal for sealing enclosures requiring serviceability</td>
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<td></td>
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<td>Allows for flexibility in seal and bead design</td>
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<td></td>
<td></td>
<td>Not optimized for fluid sealing</td>
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<td></td>
<td></td>
<td>Does not offer high adhesion without a primer or surface treatment</td>
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<td></td>
<td></td>
<td>Cure inhibition (“poisoning” of platinum catalyst)</td>
</tr>
</tbody>
</table>

NA = Not available; LA = Limited availability; – = Poor; • = Good; •• = Better; ••• = Best

¹DOWSIL™ 3145 RTV Mil-A-46146 Adhesive/Sealant is available in clear translucent.
### Table II. Acetoxy Sealants

<table>
<thead>
<tr>
<th><strong>Special Features</strong></th>
<th><strong>Acetoxy Sealants</strong></th>
<th><strong>Primary Uses</strong></th>
<th><strong>Applications</strong></th>
<th><strong>Applications</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>DOWSIL™ 730 FS Solvent Resistant Sealant</td>
<td>DOWSIL™ 732 Multi-Purpose Sealant</td>
<td>DOWSIL™ 734 Flowable Sealant</td>
<td>DOWSIL™ 786 Silicone Sealant</td>
<td>XIAMETER™ CTG-1890 Protective Coating</td>
</tr>
<tr>
<td>Solvent-resistant</td>
<td>Multipurpose; FDA; NSF</td>
<td>Flowable; self-leveling</td>
<td>Midew-resistant</td>
<td>Excellent moisture protection and resistance to sand, dust, and dirt particles; easy-to-apply, thin coating that will not run or drip when applied to vertical or overhead surfaces</td>
</tr>
<tr>
<td>Bonding, sealing and caulking where resistance to fuels, oils and solvents is required</td>
<td>General-purpose bonding and sealing; making formed-in-place gaskets</td>
<td>To fill voids, cracks and crevices; conformal coating for connections and battery terminals</td>
<td>Interior sealing applications exposed to high moisture</td>
<td>General-purpose coating for protecting motors and electrical equipment; maintenance coating</td>
</tr>
<tr>
<td>Assembling and repairing fuel lines and tanks; bonding components exposed to fuels, oils and solvents; making formed-in-place gaskets for chemical compressors, fluid-filled distributors and transformers; repairing rubber linings exposed to corrosive conditions; sealing pipe joints on lines carrying corrosive chemicals</td>
<td>Sealing flashing, vents, flues, gutters, marine cabins and windows, and electrical boxes; caulking joints in sheet metal stacks and ductwork; bonding appliance parts, signs and sign letters; adhering auto trim, appliance trim and nameplates; making formed-in-place gaskets for compressors, gearboxes and pumps</td>
<td>Coating mechanical devices; making formed-in-place gaskets for compressors, gearboxes and pumps; potting electrical terminals; sealing ammunition fuses, trailers and truck cabs</td>
<td>Sealing tubs, sinks, plumbing fixtures and interior walls</td>
<td>Coating motor windings, bus bars, splines, connectors, transformers, insulators, trailers, truck cabs and wooden pole tops</td>
</tr>
</tbody>
</table>

#### Temperature Range

-57 to 177 (204)

<table>
<thead>
<tr>
<th>Skin-Over Time, min</th>
<th>Tack-Free Time, min</th>
<th>Extrusion Rate, g/min</th>
<th>Durometer, Shore A</th>
<th>Tensile, MPa</th>
<th>Elongation, %</th>
<th>Specific Gravity</th>
<th>Listings/Specs</th>
<th>Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>5-10</td>
<td>25-20</td>
<td>250-350</td>
<td>40-25</td>
<td>2-2.2</td>
<td>200-600</td>
<td>1.4-1.04</td>
<td>FDA 21¹, NSF 51, UL 94 HB, MIL spec</td>
<td>White</td>
</tr>
<tr>
<td>7-13</td>
<td>13-20</td>
<td>650-350</td>
<td>27-25</td>
<td>1.5-2.2</td>
<td>315-600</td>
<td>1.03-1.04</td>
<td>FDA 21¹, NSF 51</td>
<td>Aluminum, black, clear translucent, white</td>
</tr>
<tr>
<td>5-15</td>
<td>20-25</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>1.04-1.03</td>
<td>FDA 21¹</td>
<td>Clear translucent, white</td>
</tr>
</tbody>
</table>

#### Lists/Specs

- FDA 21¹, NSF 51, NSF 61, UL 94 HB, MIL spec
- FDA 21¹, NSF 51, UL 94 HB, MIL spec
- FDA 21¹, NSF 51
- FDA 21¹

#### Color

- White
- Aluminum, black, clear translucent, white
- Clear translucent, white
- Clear translucent, white
- Gray

#### Sealant Type for Fluid Resistance

- FVMQ
- MQ
- MQ
- MQ

#### Primerless Adhesion

- Acrylic
- Acrylonitrile Butadiene Styrene (ABS)
- Low Density Polyethylene (LDPE)
- Nylon 6/6
- Polycarbonate
- Polypropylene (PP)
- Glass
- Aluminum, Mill Finish
- Copper
- Steel, Galvanized
- Steel, Low Carbon
- Steel, Stainless

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*Consult your local Dow office for further advice on adhesion properties

*Most paints will not adhere to sealant; not for underwater structural or adhesive applications; requires atmospheric moisture to cure. May stress-crack some plastics; test before use.

*Estimated service temperatures based on product formulation and laboratory testing. Actual service temperature range is dependent on other factors, including the specific application environment.


### Acetoxy Sealants

<table>
<thead>
<tr>
<th>Sealant Type</th>
<th>Color</th>
<th>Primary Uses</th>
<th>Special Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>XIAMETER™ SLT-5132 Sealant Acetoxy</td>
<td>Red</td>
<td>Sealing and bonding applications, such as space-filling rubber adhesive</td>
<td>Suitable for sealing and adhesive applications; diverse sealing and bonding applications, such as space-filling rubber adhesive</td>
</tr>
<tr>
<td>XIAMETER™ SLT-3445 Sealant Acetoxy</td>
<td>Clear, white, gray, black</td>
<td>General industrial sealing, gasketing and bonding applications</td>
<td>Typically used to coat plates or molds, used to produce bakery products or other foodstuffs</td>
</tr>
<tr>
<td>DOWSIL™ AP Silicone Adhesive/Sealant</td>
<td>Red</td>
<td>General industrial sealing, gasketing and bonding applications</td>
<td>Acetoxy; flowable, one-component RTV silicone sealant for high temperature release coatings; self-leveling liquid, suitable for spraying or dipping</td>
</tr>
<tr>
<td>DOWSIL™ 736 Heat Resistant Sealant</td>
<td>Red</td>
<td>High-temperature-resistant</td>
<td>Acetoxy; one-component RTV adhesive/sealant; non-sag, paste consistency</td>
</tr>
<tr>
<td>DOWSIL™ Q3-1566 Heat Resistant Adhesive/Sealant</td>
<td>Red</td>
<td>High-temperature-resistant</td>
<td>Sealing and bonding applications exposed to temperatures as high as 315°C</td>
</tr>
</tbody>
</table>

### Heat Resistant Acetoxy Sealants

<table>
<thead>
<tr>
<th>Sealant Type</th>
<th>Color</th>
<th>Primary Uses</th>
<th>Special Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>DOWSIL™ 786</td>
<td>Red</td>
<td>Sealing and bonding applications</td>
<td>Can be used in ovens, cookers and other heating equipment; automotive oil and other coolant sealing applications</td>
</tr>
<tr>
<td>XIAMETER™ CTG-1890 Protective Coating</td>
<td>Red</td>
<td>Bonding, sealing and caulking parts and electrical and electronic components</td>
<td>Suitable for sealing and adhesive applications; diverse sealing and bonding applications, such as space-filling rubber adhesive</td>
</tr>
<tr>
<td>XIAMETER™ SLT-5132 Sealant Acetoxy</td>
<td>Red</td>
<td>General industrial sealing, gasketing and bonding applications</td>
<td>Sealing and bonding applications exposed to temperatures as high as 350°C</td>
</tr>
</tbody>
</table>

### Properties

<table>
<thead>
<tr>
<th>Sealant Type</th>
<th>Physical Property</th>
<th>Value</th>
<th>Sealant Type</th>
<th>Physical Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>XIAMETER™ SLT-5132 Sealant Acetoxy</td>
<td>Viscosity (cP)</td>
<td>10000</td>
<td>XIAMETER™ SLT-3445 Sealant Acetoxy</td>
<td>Viscosity (cP)</td>
<td>5000</td>
</tr>
<tr>
<td>DOWSIL™ AP Silicone Adhesive/Sealant</td>
<td>Viscosity (cP)</td>
<td>20000</td>
<td>DOWSIL™ 736 Heat Resistant Sealant</td>
<td>Viscosity (cP)</td>
<td>15000</td>
</tr>
<tr>
<td>DOWSIL™ Q3-1566 Heat Resistant Adhesive/Sealant</td>
<td>Viscosity (cP)</td>
<td>12000</td>
<td>DOWSIL™ 786</td>
<td>Viscosity (cP)</td>
<td>8000</td>
</tr>
<tr>
<td>XIAMETER™ CTG-1890 Protective Coating</td>
<td>Viscosity (cP)</td>
<td>5000</td>
<td>XIAMETER™ SLT-5132 Sealant Acetoxy</td>
<td>Viscosity (cP)</td>
<td>4000</td>
</tr>
</tbody>
</table>

### FDA Compliance

- Estimated service temperatures based on product formulation and laboratory testing. Actual service temperature range is dependent on other factors, including the specific application environment.
- Most paints will not adhere to sealant; not for underwater structural or adhesive applications; requires atmospheric moisture to cure. May stress-crack some plastics; test before use.
- *Consult your local Dow office for further advice on adhesion properties.

### Table II. Acetoxy Sealants

<table>
<thead>
<tr>
<th>Sealant Type</th>
<th>Temperature Range2, °C,</th>
<th>Physical Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>XIAMETER™ SLT-5132 Sealant Acetoxy</td>
<td>-50 to 180</td>
<td>260 (300)</td>
<td>10</td>
</tr>
<tr>
<td>XIAMETER™ SLT-3445 Sealant Acetoxy</td>
<td>-65 to 260 (315)</td>
<td>-50 to 180</td>
<td>10</td>
</tr>
<tr>
<td>DOWSIL™ AP Silicone Adhesive/Sealant</td>
<td>-50 to 275 (350)</td>
<td>-65 to 260 (315)</td>
<td>10</td>
</tr>
<tr>
<td>DOWSIL™ 736 Heat Resistant Sealant</td>
<td>-50 to 275 (350)</td>
<td>-50 to 275 (350)</td>
<td>10</td>
</tr>
<tr>
<td>DOWSIL™ Q3-1566 Heat Resistant Adhesive/Sealant</td>
<td>-50 to 275 (350)</td>
<td>-50 to 275 (350)</td>
<td>10</td>
</tr>
</tbody>
</table>

### Other Foodstuffs

- Typically used to coat plates or molds, used to produce bakery products or other foodstuffs.
- Used to produce bakery products or other foodstuffs.
# Table III. Alkoxy (Neutral-Cure) Sealants

<table>
<thead>
<tr>
<th></th>
<th>DOWSIL™ 739 Plastic Adhesive</th>
<th>DOWSIL™ 748 Non-Corrosive Sealant</th>
<th>DOWSIL™ 3145 RTV Mil-A-46146 Adhesive/Sealant</th>
<th>DOWSIL™ 7091 Adhesive Sealant</th>
<th>DOWSIL™ 7092 High Green Strength Adhesive and Sealant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Special Features</td>
<td>Plastic adhesive</td>
<td>FDA- and NSF-approved</td>
<td>Nonflowing; high tensile/tear strength and elongation; faster in-line processing with optional heat acceleration; can be considered for uses with Mil Spec requirements</td>
<td>Non-sag; paste consistency; easy to apply; cures to a tough, flexible rubber; excellent adhesion to many substrates</td>
<td>Instant green strength: easy to use; excellent adhesion to a wide range of substrates, such as glass, metals and plastics; non-sag, paste consistency; fast strength buildup supports productivity enhancements due to fast handling of bonded units; saves time, as no buffer for strength buildup required</td>
</tr>
<tr>
<td>Primary Uses</td>
<td>Adhering, bonding and sealing plastic and metal; making formed-in-place gaskets for compressors, gearboxes and pumps; sealing flashing, vents, gutters, marine cabins and windows; waterproofing leakproof tractor cabs</td>
<td>Electrical sealing applications; food-processing and transportation applications</td>
<td>Sealing and assembly in applications requiring Mil Spec standards</td>
<td>Applications that demand a strong but flexible bond, such as when bonding materials with differing thermal expansion rates (e.g., glass to metal or glass to plastic)</td>
<td>Applications that require immediate handling and processing of the units</td>
</tr>
<tr>
<td>Applications1</td>
<td>Adhering auto trim, appliance trim and parts; assembling plastic toys; bonding gaskets in refrigeration units, signs and sign letters; caulking cement and masonry; making formed-in-place gaskets for compressors, gearboxes and pumps; sealing flashing, vents, gutters, marine cabins and windows; waterproofing leakproof tractor cabs</td>
<td>Bonding and sealing electrical equipment, power and control connections, motors, cover plates, instrument lenses, regulators, junction boxes, and control panels; sealing refrigerator and freezer liners</td>
<td>Sealing openings in modules and housings; assembly of components on printed wiring boards (PWBs); sealing in and around wired and electrical leads</td>
<td>Adhering commonly used materials, including enameled and painted steel, aluminum, ceramic and glass, as well as to certain plastics used in engineering applications; formed-in-place gasket (FIPG) applications</td>
<td>Adhering commonly used materials, including certain steels, aluminum and glass, as well as certain plastics used in engineering applications</td>
</tr>
<tr>
<td>Temperature Range2, °C, continuous (intermittent)</td>
<td>-54 to 149 (177)</td>
<td>-55 to 177 (204)</td>
<td>-45 to 200</td>
<td>-40 to 180</td>
<td>-50 to 150</td>
</tr>
<tr>
<td>Skin-Over Time, min</td>
<td>25</td>
<td>15</td>
<td>–</td>
<td>15</td>
<td>15-25</td>
</tr>
<tr>
<td>Tack-Free Time, min</td>
<td>45</td>
<td>30</td>
<td>63.8</td>
<td>41</td>
<td>–</td>
</tr>
<tr>
<td>Extrusion Rate, g/min</td>
<td>110</td>
<td>150</td>
<td>78.6</td>
<td>185</td>
<td>217</td>
</tr>
<tr>
<td>Durometer, Shore A</td>
<td>37</td>
<td>25</td>
<td>45.6</td>
<td>32</td>
<td>55</td>
</tr>
<tr>
<td>Tensile, MPa</td>
<td>1.6</td>
<td>1.9</td>
<td>5.95</td>
<td>2.5</td>
<td>2</td>
</tr>
<tr>
<td>Elongation</td>
<td>640</td>
<td>350</td>
<td>626</td>
<td>680</td>
<td>435</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>1.52</td>
<td>1.33</td>
<td>1.10</td>
<td>1.4</td>
<td>1.55</td>
</tr>
<tr>
<td>Listings/Specs</td>
<td>UL 94 HB</td>
<td>FDA 21, NSF 51, NSF 61, UL 94 HB</td>
<td>MIL-A-46146 Group II, TY 1, UL 94 HB</td>
<td>–</td>
<td>UL 94 HB</td>
</tr>
<tr>
<td>Color</td>
<td>Black, gray, white</td>
<td>Off-white</td>
<td>Clear translucent</td>
<td>Black, gray, white</td>
<td>Black, white</td>
</tr>
<tr>
<td>Sealant Type for Fluid Resistance Table</td>
<td>MQ</td>
<td>MQ</td>
<td>MQ</td>
<td>MQ</td>
<td>MQ</td>
</tr>
</tbody>
</table>

## Primerless Adhesion

<table>
<thead>
<tr>
<th></th>
<th>Acrylic</th>
<th>Acrylonitrile Butadiene Styrene (ABS)</th>
<th>Low Density Polyethylene (LDPE)</th>
<th>Nylon 6/6</th>
<th>Polycarbonate</th>
<th>Polypropylene (PP)</th>
<th>Glass</th>
<th>Aluminum, Mill Finish</th>
<th>Copper</th>
<th>Steel, Galvanized</th>
<th>Steel, Low Carbon</th>
<th>Steel, Stainless</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good</td>
<td>Excellent</td>
<td>Excellent</td>
<td>Excellent</td>
<td>Excellent</td>
<td>Excellent</td>
<td>Excellent</td>
<td>Excellent</td>
<td>Excellent</td>
<td>Excellent</td>
<td>Excellent</td>
<td>Excellent</td>
<td>Excellent</td>
</tr>
<tr>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
</tbody>
</table>

*Consult your local Dow representative for further advice on adhesion properties.

1Most paints will not adhere to sealant; not for underwater structural or adhesive applications; requires atmospheric moisture to cure. May stress-crack some plastics; test before use.

2Estimated service temperatures based on product formulation and laboratory testing. Actual service temperature range is dependent on other factors, including the specific application environment.

**Table III. Alkoxy (Neutral-Cure) Sealants**

<table>
<thead>
<tr>
<th>DOWSIL™ 7093 Adhesive Sealant</th>
<th>DOWSIL™ 7094 Flowable Sealant</th>
<th>DOWSIL™ AS 7096N Sealant</th>
<th>DOWSIL™ 3559 Neutral Silicone Adhesive Sealant</th>
<th>DOWSIL™ 1080 Oxime Sealant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-sag, paste consistency; low modulus for high movement capability</td>
<td>Flowable and self-leveling</td>
<td>Non-sag, paste consistency; contains fungicide; low modulus for high movement capability</td>
<td>Non-sag, paste consistency</td>
<td>Non-sag, paste consistency</td>
</tr>
<tr>
<td>General industrial sealing and bonding applications where a non-corrosive cure is required</td>
<td>Sealing and bonding applications where low viscosity and self-leveling properties in combination with non-corrosive cure is required</td>
<td>Sealing and bonding applications where translucent and non-corrosive cure is required</td>
<td>Designed to provide flexible yet structurally strong bonding in applications where a neutral cure and a fast build up of mechanical properties is required</td>
<td>As a formed-in-place gasket for general industrial sealing and bonding applications; for sealing dissimilar metals and corrosion sensitive surfaces like chrome, copper, steel</td>
</tr>
<tr>
<td>Good adhesion to many substrates</td>
<td>Good adhesion to many substrates</td>
<td>Excellent unprimed adhesion to many substrates</td>
<td>Good adhesion to many substrates</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Temperature Range</th>
<th>-50 to 180</th>
<th>-50 to 180</th>
<th>-50 to 180</th>
<th>-40 to 180</th>
<th>-40 to 150</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tensile, MPa</td>
<td>1.6</td>
<td>1.9</td>
<td>5.95</td>
<td>2.5</td>
<td>2</td>
</tr>
<tr>
<td>Durometer, Shore A</td>
<td>37</td>
<td>25</td>
<td>45.6</td>
<td>32</td>
<td>55</td>
</tr>
<tr>
<td>Extrustion Rate</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tack-Free Time, min</td>
<td>45</td>
<td>30</td>
<td>63.8</td>
<td>41</td>
<td>–</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>1.52</td>
<td>1.33</td>
<td>1.10</td>
<td>1.4</td>
<td>1.55</td>
</tr>
<tr>
<td>Color</td>
<td>Black, gray, white</td>
<td>Off-white</td>
<td>Clear translucent</td>
<td>Black, gray, white</td>
<td>Black, white</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Applications 1</th>
<th>Plastic Adhesive</th>
<th>DOWSIL™ 739</th>
<th>-54 to 149 (177)</th>
<th>-55 to 177 (204)</th>
<th>-45 to 200</th>
<th>-40 to 180</th>
<th>-50 to 150</th>
</tr>
</thead>
<tbody>
<tr>
<td>Special Features</td>
<td>Plastic adhesive FDA- and NSF-approved cabs</td>
<td>waterproofing leakproof</td>
<td>tractor gearboxes and pumps; sealing place gaskets for compressors, and masonry; making formed-in-place letters; caulking cement in refrigeration units, signs and plastic toys; bonding gaskets trim and parts; assembling Adhering auto trim, appliance formed-in-place gaskets plastic and metal; making Adhering, bonding and sealing Plastic Adhesive</td>
<td>DOWSIL™ 7092</td>
<td>-50 to 180</td>
<td>-50 to 180</td>
<td>-50 to 180</td>
</tr>
<tr>
<td>Resistance Table</td>
<td>MQ</td>
<td>MQ</td>
<td>MQ</td>
<td>MQ</td>
<td>MQ</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Color</td>
<td>Black, gray, white</td>
<td>Off-white</td>
<td>Clear translucent</td>
<td>Black, gray, white</td>
<td>Black, white</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Applications 1 | Non-Corrosive Sealant | DOWSIL™ 748 | NSF 61, UL 94 HB – UL 94 HB | – | – | – | – |
| Special Features | Waterproofing, leakproof and corrosion resistant | General industrial sealing and bonding applications | Non-sag, paste consistency | Low viscosity and self-leveling properties | Low modulus for high movement capability | Low modulus for high movement capability | Low modulus for high movement capability |
| Color         | White, black, gray | Black | Translucent | Black | White, black, translucent |

| Applications 1 | Adhesive/Sealant | DOWSIL™ 3145 | TY, I, UL 94 HB – UL 94 HB | – | – | – | – |
| Special Features | Best adhesion to plastic (co-located substrates) | General industrial sealing and bonding applications | Flowable and self-leveling properties | Flowable and self-leveling properties | Flowable and self-leveling properties | Flowable and self-leveling properties |
| Color         | White, black | Black | Translucent | Black | White, black, translucent |

| Applications 1 | Adhesive Sealant | DOWSIL™ 7093 | -50 to 180 | -50 to 180 | -50 to 180 | -40 to 180 | -40 to 150 |
| Special Features | Instant green strength; easy processing of the units | General industrial sealing and bonding applications requiring Mil Spec | Excellent adhesion to many substrates | Excellent adhesion to many substrates | Excellent adhesion to many substrates | Excellent adhesion to many substrates | Excellent adhesion to many substrates |
| Color         | Black | Black | Black | Black | Black | Black | Black |

| Applications 1 | Flowable Sealant | DOWSIL™ 7094 | -50 to 180 | -50 to 180 | -50 to 180 | -40 to 180 | -40 to 150 |
| Special Features | Non-sag, paste consistency; low modulus for high movement capability | Sealing and bonding applications where low viscosity and self-leveling properties in combination with non-corrosive cure is required | Excellent adhesion to many substrates | Excellent adhesion to many substrates | Excellent adhesion to many substrates | Excellent adhesion to many substrates | Excellent adhesion to many substrates |
| Color         | Black | Black | Black | Black | Black | Black | Black |

| Applications 1 | Flowable Sealant | DOWSIL™ 7094 | -50 to 180 | -50 to 180 | -50 to 180 | -40 to 180 | -40 to 150 |
| Special Features | Non-sag, paste consistency; low modulus for high movement capability | Sealing and bonding applications where low viscosity and self-leveling properties in combination with non-corrosive cure is required | Excellent adhesion to many substrates | Excellent adhesion to many substrates | Excellent adhesion to many substrates | Excellent adhesion to many substrates | Excellent adhesion to many substrates |
| Color         | Black | Black | Black | Black | Black | Black | Black |
## Table IV. Two-part Alkoxy and One-Part Oxime (Neutral-Cure) Sealants

<table>
<thead>
<tr>
<th>Special Features</th>
<th>DOWSIL™ EA-2626 Adhesive Sealant</th>
<th>DOWSIL™ Q3-3526 Base and Catalyst Adhesive</th>
<th>SILASTIC™ Q3-3636 Adhesive</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Neutral, Two-Component</strong></td>
<td>Two-component adhesive/sealant; fast cure at room temperature; neutral alkoxy cure; non-self-leveling, paste consistency; good, durable adhesion; excellent weathering, UV and heat resistance to 190°C; fast cure allows rapid handling of bonded components; fast cure in-depth, and not outside-inward cure like typical moisture-cure adhesives</td>
<td>Fast curing, non-slump, two-part silicone adhesive/sealant</td>
<td>Fast cure at room temperature; good, durable adhesion; reduced weight loss (fogging) at high operating temperatures; fast assembly process; adhesion to a wide variety of substrates; through cure and not an outside-inward cure like typical moisture-cure adhesives; not humidity-cure-sensitive</td>
</tr>
<tr>
<td><strong>Primary Uses</strong></td>
<td>Durable adhesive sealing of components that must perform in difficult environments</td>
<td>Assembly of automotive headlights and auxiliary lights, body panels and body components; assembly of oven door windows and other appliance components</td>
<td>Bonding of polycarbonate or glass lenses to the reflector housing of headlamps and fog lamps; in appliance manufacturing, especially for oven and ceramic hob assembly or for bonding glass to metal, glass to painted metal or glass to plastic</td>
</tr>
<tr>
<td><strong>Applications</strong>&lt;sup&gt;1&lt;/sup&gt;</td>
<td>A perfect solution in appliances manufacturing, especially for oven and ceramic hob assembly; for bonding glass to metal, glass to painted metal or glass to plastic</td>
<td>Assembly of automotive headlights and auxiliary lights, body panels and body components; assembly of oven door windows and other appliance components</td>
<td>Bonding of polycarbonate or glass lenses to the reflector housing of headlamps and fog lamps; in appliance manufacturing, especially for oven and ceramic hob assembly or for bonding glass to metal, glass to painted metal or glass to plastic</td>
</tr>
<tr>
<td><strong>Temperature Range</strong>&lt;sup&gt;2&lt;/sup&gt;, °C, continuous (intermittent)</td>
<td>-50 to 190</td>
<td>-50 to 190</td>
<td>–</td>
</tr>
<tr>
<td><strong>Skin-Over Time, min</strong></td>
<td>6-9</td>
<td>8</td>
<td>2.5–10 min working time</td>
</tr>
<tr>
<td><strong>Tack-Free Time, min</strong></td>
<td>11-18</td>
<td>20</td>
<td>5-20</td>
</tr>
<tr>
<td><strong>Extrusion Rate, g/min</strong></td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td><strong>Flow Rate, mm</strong></td>
<td>Flow &lt;2 mm</td>
<td>Flow &lt;2 mm</td>
<td>Flow &lt;2 mm</td>
</tr>
<tr>
<td><strong>Durometer, Shore A</strong></td>
<td>43-45</td>
<td>38-40</td>
<td>32-35</td>
</tr>
<tr>
<td><strong>Tensile, MPa</strong></td>
<td>&gt;1.9</td>
<td>2</td>
<td>&gt;1.8</td>
</tr>
<tr>
<td><strong>Elongation, %</strong></td>
<td>&gt;200</td>
<td>270-280</td>
<td>&gt;300</td>
</tr>
<tr>
<td><strong>Specific Gravity</strong></td>
<td>1.32-1.33</td>
<td>1.36-1.32</td>
<td>1.31 (base)/1.00-1.04 (catalyst)</td>
</tr>
<tr>
<td><strong>Listings/Spec</strong></td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td><strong>Color</strong></td>
<td>Gray, black, special black</td>
<td>Gray, black</td>
<td>Gray, black, special black</td>
</tr>
<tr>
<td><strong>Sealant Type for Fluid Resistance Table</strong>&lt;sup&gt;3&lt;/sup&gt;</td>
<td>VMO</td>
<td>VMO</td>
<td>MO</td>
</tr>
</tbody>
</table>

### Primerless Adhesion

<table>
<thead>
<tr>
<th>Material</th>
<th>Acrylic</th>
<th>Acrylonitrile Butadiene Styrene (ABS)</th>
<th>Low Density Polyethylene (LDPE)</th>
<th>Nylon 6/6</th>
<th>Polycarbonate</th>
<th>Polypropylene (PP)</th>
<th>Glass</th>
<th>Aluminum, Mill Finish</th>
<th>Copper</th>
<th>Steel, Galvanized</th>
<th>Steel, Low Carbon</th>
<th>Steel, Stainless</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adhesion</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>Excellent</td>
<td>Excellent</td>
<td>*</td>
<td>*</td>
<td>Excellent</td>
<td>Excellent</td>
<td>Excellent</td>
<td>Excellent</td>
<td>Excellent</td>
</tr>
</tbody>
</table>

*Consult your local Dow representative for further advice on adhesion properties

<sup>1</sup>Most paints will not adhere to sealant; not for underwater structural or adhesive applications; requires atmospheric moisture to cure. May stress-crack some plastics; test before use.

<sup>2</sup>Estimated service temperatures based on product formulation and laboratory testing. Actual service temperature range is dependent on other factors, including the specific application environment.
DOWSIL™ Silicone Sealants and Foams for Industrial, Appliance and Maintenance

Hot-melt, neutral-cure sealants are intended for assembly, bonding, sealing, gasketing and other OEM applications that require instant adhesion and high green strength.

These sealants feature:

- Excellent adhesion to most substrates without the need for a primer
- Instant adhesion, enabling parts to be shipped out quickly
- Long open time
- Long pot life
- Low VOC
- Safe handling with nonhazardous composition and by-products
- Long life once cured

Table V. Hot-Melt (Neutral-Cure) Sealants

<table>
<thead>
<tr>
<th>DOWSIL™ HM-2500 Assembly Sealant</th>
<th>DOWSIL™ HM-2510 Assembly Sealant</th>
<th>DOWSIL™ HM-2515 Assembly Sealant</th>
<th>DOWSIL™ HM-2520 Assembly Sealant</th>
<th>DOWSIL™ HM-2600 Silicone Assembly Sealant</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Special Features</strong></td>
<td><strong>Offers the fastest build of green strength; 100% silicone sealant; high viscosity at room temperature resists flow of material, which reduces material squeeze-out; excellent clarity</strong></td>
<td><strong>Offers high robustness; multipurpose 100% silicone sealant; high viscosity at room temperature resists flow of material, which reduces material squeeze-out; excellent clarity</strong></td>
<td><strong>Lowest viscosity; 100% silicone sealant; can be used in assembly and lamination; dispersed in finebeads, fibers or spiral patterns; low durometer</strong></td>
<td><strong>Offers highest mechanical properties; 100% silicone; high viscosity at room temperature resists flow of material, which reduces material squeeze-out; translucent clear</strong></td>
</tr>
<tr>
<td><strong>Specific Gravity</strong></td>
<td>1.08</td>
<td>1.08</td>
<td>1.07</td>
<td>1.11</td>
</tr>
<tr>
<td><strong>Viscosity at 120°C, Pa·s</strong></td>
<td>200</td>
<td>110</td>
<td>27</td>
<td>110</td>
</tr>
<tr>
<td><strong>15-Min Green Strength, MPa</strong></td>
<td>0.06</td>
<td>0.04</td>
<td>0.004</td>
<td>0.03</td>
</tr>
<tr>
<td><strong>Durometer, Shore A</strong></td>
<td>49</td>
<td>38</td>
<td>14</td>
<td>31</td>
</tr>
<tr>
<td><strong>Ultimate Tensile Strength, MPa</strong></td>
<td>4.8</td>
<td>4.6</td>
<td>2.3</td>
<td>6</td>
</tr>
<tr>
<td><strong>Ultimate Elongation, %</strong></td>
<td>1,900</td>
<td>1,900</td>
<td>1,500</td>
<td>1,500</td>
</tr>
<tr>
<td><strong>Tear Strength – Type B, pli</strong></td>
<td>80</td>
<td>78</td>
<td>67</td>
<td>89</td>
</tr>
<tr>
<td><strong>Peel Strength, pli</strong></td>
<td>&gt;45</td>
<td>&gt;41</td>
<td>&gt;33</td>
<td>&gt;30</td>
</tr>
<tr>
<td><strong>SAFT, °C (minimum)</strong></td>
<td>250</td>
<td>280</td>
<td>240</td>
<td>280</td>
</tr>
<tr>
<td><strong>NSF/ANSI Standard 51 and 61</strong></td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>FDA 21 CFR 177.2600</strong></td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>UL 94 (Relative Thermal Index)</strong></td>
<td>HB (105)</td>
<td>HB (105)</td>
<td>HB (105)</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Color</strong></td>
<td>Clear</td>
<td>Clear</td>
<td>Clear</td>
<td>Clear</td>
</tr>
</tbody>
</table>

**Primerless Adhesion**

- **Acrylic**: Excellent
- **Acrylonitrile Butadiene Styrene (ABS)**: Excellent
- **Low Density Polyethylene (LDPE)**: Excellent
- **Nylon 6/6**: Excellent
- **Polycarbonate**: Excellent
- **Polypropylene (PP)**: Excellent
- **Glass**: Excellent
- **Aluminum, Mill Finish**: Excellent
- **Copper**: Excellent
- **Steel, Galvanized**: Excellent
- **Steel, Low Carbon**: Excellent
- **Steel, Stainless**: Excellent
- **Duranar, Black**: Excellent
- **Fluoropon, White**: Excellent
- **Polyethylene Powder Coatings (PEPC), Black**: Excellent

*Consult your local Dow office for further advice on adhesion properties
1Most paints will not adhere to sealant; not for underwater structural or adhesive applications; requires atmospheric moisture to cure. May stress-crack some plastics; test before use.
2180° peel from various substrates based on ASTM C794: 21-day cure (24 ±2°C; 50 ±5% RH) + 7-day H2O immersion.
3Shear adhesion failure temperature based on ASTM 4498.
4Qualified only under electronics or lighting industry label.
Table VI. Silicone Foams (Two-Part, Addition Cure)

<table>
<thead>
<tr>
<th></th>
<th>SILASTIC™ 8257 Silicone Foam</th>
<th>DOWSIL™ 3-8209 Silicone Foam</th>
<th>DOWSIL™ 3-8219 RF Silicone Foam</th>
<th>DOWSIL™ 3-8259 RF Silicone Foam</th>
</tr>
</thead>
<tbody>
<tr>
<td>Special Features</td>
<td>Low hardness (Shore 00); available in white and black; low density</td>
<td>Low to medium hardness (Shore 00); medium density</td>
<td>Medium hardness (Shore 00); medium to high density; reduced flow aids application to vertical surfaces</td>
<td>Medium hardness (Shore 00); available in gray and dark gray; high density; reduced flow aids application to vertical surfaces</td>
</tr>
<tr>
<td>Viscosity, mPas</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>21,000</td>
<td>14,000</td>
<td>21,000</td>
<td>68,000</td>
</tr>
<tr>
<td>B</td>
<td>12,000</td>
<td>15,000</td>
<td>40,000</td>
<td>63,000</td>
</tr>
<tr>
<td>Snap Time, sec</td>
<td>230</td>
<td>220</td>
<td>200</td>
<td>200</td>
</tr>
<tr>
<td>Tack-Free Time, min</td>
<td>8</td>
<td>7</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Density, kg/m³</td>
<td>140</td>
<td>250</td>
<td>300</td>
<td>330</td>
</tr>
<tr>
<td>Flowability, cm</td>
<td>Flowable</td>
<td>Flowable</td>
<td>Flowable</td>
<td>Flowable</td>
</tr>
<tr>
<td>Cell Structure, Zellen/3 cm</td>
<td>Fine</td>
<td>Fine</td>
<td>Fine</td>
<td>Fine</td>
</tr>
<tr>
<td>Hardness, Shore 00</td>
<td>25</td>
<td>45</td>
<td>45</td>
<td>50</td>
</tr>
</tbody>
</table>

Two-part, addition-cure silicone foams are designed to be dispensed and cured directly on parts to form an integrated compression gasket. They typically are used in automotive parts, including seals for vibration and noise damping, housings for electronic devices, exterior lighting, and domestic appliance components.

These sealants feature:

- Room temperature cure (RTV)
- 1:1 mix ratio
- CFC-free content
- Low post-cure compression set
- Stability and flexibility across a wide range of temperatures

**Surface Preparation**

Although DOWSIL™ silicone sealants possess excellent bond strength, maximum adhesion is only attained on surfaces that are clean and dry. Contaminants – such as dirt, grease, water, tar or rust – act as release agents and prevent the formation of durable bonds. Use of a primer does not negate the necessity for proper surface cleaning.

Wet or dirty surfaces should be properly prepared before sealants are applied.

- Wipe contaminated surface with a clean, oil-free cloth.
- Rewipe surface with a suitable cleaner or industrial solvent, such as isopropyl alcohol (IPA), mineral spirits, naphtha or ketones. Note: Do not clean surface with detergent or soap. (Soap residue may act as release agent.)
- Rough rubber surfaces with sandpaper. Make a spot-check to determine the adhesion of sealants for each application. Bond strength will increase as the sealant cures.

The active ingredients must thoroughly wet-out and coat the bonding surfaces. Mild abrasion, solvent cleaning, plasma, corona discharge and other pretreatments have been used to clean and enhance surface reactivity to bonding. In general, light surface abrasion is recommended whenever possible, because it promotes good cleaning and increases the surface area for bonding. Clean and/or degrease surfaces with DOWSIL™ OS Fluids, naphtha, mineral spirits, methyl ethyl ketone (MEK), or other suitable solvents that will remove oils and other contaminants that may be present. A final surface wipe with acetone or IPA also may be helpful.

Some cleaning techniques may give better results than others; determine the best technique for your application. For especially difficult-to-bond-to surfaces, it may be necessary to increase the surface reactivity by using chemical etchants or oxidizers or by exposing the surface to UV, corona, plasma or flame sources. Allow solvents to completely evaporate before applying the primer.
DOWSIL™ Silicone Sealants and Foams for Industrial, Appliance and Maintenance

For maximum adhesion, DOWSIL™ primer is recommended. After solvent-cleaning, apply a thin coat of DOWSIL™ primer in a very light, even coat by wiping, dipping or spraying. Wipe off excess material to avoid overapplication, which generally appears as a white, chalky surface. When dip- or spray-coating, diluting by a factor of 2 to 4 with additional solvent may avoid excessive buildup.

**Primer Cure**

At normal room temperatures and 50% relative humidity conditions, allow the primer to air-dry from five to 30 minutes. Low-humidity and/or low-temperature conditions require longer cure times. Mild heat acceleration of the cure rate may be possible, but temperatures above 60°C are not recommended. During application, the carrier solvent typically evaporates quickly, allowing the active ingredients to begin to react with atmospheric moisture and bonding surfaces. For optimal bonding, different cure times may be required for different temperature and humidity conditions; determine the best cure schedule and conditions for your application. Apply the desired silicone sealant after the primer, prime coat or adhesion promoter has fully cured.
Sealant Application

Apply DOWSIL™ brand adhesives/sealants to one of the prepared surfaces, then quickly cover with the other substrate to be bonded. On exposure to moisture, the freshly applied material will “skin over” in about 5 to 10 minutes (depending on the product) at room temperature and 50% relative humidity.

Tool the sealant to coat or wet the substrate surface for maximum bonding. This typically is done by properly filling the joint first and then dry-tooling the sealant by pressing and pulling a round-tipped spatula or similar tool across the sealant surface. This step forces sealant into joint surfaces and helps remove air pockets or voids at the bond line. Tooling should be completed before the skin forms.

Keeping the primed surface clean may allow application of the silicone elastomer to be delayed – but in some cases, if too much time elapses, lower adhesion can result. Users are encouraged to determine the optimal cure conditions for their specific applications and the effects of any hold times imposed between applications of the primer and sealant. In some cases, it may be recommended to reprime surfaces if 8 to 24 hours elapse before the silicone sealant can be applied.

Cure Time

After skin formation, cure continues inward from the surface. In 24 hours (at room temperature and 50% relative humidity), DOWSIL™ adhesive/sealant will cure to a depth of about 1/8”. Very deep sections, especially when access to atmospheric moisture is restricted, will take longer to cure completely. Cure time is extended at lower humidity levels.

Because the sealants cure by reaction with moisture in the air, keep the container tightly sealed when not in use. A plug of used material may form in the tip of a tube or cartridge during storage. This is easily removed and does not affect the remaining contents.

Compatibility

Some DOWSIL™ adhesives/sealants release a small amount of acetic acid during cure. This may cause corrosion on some metallic parts or substrates, especially in direct contact or when the cure is carried out in a totally enclosed environment that does not allow cure by-products to escape.

Platinum catalysts used in addition-cure silicone sealants – including silicone foams – are sensitive to contamination by certain compounds that have the power to stop or inhibit cure. For more information, refer to “Guarding against potential inhibitors/poisons of platinum-catalyzed addition-cure release coatings,” Form No. 30-1053-01, available in the Technical Library on consumer.dow.com or upon request from Dow customer service.

Cleanup/Sealant Removal

Cured silicone can be removed from a surface with a sharp blade if the cured silicone material is accessible. If it is difficult to cut through, solvents – such as IPA, toluene, xylene, naphtha or mineral spirits – may be used to soften the cured sealant. DOWSIL™ OS Fluids also can be used to help soften cured silicone and/or remove silicone residue after it has been removed mechanically from a surface. DOWSIL™ OS Fluids will generally be a lower-VOC alternative to standard solvents.

Limitations

Refer to individual product data sheets for use limitations.

Health and Environmental Information

To support customers in their product safety needs, Dow has an extensive Product Stewardship organization and a team of Product Safety and Regulatory Compliance (PS&RC) specialists available in each area.

For more information, please see our website, consumer.dow.com, or consult your local Dow representative.
Contact Us

For more than 60 years, OEM designers, maintenance and materials engineers around the world have trusted Dow for performance and expertise to solve or prevent sealant challenges. Dow has sales offices, manufacturing sites, and science and technology laboratories – and a network of more than 3,000 distributors – around the world.

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