Dow Corning® Silicone Sealants

Designed for Industrial Assembly and Maintenance

Silicon-based *Dow Corning*® sealants last longer and are more versatile than most organic polymer sealants. They are durable, one-part 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.

Features of *Dow Corning*® silicone sealants include:

- **Stability over a wide temperature range** – When fully cured, many of our products can be used at temperatures ranging from -85° to 599°F (-65° to 315°C).
- **Weather resistance** – High resistance to 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 Corning, you receive a solution backed by the world leader in silicone technology with more than 60 years of expertise and innovations.

Innovative Technology

Reactive hot-melt silicone technology provides instant green strength, which can increase productivity, improve quality and reduce costs in industrial assembly applications.

***Dow Corning*® HM-25XX Assembly Sealants** are patented, neutral-cure reactive hot-melt silicones ideal for automated applications in the manufacturing of various components. When used with standard hot-melt dispensing equipment and an automated robot, *Dow Corning* HM-25XX Assembly Sealants become part of the productivity solution that enables parts to be produced faster, better and more economically.

- **Immediate green strength** – parts move efficiently from one step to the next
- **No "hold time" required** – ship parts as fast as you make them
- **Long pot life and long open time** – material stability; is not heat-cured; does not cure in line
- **Aggressive adhesion** – excellent primerless adhesion to metals, plastics, wood and paints
- **Clear** – Ultra clear, clear or select colors
- **Worker-friendly** – non-hazardous formulation; very low odor; very low VOC
- **Neutral-cure 100% silicone chemistry** – cure to flexible, weather-resistant silicone elastomer with outstanding durability and UV resistance

Substrate Preparation

Although *Dow Corning* 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.

It is strongly recommended, therefore, that wet or unclean surfaces 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 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.

How to Apply

Apply *Dow Corning*® 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. Any tooling should be completed before this skin forms. The surface is easily tooled with a spatula.

Use of Primer

For maximum adhesion, the use of *Dow Corning*® primer is recommended. After solvent cleaning, a thin coat of *Dow Corning* primer is applied by wiping, brushing or spraying. At normal room temperatures and humidity conditions (room temperature, 50% relative humidity), the primer should be allowed to air dry from 5 to 30 minutes. The primer cures in contact with air moisture; low humidity will necessitate longer drying time.

The required drying time for a specific area should be determined prior to use. Primer that was allowed to cure extensively will not promote adhesion anymore. As a general rule, drying time of more than 6 hours at normal temperatures and humidity should be avoided.

Cure Time

After skin formation, cure continues inward from the surface. In 24 hours (at room temperature and 50% relative humidity), *Dow Corning* 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.

As 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 *Dow Corning* 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 would not allow cure by-products to escape.

Health and Environmental Information

To support customers in their product safety needs, Dow Corning 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, **dowcorning.com,** or consult your local Dow Corning representative.

How To Contact Us

For more than 60 years, OEM designers and maintenance and materials engineers around the world have trusted the *Dow Corning*® brand for performance and expertise to solve or prevent sealant problems. Dow Corning solutions are available though a distributor network of more than 3,000 channel partners around the world. To learn more about our extensive product and service offerings, visit **dowcorning.com** or email **industrial@dowcorning.com**.

While all products listed in this selection guide are *Dow Corning*® brand, those marked with a "△" are sold via the XIAMETER® Web-enabled business model from Dow Corning, which offers high-quality, reliable standard silicone products online, at market-based prices. Visit **www.xiameter.com** to order these products or to learn more.

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DOW CORNING

We help you invent the future.™

DOW CORNING

Americas Selection Guide

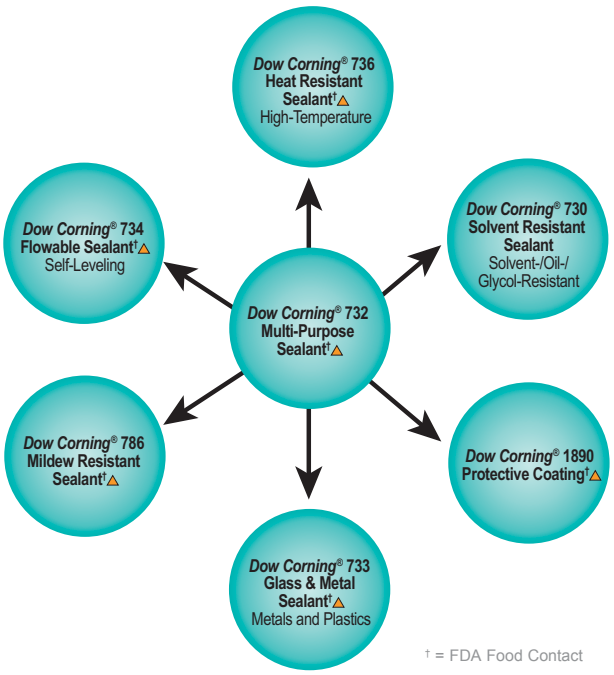
Dow Corning® brand

Silicone Sealants for Industrial Assembly and Maintenance

Even in harsh environments or extreme temperatures, many *Dow Corning*® brand sealants can meet your needs.

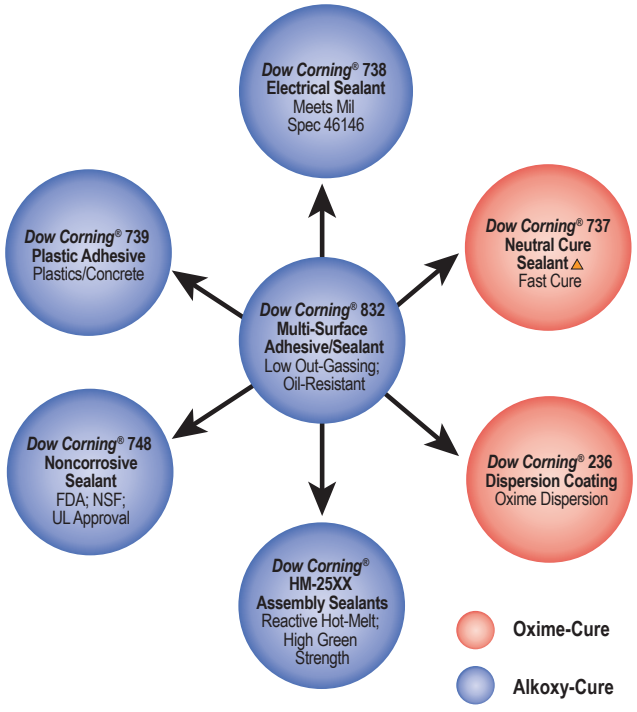
This guide will assist you in selecting the best sealant for your specific application needs. Technical data sheets are available for all products.

Acetoxy Selection Guide



† = FDA Food Contact

Neutral-Cure RTV Selection Guide



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Acetoxy

Dow Corning® 730 Solvent Resistant Sealant

- **Primary Use** – Bonding, sealing and caulking where resistance to fuels, oils and solvents is required.
- **Applications** – 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.*

Dow Corning® 732 Multi-Purpose Sealant △

- **Primary Use** – General-purpose bonding and sealing; making formed-in-place gaskets.
- **Applications** – 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 name plates; making formed-in-place gaskets for compressors, gearboxes and pumps.*

Dow Corning® 733 Glass & Metal Sealant △

- **Primary Use** – Bonding and sealing.
- **Applications** – Bonding and sealing appliances, heavy equipment, marine equipment and recreational vehicles.*

Dow Corning® 734 Flowable Sealant △

- **Primary Use** – To fill voids, cracks and crevices; conformal coating for connections and battery terminals.
- **Applications** – Coating mechanical devices; making formed-in-place gaskets for compressors, gearboxes and pumps; potting electrical terminals; sealing ammunition fuses, trailers and truck cabs.*

Dow Corning® 736 Heat Resistant Sealant △

- **Primary Use** – Sealing and bonding applications exposed to temperatures as high as 600°F (315°C).
- **Applications** – Sealing fired heaters, flanged pipe joints, access doors, moving oven belts, industrial ovens and boilers, plywood drying ovens, bag filters on smoke stacks, and flues on gas appliances; bonding appliance parts and electrical and electronic equipment; caulking joints in sheet metal stacks and ductwork.*

Dow Corning® 786 Mildew Resistant Sealant △

- **Primary Use** – Interior sealing applications exposed to high moisture.
- **Applications** – Sealing tubs, sinks, plumbing fixtures and interior walls.*

Dow Corning® 1890 Protective Coating △

- **Primary Use** – General-purpose coating for protecting motors and electrical equipment; maintenance coating.
- **Special Characteristics** – 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.
- **Applications** – Coating motor windings, bus bars, splines, connectors, transformers, insulators, trailers, truck cabs and wooden pole tops.*

Oxime

Dow Corning® 236 Dispersion Coating

- **Primary Use** – Release coating for surfaces that offer protection from weathering, corrosion and dirt.
- **Special Characteristics** – Excellent release; weather resistance; excellent electrical insulator.
- **Applications** – Easing clean-up of latex manufacturing equipment and paint-spraying operations and removal of flash in urethane and polyester molding; preventing adhesion and build-up on conveyor belts, paper and fabric rolls; reducing build-up on waste-handling equipment.*

Dow Corning® 737 Neutral Cure Sealant ▲

- **Primary Use** – General manufacturing assembly operations where quick cure and good adhesion are important.
- **Applications** – OEM and assembly applications; substitute for mechanical fasteners on appliances; adhering plastic moldings to plastic substrates; waterproofing components, sealing coaxial connectors, protecting instrumentation; may be used on concrete and masonry.*

Alkoxy

Dow Corning® 738 Electrical Sealant

- **Primary Use** – Bonding and sealing.
- **Applications** – Bonding and sealing corrosion-sensitive electrical and electronic equipment.*

Dow Corning® 739 Plastic Adhesive

- **Primary Use** – Adhering, bonding and sealing plastic and metal; making formed-in-place gaskets.
- **Applications** – 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.*

Dow Corning® 748 Noncorrosive Sealant

- **Primary Use** – Electrical sealing applications; food processing and transportation applications.
- **Applications** – 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.*

Dow Corning® 832 Multi-Surface Adhesive/Sealant

- **Primary Use** – Bonding, sealing and assembly where a noncorrosive sealant is required.
- **Applications** – Sealing and repairing roof penetrations, gutters, concrete floor seams, marine equipment and windows, pipes and threaded connections; assembling original equipment components.*

Cure Type	Product	Special Features	Temperature Range °F/°C (Intermittent)[1]	Color(s)
Acetoxy	*Dow Corning*® 730 Solvent Resistant Sealant	Solvent-resistant	-85 to 500/-65 to 260	wht
Acetoxy	*Dow Corning*® 732 Multi-Purpose Sealant ▲	Multi-purpose, FDA, NSF	-76 to 350 (400)/-60 to 177 (204)	alum, blk, clr, wht
Acetoxy	*Dow Corning*® 733 Glass & Metal Sealant ▲	Good adhesion	-70 to 350 (400)/-57 to 177 (204)	alum, blk, clr, wht
Acetoxy	*Dow Corning*® 734 Flowable Sealant ▲	Flowable, self-leveling	-85 to 356/-65 to 180	clr, wht
Acetoxy	*Dow Corning*® 736 Heat Resistant Sealant ▲	High-temperature resistant	-85 to 500 (599)/-65 to 260 (315)	red
Acetoxy	*Dow Corning*® 786 Mildew Resistant Sealant ▲	Mildew-resistant	-76 to 350 (400)/-60 to 177 (204)	clr, wht
Acetoxy	*Dow Corning*® 1890 Protective Coating ▲	Coating, visc. 400 poise	-75 to 350 (400)/-59 to 177 (204)	gry
Alkoxy | Oxime	*Dow Corning*® 236 Dispersion Coating	Coating, visc. 675 cps	-40 to 300/-40 to 150	wht
Alkoxy | Oxime	*Dow Corning*® 737 Neutral Cure Sealant ▲	Fast cure	-85 to 350/-65 to 177	blk, clr, wht
Alkoxy	*Dow Corning*® 738 Electrical Sealant	Electrical sealant	-80 to 356/-62 to 180	wht
Alkoxy	*Dow Corning*® 739 Plastic Adhesive	Plastic adhesive	-65 to 300 (350)/-54 to 149 (177)	blk, gry, wht
Alkoxy	*Dow Corning*® 748 Noncorrosive Sealant	FDA- and NSF-approved	-65 to 350 (400)/-55 to 177 (204)	off wht
Alkoxy	*Dow Corning*® 832 Multi-Surface Adhesive/Sealant	Excellent adhesion	-67 to 300 (350)/-55 to 149 (177)	blk, gry, off wht
Alkoxy	*Dow Corning*® HM-2500 Assembly Sealant	Immediate adhesion	-50 to 300/-45 to 150	ultra clr
Alkoxy	*Dow Corning*® HM-2510 Assembly Sealant	Immediate adhesion	-50 to 300/-45 to 150	ultra clr
Alkoxy	*Dow Corning*® HM-2520 Assembly Sealant	Immediate adhesion	-50 to 300/-45 to 150	clr

[1]Estimated service temperatures based on product formulation and laboratory testing. Actual service temperature range is dependent on other factors, including the specific application environment.
[2]Meets FDA CFR 21.177.2600
[3]Meets FDA CFR 21.177.2600 and FDA CFR 21.175.105

Dow Corning® HM-25XX Assembly Sealants

- **Primary Use** – Assembly, bonding, sealing, gasketing and other applications that require instant adhesion and high green strength.
- **Special Characteristics** – 100% silicone; instant adhesion; cures to long-lasting silicone sealant.
- **Applications** – Hot-melt reactive sealants work well in OEM and assembly applications; very good adhesion to most substrates without the need of a primer. With instant adhesion, parts can be shipped out quickly. Long open time, long pot life and low VOC.

Primers and Cleaners

Dow Corning® PR-1200 RTV Prime Coat

- **Primary Use** – Significantly improves the adhesion of silicone sealants to a wide variety of challenging substrates.
- **Applications** – Improves the adhesion of silicone sealants, coatings and rubber to masonry, wood, granite, metals, glass, ceramics, plastics, rubbers and coatings.
- **Container Sizes** – Can, pail and drum.
- **Colors** – Clear, red.

Dow Corning® P5200 Adhesion Promoter

- **Primary Use** – Significantly improves the adhesion of silicone sealants with low VOC to a wide variety of challenging substrates.
- **Applications** – Improves the adhesion of silicone sealants, coatings and rubber to masonry, wood, granite, plastics, rubbers and coatings.
- **Container Size** – Can.
- **Colors** – Clear, red.

Dow Corning® OS-2 Silicone Cleaner and Surface Prep Solvent

- **Primary Use** – Removing oils, greases, waxes and sealant residue – especially silicone; cleaning surfaces to be painted, bonded or sealed; replacing VOC solvents.
- **Special Characteristics** – VOC exempt (VOC = 0 g/L). Certified as a Clean Air Solvent by the California South Coast Air Quality Management District. Easy-to-use; low in toxicity; essentially odorless. Safe on plastics and non-corrosive to metals. Ideal for diluting and tailoring the viscosity of silicones.
- **Applications** – Cleaning plastics, metals and other surfaces or preparing these surfaces for painting, bonding or sealing.
- **Limitations** – This product may not remove highly polar contaminants.
- **Container Sizes** – Can, pail and drum.

*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.

Skin-Over Time (min)	Tack Free Time (min)	Extrusion Rate (g/min)	Durometer (Shore A)	Tensile PSI	Elongation	Specific Gravity	Listings/ Specifications	Container Sizes Listed
5	25	250	40	300	200	1.40		tube, cartridge, pail, drum
10	20	350	25	325	600	1.04	FDA 21[2], NSF 51, NSF 61, UL, MIL spec	tube, cartridge, pail, drum
10	15	350	25	335	500	1.03	NSF 51, UL, FDA	cartridge, pail, drum
7	13	650	27	222	315	1.03	FDA 21[2], NSF 51, UL, MIL spec	tube, cartridge, pail, drum
10	17	390	26	350	600	1.04	FDA 21[2], NSF 51, UL, MIL spec	tube, cartridge, pail, drum
5	20	350	25	325	600	1.04	FDA 21[3], NSF 51	cartridge, pail, drum
15	25	—	21	—	—	1.03	FDA 21[2]	pail, drum
85	120	n/a	20	325	500	1.64		can, pail
5	14	395	33	175	300	1.04	UL	tube, cartridge, pail, drum
20	120	550	35	385	535	1.03	UL, MIL-A-46146 Type 1	tube, cartridge, pail, drum
25	45	110	37	225	640	1.52	UL	cartridge, pail, drum
15	30	150	25	275	350	1.33	FDA 21[3], NSF 51, NSF 61, UL	tube, cartridge, pail, drum
20	50	133	35	350	420	1.33	UL	cartridge, pail, drum
—	—	—	60	350	1000	1.06	FDA 21[2], NSF 51, NSF 61, UL	pail, drum
—	—	—	47	390	760	1.07	FDA 21[2], NSF 51, NSF 61	pail, drum
—	—	—	33	700	1000	1.12	FDA 21[2], NSF 51, NSF 61	pail, drum