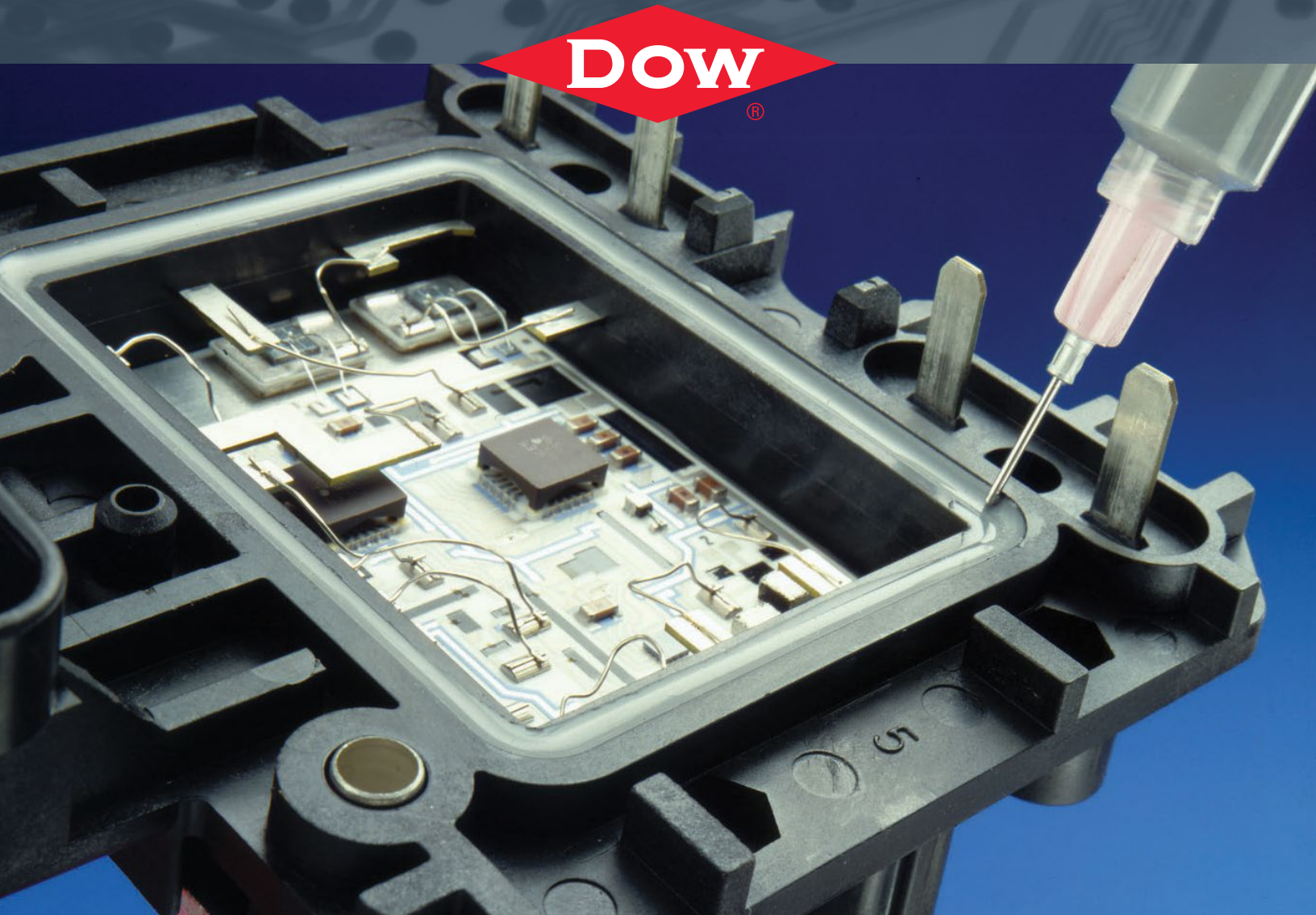


*Imagine* enhance productivity,  
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minimize stress with advanced  
silicone adhesives and sealants

Adhesives and sealants selection guide

**DOW**

®





## Why choose Dow Performance Silicones?

Dow Performance Silicones has been a global leader in silicon-based adhesives for more than seventy years. Headquartered in Michigan, USA, we maintain manufacturing sites, sales and customer service offices, and research and development labs in every major geographic market worldwide, to ensure you receive fast, reliable support for your processing and application development needs.

### Proven product technology

To describe Dow Performance Silicones is to describe the history and evolution of silicone technology, which generated a legacy of innovative and reliable products under the Dow Corning label for more than seven decades. Today that legacy continues under the DOWSIL™ brand name, which encompasses more than 7,000 proven silicone products and services. Few companies match our adhesives portfolio with comparable breadth, which ranges from time-tested, proven products to unique and versatile technologies like hot melt adhesives.

### Extensive know-how

Dow Performance Silicones multiplies the value of its products with deep in-house expertise, as well as an extended network of industry resources.

### Collaborative culture

Dow Performance Silicones works closely with you to help reduce time, risk and cost at every stage of your new product development.

### Stability

For over seven decades, Dow Performance Silicones has been a global leader, who invests in manufacturing and quality, to help fuel customer innovation through a consistent supply of proven silicone products.



## Why Dow adhesives/sealants?

### Innovation applied

Whether your module or assembly demands an adhesive that offers proven performance, flexible processing options, or a unique solution to a challenging problem, Dow Performance Silicones can help you achieve your most challenging goals. As a class of materials, silicones generally offer demonstrable benefits over organic-based urethane and epoxy solutions, including:

- Superior stability and reliability across temperatures from -45°C to 275°C
- More physically robust under mechanical stress caused by thermal cycling or mismatched coefficient of thermal expansion
- Extraordinary protection against shock and vibration
- Greater hydro-stability and stronger resistance to chemicals
- Eliminating many of the toxicity issues of organics, helping to reduce special handling precautions
- Simpler processing without the need for oven drying or concerns about exotherms
- Stable pot life and ease of reworkability
- A wide selection range of special features targeting multiple functions like thermal management, improved processing efficiency and others



## Choosing the right adhesive or sealant

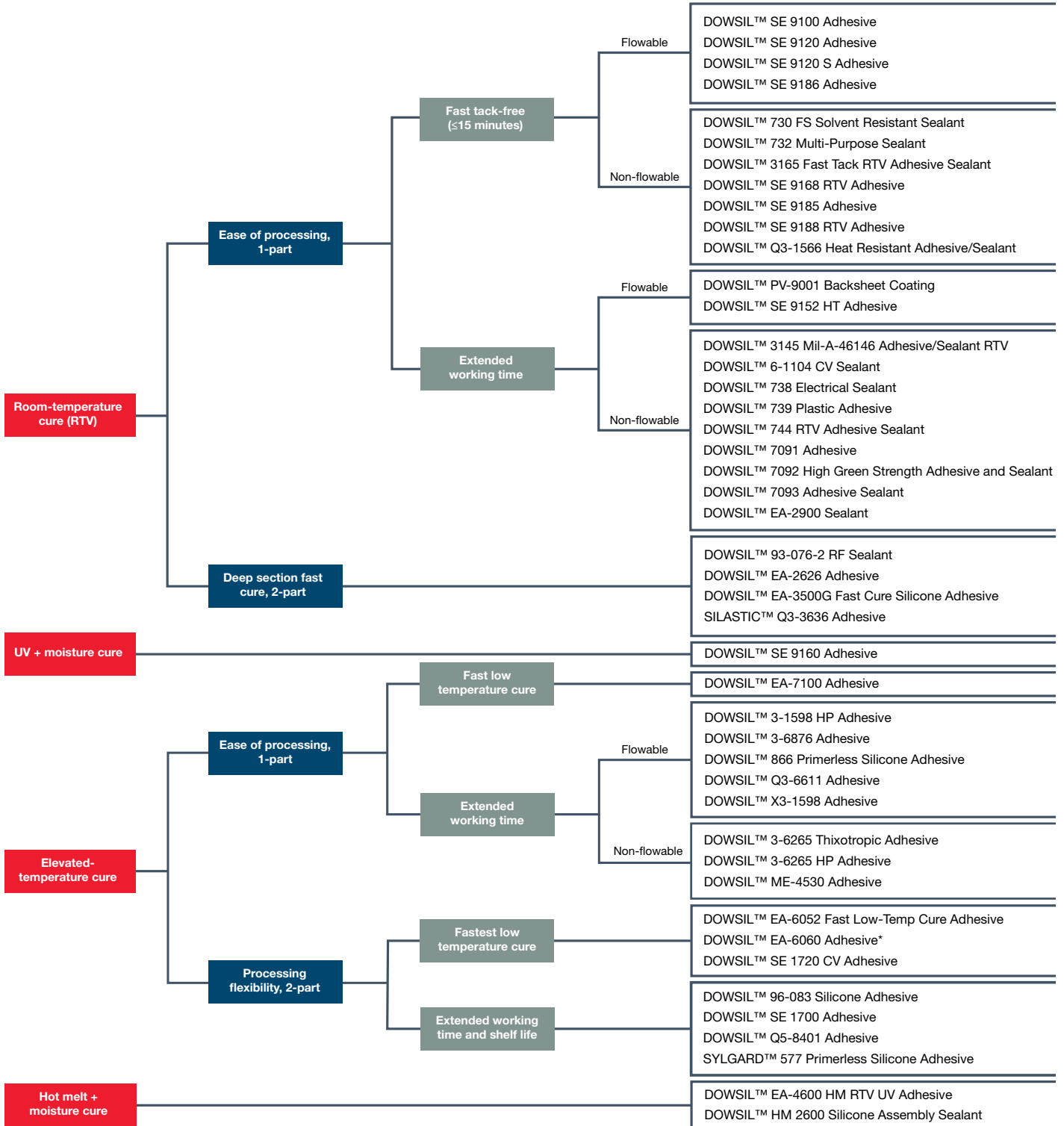
### What's best for your application?

The silicone adhesives in Dow's portfolio share many common benefits. Our silicone adhesives, for example, perform reliably from -45°C up to 200°C (or even 275°C in some cases) – a much wider temperature range than organic solutions provide. Most are self-priming materials that form long-lasting bonds, without the need for mechanical fastening and clamping, and many are reworkable to allow for easier module repair. DOWSIL™ adhesives are typically solventless solutions that minimize the need for special storage, handling, or ventilation.

In addition, many of the adhesive products we offer are recognized by various specification authorities, including Underwriter Laboratories and Mil Spec qualifications, to ease compliance for finished parts.

While you may see some similar benefits appear repeatedly throughout these pages, this guide can help you more quickly select the grade, with the optimal performance properties, for your process and adhesive/sealant choice.

# Adhesives/sealants



\*Product only available in Europe



## Choosing an adhesive

### For fast or simple adhesion

While performance properties certainly influence selection of the right adhesive for your application, the search frequently begins with practical processing considerations. Dow's broad selection encompasses adhesives that bond easily at low temperatures, to grades that cure within minutes – either through a unique chemical reaction or with the application of heat.

#### **Simple, room-temperature cures**

This family of one-part, room-temperature vulcanizate (RTV) silicones encompasses our simplest “dispense and forget” adhesive options. They require no mixing or oven equipment to process, and some achieve green strength within minutes to facilitate part assembly. Others allow longer working times

to permit adhesives to spread evenly across wide or complex surfaces before cure. Also see our unique Hot Melt RTV Silicone Adhesives on page 6.

#### **Fast-and controlled-cure adhesives**

DOWSIL™ accelerated heat-cure adhesives put greater control and processing flexibility into your hands. Standard grades available as one- or two-part formulations enable adhesion in as little as 20-30 minutes at ambient temperatures of 150°C. Select, high-performance grades can cure within minutes at 150°C, or deliver full adhesion within 50 minutes at a more energy-efficient 70°C.



## Choosing an adhesive

### For specialized processing and performance needs

Dow's broad portfolio of silicone adhesives encompasses a versatile selection of solutions tailored to meet your most demanding application or processing challenge.

#### Specialized fast-cure adhesive

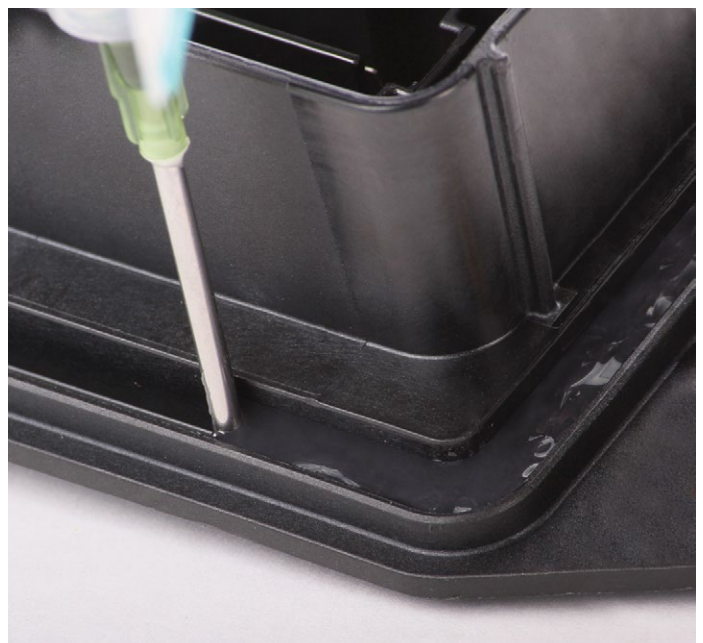
DOWSIL™ EA-7100 Adhesive significantly expands design and assembly options by enabling strong bonds to a wide variety of substrates, including metals, ceramics, glass and laminates, as well as plastics such as polyethylene, polycarbonate and liquid crystal polymer. In addition, DOWSIL™ EA-7100 Adhesive's innovative chemistry allows up to 50 percent faster cure time than conventional heat-cure platinum catalyzed silicone adhesive systems. In select applications, cohesive adhesion may be complete within three minutes. As a result, this one-part, heat-cure adhesive may greatly accelerate processing, reduce energy use and cut material costs.

#### Fast, flexible UV-cure adhesive

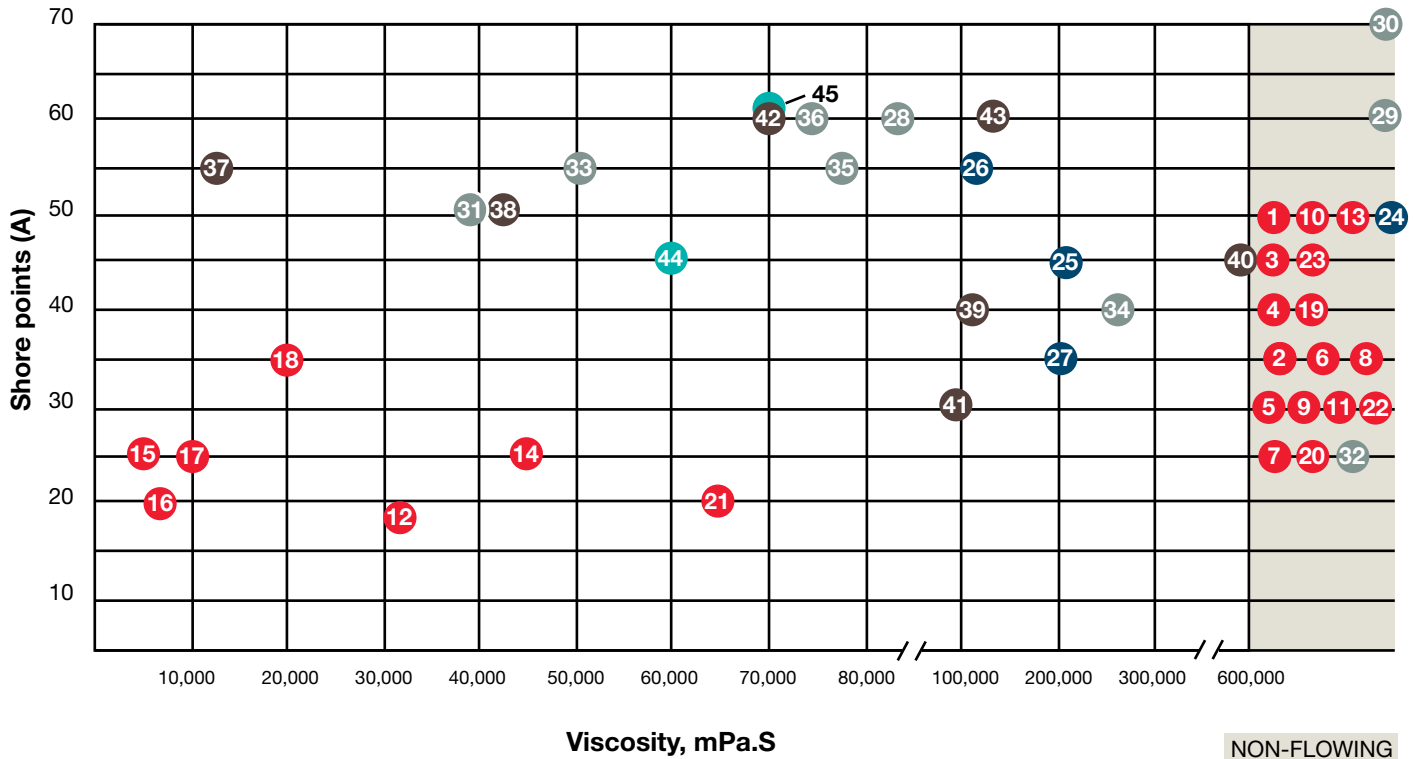
Part of Dow's portfolio of room-temperature cure (RTV) silicone adhesives, DOWSIL™ SE 9160 Adhesive offers the option of faster in-line processing through irradiation with ultraviolet (UV) energy at densities as low as 4,000 mJ/cm<sup>2</sup> to component assembly to continue within seconds. Higher densities (10,000 mJ/cm<sup>2</sup>) enable the material to quickly achieve full, deep section cure. DOWSIL™ SE 9160 Adhesive bonds well to most substrates, delivers excellent reworkability with no residue, exhibits high flow to fill narrow gaps, and enables cure-in-place-gaskets that offer effective seals compatible with IPX7-rated water resistance.

#### Simple and fast: Hot melt adhesives

DOWSIL™ Hot Melt Adhesives process simply and quickly, offering a unique combination of properties that translate into a lower total cost of ownership vs. conventional thermal cure adhesives and especially double-sided tape. This special class of reactive, neutral cure adhesives dispense easily as a liquid melt, and quickly achieves green strength. DOWSIL™ Hot Melt Adhesives deliver primerless adhesion to glass, plastics, metals, and many other substrates. Consequently, they are helping to enable innovative next-generation products that are more durable, reliable, and waterproof.



# Viscosity/hardness profile



- 1 DOWSIL™ 3145 RTV Mil-A-46146 Adhesive/Sealant
- 2 DOWSIL™ 3165 Fast Tack RTV Adhesive Sealant
- 3 DOWSIL™ 6-1104 CV Sealant
- 4 DOWSIL™ 730 FS Solvent Resistant Sealant
- 5 DOWSIL™ 732 Multi-Purpose Sealant
- 6 DOWSIL™ 738 Electrical Sealant
- 7 DOWSIL™ 739 Plastic Adhesive
- 8 DOWSIL™ 744 RTV Adhesive Sealant
- 9 DOWSIL™ 7091 Adhesive
- 10 DOWSIL™ 7092 High Green Strength Adhesive and Sealant
- 11 DOWSIL™ 7093 Adhesive Sealant
- 12 DOWSIL™ PV-9001 Backsheet Coating
- 13 DOWSIL™ EA-2900 Sealant
- 14 DOWSIL™ SE 9100 Adhesive
- 15 DOWSIL™ SE 9120 Adhesive
- 16 DOWSIL™ SE 9120 S Adhesive

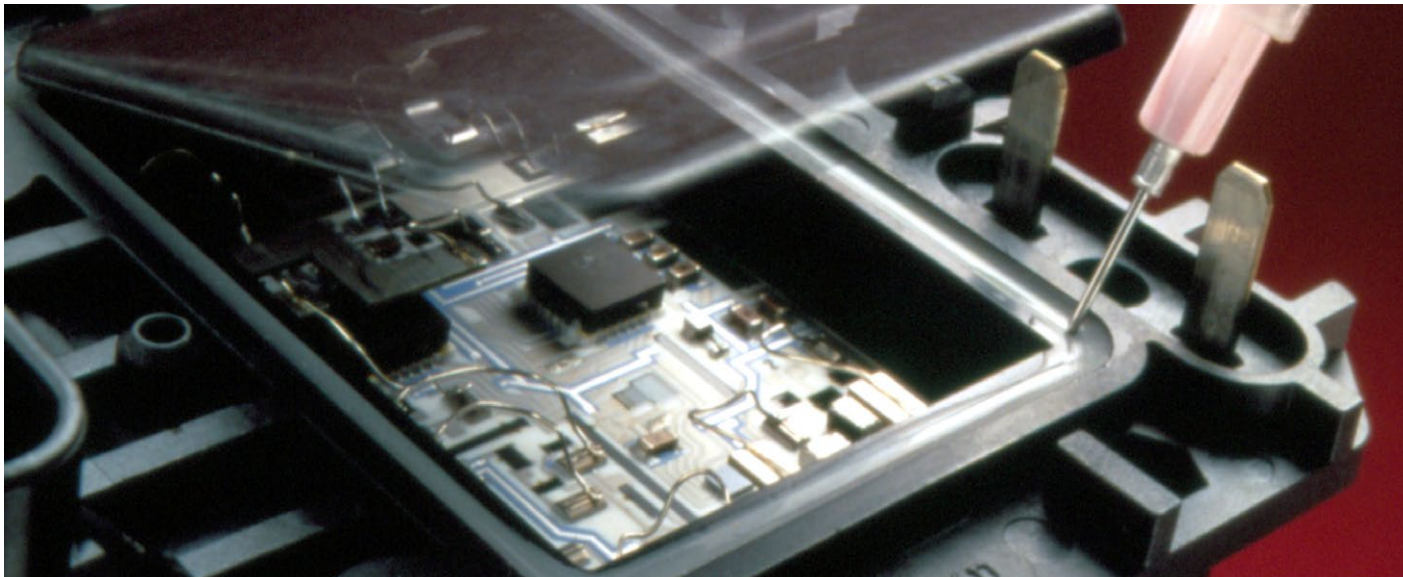
- 17 DOWSIL™ SE 9152 HT Adhesive
- 18 DOWSIL™ SE 9160 Adhesive
- 19 DOWSIL™ SE 9168 RTV Adhesive
- 20 DOWSIL™ SE 9185 Adhesive
- 21 DOWSIL™ SE 9186 Sealant
- 22 DOWSIL™ SE 9188 RTV Adhesive
- 23 DOWSIL™ Q3-1566 Heat Resistant Adhesive/Sealant
- 24 DOWSIL™ 93-076-2 RF Sealant
- 25 DOWSIL™ EA-2626 Adhesive
- 26 DOWSIL™ EA-3500G Fast Cure Silicone Adhesive
- 27 SILASTIC™ Q3-3636 Adhesive
- 28 DOWSIL™ 3-1598 HP Adhesive
- 29 DOWSIL™ 3-6265 Thixotropic Adhesive
- 30 DOWSIL™ 3-6265 HP Adhesive
- 31 DOWSIL™ 3-6876 Adhesive
- 32 DOWSIL™ ME-4530 Adhesive

- 33 DOWSIL™ 866 Primerless Silicone Adhesive
- 34 DOWSIL™ EA-7100 Adhesive
- 35 DOWSIL™ Q3-6611 Adhesive
- 36 DOWSIL™ X3-1598 Adhesive
- 37 DOWSIL™ 96-083 Silicone Adhesive
- 38 DOWSIL™ EA-6052 Fast Low-Temp Cure Adhesive
- 39 DOWSIL™ EA-6060 Adhesive\*
- 40 DOWSIL™ SE 1700 Adhesive
- 41 DOWSIL™ SE 1720 CV Adhesive
- 42 DOWSIL™ Q5-8401 Adhesive
- 43 SYLGARD™ 577 Primerless Silicone Adhesive
- 44 DOWSIL™ EA-4600 HM RTV UV Adhesive
- 45 DOWSIL™ HM 2600 Silicone Assembly Sealant

\*Product only available in Europe

- One-part moisture cure (RTV)
- Two-part condensation cure (RTV)
- One-part heat cure
- Two-part heat cure
- One-part hot melt moisture cure
- ☆ Shore 00

# One-part moisture cure (RTV)\*



Product name	Features & benefits	Color	Viscosity (mPa·sec)	Cure system (Mixing ratio)	Working time		Cure time/ conditions for adhesion	Durometer (Hardness)		Tensile strength (MPa)	Elongation (%)	Adhesion			Agency listing**	
					Tack-free time (min)	Pot life (hr)		Shore A	Shore 00			Unprimed lap shear (MPa)	Peel strength (N/cm)	Dielectric strength (kV/mm)		
DOWSIL™ 3145 RTV Mil-A-46146 Adhesive/ Sealant	Very high tensile strength and elongation; Proven performance and an aerospace standard for the most demanding applications	Clear	Non-flowing	Non-corrosive moisture cure	70	—	3-7 days @ 25°C	1.10	50	—	6	700	3.5 (Al)	180 (Al)	19	Mil-A-46146, Group II, Type I; UL 94 HB
	Enhanced thermal stability compared to clear version	Gray	Non-flowing	Non-corrosive moisture cure	80	—	3-7 days @ 25°C	1.12	50	—	7	700	3.5 (Al)	180 (Al)	19	Mil-A-46146, Group II/III, Type 1
DOWSIL™ 3165 Fast Tack RTV Adhesive Sealant	Fast, tack-free time, with good green strength	Gray	Non-flowing	Non-corrosive moisture cure	5	—	3-7 days @ 25°C	1.35	35	—	1	175	1.5 (Al)	20 (Al)	20	UL 94 V-1
DOWSIL™ 6-1104 CV Sealant	High tensile tear strength and elongation; Extremely low levels of Si volatilities; Proven for space-grade applications	Translucent	Non-flowing	Non-corrosive moisture cure	65	—	3-7 days @ 25°C	1.10	45	—	6.7	700	1.5 (Al)	20 (Al)	21	—

\*One-part moisture cure adhesives are generally cured at room temperature and in an environment of 30 to 80 percent relative humidity. Greater than 90 percent of full physical properties should be attained within 24 to 72 hours and varies according to product. These adhesives are not typically used in highly confined spaces or where a deep section cure is required. They cure from the exposed surface inward at a rate of about 6 mm per 7 days. Cure progresses from the outer exposed surface and is dependent on the moisture in the air. Mild heat below 60°C may be used to increase through-put by accelerating the cure.

\*\*Visit UL.com for specific details.



# One-part moisture cure (RTV)\* (continued)

Product name	Features & benefits	Color	Viscosity (mPa. sec)	Cure system (Mixing ratio)	Working time		Cure time/ conditions for adhesion	Durometer (Hardness)		Tensile strength (MPa)	Elongation (%)	Adhesion			Agency listing**	
					Tack-free time (min)	Pot life (hr)		Shore A	Shore 00			Unprimed lap shear (MPa)	Peel strength (N/cm)	Dielectric strength (kV/mm)		
DOWSIL™ 730 FS Solvent Resistant Sealant	An aerospace proven fluorosilicone that retains its properties under exposure to fuels, oils, and solvents	White	Non-flowing	Acetoxy cure	10	—	3-7 days @ 25°C	1.44	40	—	3.3	225	—	70 (Al)	15	—
DOWSIL™ 732 Multi-Purpose Sealant	A well established silicone that cures to a tough, flexible rubber; FDA and aerospace approved	White, black, clear, aluminum	Non-flowing	Acetoxy cure	15	—	3-7 days @ 25°C	1.03	30	—	2.0	525	—	50 (Al)	17	Mil-A-46106, FDA 177.2600; UL 94 HB
DOWSIL™ 738 Electrical Sealant	A proven silicone sealant for use around electrical and electronic application	White	Non-flowing	Non-corrosive moisture cure	90	—	3-7 days @ 25°C	1.04	35	—	2.7	500	—	40 (Al)	19	Mil-A-46146, Group I, Type I
DOWSIL™ 739 Plastic Adhesive	An industry standard for bonding to many plastics	Black, white, gray	Non-flowing	Non-corrosive moisture cure	75	—	3-7 days @ 25°C	1.40	25	—	1.5	500	0.7 (Al)	—	25	UL 94 V-1
DOWSIL™ 744 RTV Adhesive Sealant	Electronic grade with high adhesion to many metals and plastics	White	Non-flowing	Non-corrosive moisture cure	40	—	3-7 days @ 25°C	1.43	35	—	2.5	600	1.5 (PA66GF30/Al)	—	16	UL 94 HB
DOWSIL™ 7091 Adhesive	Automotive grade; Excellent adhesion to many substrates; Used as a Formed-in-Place gasket (FIPG) material	Black, white, gray	Non-flowing	Non-corrosive moisture cure	28	—	3-7 days @ 25°C	1.43	30	—	2.5	680	1.5 (PA66GF30/Al)	—	16	UL 94 V-1
DOWSIL™ 7092 High Green Strength Adhesive and Sealant	Provides improved immediate green strength — saves time as no buffer time for strength build-up required	Black, white	Non-flowing	Non-corrosive moisture cure	30	—	3-7 days @ 25°C	1.58	50	—	2.0	425	1-1.5 (Steel, Al, PC, PA, PBT, PP, PMMA, ABS)	—	17	UL 94 V-1
DOWSIL™ 7093 Adhesive Sealant	Extra low modulus for high movement capability	White, black, gray	Non-flowing	Non-corrosive moisture cure	30	—	3-7 days @ 25°C	1.50	30	—	2.0	750	100% CF (Al, glass)	—	13	—
DOWSIL™ PV-9001 Backsheet Coating	Flowable and self-leveling	Black, white	33,000	Non-corrosive moisture cure	40	—	3-7 days @ 25°C	1.30	20	—	1.2	400	0.8 (Glass)	—	—	UL 94 HB
DOWSIL™ EA-2900 Sealant	High green strength; Fast assembly with improved UL flame resistance	White	Non-flowing	Non-corrosive moisture cure	20	—	3-7 days @ 25°C	1.52	50	—	2.0	400	1.5 (Al, PC, PMMA, glass)	—	17	UL 94 V-1

\*One-part moisture cure adhesives are generally cured at room temperature and in an environment of 30 to 80 percent relative humidity. Greater than 90 percent of full physical properties should be attained within 24 to 72 hours and varies according to product. These adhesives are not typically used in highly confined spaces or where a deep section cure is required. They cure from the exposed surface inward at a rate of about 6 mm per 7 days. Cure progresses from the outer exposed surface and is dependent on the moisture in the air. Mild heat below 60°C may be used to increase through-put by accelerating the cure.

\*\*Visit UL.com for specific details.

# One-part moisture cure (RTV)\* (continued)

Product name	Features & benefits	Color	Viscosity (mPa·sec)	Cure system (Mixing ratio)	Working time		Cure time/ conditions for adhesion	Specific gravity		Durometer (Hardness)		Tensile strength (MPa)	Elongation (%)	Adhesion			Agency listing**
					Tack-free time (min)	Pot life (hr)		Shore A	Shore 00	Unprimed lap shear (MPa)	Peel strength (N/cm)			Dielectric strength (kV/mm)			
DOWSIL™ SE 9100 Adhesive	Repairable adhesive with controlled silicone volatility	Black	45,000	Non-corrosive moisture cure	10	–	NA	1.05	25	–	2.5	400	0.5 (Glass)	–	–	–	
DOWSIL™ SE 9120 Adhesive	Highly flowable with controlled silicone volatility	Clear	6,500	Non-corrosive moisture cure	10	–	3-7 days @ 25°C	1.02	25	–	1.5	375	–	–	23	–	
DOWSIL™ SE 9120 S Adhesive	White repairable version of DOWSIL™ SE 9120 Adhesive	White	7,000	Non-corrosive moisture cure	10	–	3-7 days @ 25°C	1.03	20	–	1.5	400	–	–	23	–	
DOWSIL™ SE 9152 HT Adhesive	Flowable with heat resistance for sustained 275°C exposure	Reddish-brown	10,000	Non-corrosive moisture cure	20	–	3-7 days @ 25°C	1.05	25	–	2	300	5.5 (Glass)	–	25	–	
DOWSIL™ SE 9160 Adhesive	Repairable, hybrid (UV cure with secondary moisture cure) for faster in-line processing	Bluish	20,000	UV cure with secondary moisture cure	30	–	3-7 days @ 25°C	1.04	35	–	3	250	0.5 (Glass)	–	–	–	
DOWSIL™ SE 9168 RTV Adhesive	Controlled silicone volatility with top UL flame resistance	Gray	Non-flowing	Non-corrosive moisture cure	5	–	3-7 days @ 25°C	1.25	40	–	3.5	375	1.5 (Glass)	–	26	UL 94 V-1	
DOWSIL™ SE 9185 Adhesive	Non-flowing; High elongation for added stress relief, with controlled silicone volatility	Translucent/white	Non-flowing	Non-corrosive moisture cure	10	–	3-7 days @ 25°C	1.04	25	–	3.0	500	1 (Glass)	–	22	–	
DOWSIL™ SE 9186 Sealant Adhesive	Self-leveling with controlled silicone volatility	Translucent/white	65,000	Non-corrosive moisture cure	10	–	3-7 days @ 25°C	1.03	20	–	2.5	550	1 (Glass)	–	23	–	
DOWSIL™ SE 9188 RTV Adhesive	Lower modulus for improved stress relief, with controlled silicone volatility	Gray	Non-flowing	Non-corrosive moisture cure	10	–	3-7 days @ 25°C	1.29	30	–	3.0	400	1 (Glass)	–	30	UL 94 V-1	
DOWSIL™ Q3-1566 Heat Resistant Adhesive/ Sealant	High temperature resistant, with broad adhesion to many substrates	Black	Non-flowing	Acetoxy cure	5	–	3-7 days @ 25°C	1.06	45	–	3.5	350	1.9 (Steel)	–	–	–	

\*One-part moisture cure adhesives are generally cured at room temperature and in an environment of 30 to 80 percent relative humidity. Greater than 90 percent of full physical properties should be attained within 24 to 72 hours and varies according to product. These adhesives are not typically used in highly confined spaces or where a deep section cure is required. They cure from the exposed surface inward at a rate of about 6 mm per 7 days. Cure progresses from the outer exposed surface and is dependent on the moisture in the air. Mild heat below 60°C may be used to increase through-put by accelerating the cure.

\*\*Visit UL.com for specific details.

## Two-part condensation cure (RTV)



	Product name	Features & benefits	Color	Viscosity (mPa. sec)	Cure system (Mixing ratio)	Working time		Cure time/ conditions for adhesion	Durometer (Hardness)		Tensile strength (MPa)		Adhesion			Agency listing**	
						Tack-free time (min)	Pot life (hr)		Shore A	Shore 00	Tensile strength (MPa)	Elongation (%)	Unprimed lap shear (MPa)	Peel strength (N/cm)	Dielectric strength (kV/mm)		
Two-part condensation cure (RTV)	DOWSIL™ 93-076-2 RF Sealant	Aero-space recognized, high strength silicone adhesive	Gray/ turquoise	Non-flowing	Moisture cure (10:1)	120	—	23 hrs @ 25°C	1.13	50	—	5.5	425	—	133	—	—
	DOWSIL™ EA-2626 Adhesive	Automotive-grade adhesive with UV and heat resistance that has fast, in-depth cure	White/ gray, special black	205,000	Neutral cure (6:1)	10	—	24 hrs @ 25°C	1.33	45	—	2.5	275	> 1.0 (PC/PP, PC/glass, PBT-ASA/glass)	100% CF	—	—
	DOWSIL™ EA 3500G Fast Cure Silicone Adhesive	Fast, room-temperature cure with good adhesion to metals, glass, and plastic	White	119,000	Moisture cure (10:1)	5	—	3-7 days @ 25°C	1.36	55	—	1.5	75	1.5 (Al, PBT)	—	23	UL 94 HB
	SILASTIC™ Q3-3636 Adhesive	Automotive-grade adhesive with reduced weight loss (fogging) at high operating temperatures; Not humidity-cure sensitive	Gray, black, special black	200,000	Moisture cure (6:1)	15	—	25 hrs @ 25°C	1.3	35	—	2	350	2	100% CF	—	—

\*\*Visit UL.com for specific details.



# One-part heat cure

Product name	Features & benefits	Color	Viscosity (mPa·sec)	Cure system (Mixing ratio)	Working time		Cure time/ conditions for adhesion	Durometer (Hardness)		Tensile strength (MPa)	Elongation (%)	Adhesion			Agency listing**	
					Tack-free time (min)	Pot life (hr)		Shore A	Shore 00			Unprimed lap shear (MPa)	Peel strength (N/cm)	Dielectric strength (kV/mm)		
DOWSIL™ 3-1598 HP Adhesive	Version of DOWSIL™ X3-1598 Adhesive with extra low void formation after cure for sensitive substrate	Black	85,000	Addition cure	–	–	3 hrs @ 100°C 30 min @ 125°C 15 min @ 150°C	1.31	60	–	5.5	250	5 (Al)	–	20	–
DOWSIL™ 3-6265 Thixotropic Adhesive	Thixotropic version of DOWSIL™ 3-6265 Adhesive	Black	1,000,000 Thixo	Addition cure	–	–	1 hr @ 125°C 30 min @ 150°C	1.34	60	–	5	175	4 (Al)	–	21	–
DOWSIL™ 3-6265 HP Adhesive	Version of DOWSIL™ 3-6265 Adhesive with extra low void formation after cure for sensitive substrates	Black	1,080,000 Thixo	Addition cure	–	–	2.5 hrs @ 100°C 25 min @ 125°C 10 min @ 150°C	1.34	70	–	6	275	5.5 (Al)	–	24	UL 94 V-1
DOWSIL™ 3-6876 Adhesive	Lower viscosity version of DOWSIL™ Q3-6611 Adhesive	Black	40,000	Addition cure	–	–	5 hrs @ 100°C 1 hr @ 125°C 30 min @ 150°C	1.31	50	–	5.5	250	4.5 (Al)	–	21	UL 94 V-1
		Gray	40,000	Addition cure	–	–	1 hr @ 125°C 30 min @ 150°C	1.31	50	–	6	175	4 (Al)	–	14	–
DOWSIL™ ME-4530 Adhesive	Aerospace recognized; Thixotropic non-corrosive adhesive with enhanced fuel and solvent resistance	Dark gray	Non-flowing	Addition cure	–	–	4 hrs @ 125°C	1.28	25	–	3.5	350	2.5 (Al)	–	–	–
DOWSIL™ 866 Primerless Silicone Adhesive	Automotive established; Flowable; High strength adhesive	Gray	50,000	Addition cure	–	–	1 hr @ 125°C 30 min @ 150°C	1.29	55	–	6.5	200	5.5 (Al)	–	20	–
DOWSIL™ EA-7100 Adhesive	Fast cure at lower temperatures; Adhesion to a wide variety of substrates that forms simultaneously with the cure; Less sensitive to contamination and cleaning	Dark gray	270,000 Thixo	Thermal Radical Cure™ and secondary moisture cure	–	–	15 min @ 100°C	1.09	40	–	3.5	250	3 (Al)	20	17	UL 94 HB
DOWSIL™ Q3-6611 Adhesive	Industry standard; Flowable; High tensile strength adhesive	Black	80,000	Addition cure	–	–	3 hrs @ 100°C 1 hr @ 125°C 30 min @ 150°C	1.31	55	–	6	225	5.5 (Al)	–	13	–
		Gray	75,000	Addition cure	–	–	1 hr @ 125°C 30 min @ 150°C	1.31	55	–	5.9	240	5.5 (Al)	–	14	–
DOWSIL™ X3-1598 Adhesive	Flowable; Automotive industry standard adhesive with high strength; UV indicator for inspection	Black	75,000	Addition cure	–	–	1 hr @ 125°C 30 min @ 150°C	1.32	60	–	5.5	225	5.5 (Al)	–	22	–

\*Visit UL.com for specific details.

# Two-part heat cure and one-part hot melt moisture cure

	Product name	Features & benefits	Color	Viscosity (mPa·sec)	Cure system (Mixing ratio)	Working time		Cure time/ conditions for adhesion	Specific gravity	Durometer (Hardness)		Tensile strength (MPa)	Elongation (%)	Adhesion			Agency listing**
						Tack-free time (min)	Pot life (hr)			Shore A	Shore 00			Unprimed lap shear (MPa)	Peel strength (N/cm)	Dielectric strength (kV/mm)	
Two-part heat cure	DOWSIL™ 96-083 Silicone Adhesive	Aerospace grade; High strength, very flowable adhesive	Translucent	11,000 (mixed)	Addition cure (10:1)	—	—	30 min @ 150°C	1.08	55	—	6	125	5 (AI)	—	20	—
	DOWSIL™ EA-6052 Fast Low-Temp Cure Adhesive	Fast curing version of DOWSIL™ 3-1598 HP Adhesive	Black	43,500 (mixed)	Addition cure (1:1)	—	6	60 min @ 60°C 30 min @ 125°C 10 min @ 150°C	1.24	50	—	3.0	175	5 (AI)	—	23	—
	DOWSIL™ EA-6060 Adhesive**	Fast, low-temperature cure adhesive with a UV indicator for inspection	Black/white	115,000 Thixo	Addition cure (1:1)	—	1	30 min @ 80°C 15 min @ 90°C 10 min @ 100°C	1.25	40	—	3.0	300	2 (AI)	—	18	UL 94 V-1
	DOWSIL™ SE 1700 Adhesive	Non-flowing; Heat cure silicone adhesive with very high strength	Clear	650,000 (mixed)	Addition cure (10:1)	—	8	30 min @ 150°C	1.11	45	—	7.5	425	2.5 (AI)	—	22	—
			White	550,000 (mixed)	Addition cure (10:1)	—	8	30 min @ 150°C	1.13	45	—	7.5	400	2.5 (AI)	—	22	—
	DOWSIL™ SE 1720 CV Adhesive	Fast, low-temperature cure, flowable adhesive with controlled silicone volatility	White	100,000 (mixed)	Addition cure (1:1)	—	6	50 min @ 70°C 30 min @ 80°C 10 min @ 100°C	1.06	30	—	3.0	375	1 (AI)	—	26	—
	DOWSIL™ Q5-8401 Adhesive	Long working time after mixing; Version of DOWSIL™ 866 Adhesive	Dark gray	70,000 (mixed)	Addition cure (1:1)	—	24	1.5 hrs @ 120°C	1.25	60	—	6.0	225	6.5	20	14	—
SYLGARD™ 577 Primerless Silicone Adhesive	Flowable adhesive with high strength and a long working time after mixing	Gray	110,000 (mixed)	Addition cure (10:1)	—	22	1 hr @ 125°C	1.29	60	—	6.5	225	6 (AI)	—	19	Mil-Spec PRF-23586F; UL 94 V-1	
One-part hot melt moisture cure	DOWSIL™ EA-4600 HM RTV UV Adhesive	A tough, electronic-grade silicone adhesive that adheres as soon as it cools to nearly all surfaces; UV indicator for inspection	Black	60,000 @ 120°C	Moisture cure	—	24	—	1.08	55	—	4.5	1,000	1.5 (PC)	10	20	UL 94 HB
	DOWSIL™ HM 2600 Silicone Assembly Sealant	A tough, clear silicone adhesive that delivers adhesion as soon as it cools to nearly all surfaces; Industrial grade	Clear	70,000 @ 120°C	Moisture cure	15	24	—	1.08	60	—	4.5	1,000	1.5 (PC)	17	20	UL 94 HB

\*Visit UL.com for specific details

\*\*Product only available in Europe

# Other considerations

## Cleaners and primers



### Primers and adhesion promoters

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 two to four 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 140°F (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™ 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 five to ten 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 is typically done by properly filling the joint first, 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 eight to 24 hours elapse before the silicone sealant can be applied.



# Other considerations

## Features and applications



	Product name	Special features	Applications
Cleaners	DOWSIL™ OS-20	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	Cleaning plastics, metals, and other surfaces, or preparing these surfaces for painting, bonding, or sealing
	DOWSIL™ DS-1000 Aqueous Silicone Cleaner	Cleaner for use on uncured silicone; Effectively emulsifies silicone oils, greases, and uncured elastomers; Effective degreaser on a wide range of applications; Aqueous solution; Complies with EU detergent regulation on biodegradability of surfactants; Nonflammable	Cleaning surfaces, equipment, and manufacturing units contaminated with nonsubstantive, uncured silicone residues
	DOWSIL™ DS-2025 Silicone Cleaning Solvent	Cleaner for use on cured silicone; Rapid digestion of cured silicone; Leaves silicone-free surface; Nonflammable; High flash point; Does not contain aromatic solvent; Nonhalogenated solvent; Low viscosity; Multiple use and recyclable	Cleaning surfaces, equipment, and manufacturing units contaminated with substantive, cured silicone residues
Primers	DOWSIL™ PR-1200 RTV Prime Coat	Significantly improves the adhesion of silicone sealants to a wide variety of challenging substrates; Available in clear and red	Improves the adhesion of silicone sealants, coatings, and rubber to masonry, wood, granite, metals, glass, ceramics, plastics, rubbers, and coatings
	DOWSIL™ P5200 Adhesion Promoter	Significantly improves the adhesion of silicone sealants with low VOC to a wide variety of challenging substrates; Available in clear and red	Improves the adhesion of silicone sealants, coatings, and rubber to masonry, wood, granite, plastics, rubbers, and coatings
	DOWSIL™ 1200 OS Primer	Useful for both moisture-curing RTV, and heat-curing silicones; Diluted in low-molecular-weight silicone fluid; Meets many international regulations for low VOC content (including European Union); Similar to DOWSIL™ P5200 Adhesion Promoter	Enhances bonding/adhesion of RTV and heat-cure silicones to ceramics, glass, wood, masonry, structural plastics (including FR-4), and many metals
	DOWSIL™ Primer-C OS	Improves adhesion of silicone sealants to many substrates, including plastics; Accelerates adhesion build of two-part structural sealants; Conforms to South Coast and Bay Air Quality Management District Regulations for Architectural Sealant Primers; User friendly with low VOC; Improves quality control processes by offering a visual confirmation of primer presence; Quick cure time; Nonstaining	In-shop or field use with one- and two-part DOWSIL™ sealants; Accelerating adhesion to coated aluminum substrates, such as polyvinylidene fluoride (PVDF), or Kynar based paint

## Learn more

We bring more than just an industry-leading portfolio of advanced silicone-based materials. As your dedicated innovation leader, we bring proven process and application expertise, a network of technical experts, a reliable global supply base, and world-class customer service.

To find out how we can support your applications, visit [dow.com/electronics](https://www.dow.com/electronics).



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