



Sealant Selection Guide



100% Silicone Sealant Comparison Chart

Product Name	UL Certified	Dispense Nozzle/ Cap?	NSF Certified	FDA Compliant	Case Packaging	Solids - %	Tensile (psi)	Elongation (%)	Temp Range	Standard Colors	Cure Type	Package Type(s)
All Purpose	YES	Premium Removable Nozzle & Cap	YES ANSI 51	YES	Premium White Logo Box	>=89%	325	550	-75F to 350F continuous 400F intermittent	White Clear Black Aluminum	Acetoxy	Sq Tube Cartridge Pail Drum
General Purpose	NO	Fixed Nozzle	YES ANSI 51	YES	Tall Kraft Box	>=85%	288	521	-75F to 350F continuous 400F intermittent	White Clear Black Aluminum	Acetoxy	Cartridge Sausage Pail Drum
HVAC/R	NO	Special Removable Nozzle & Cap	YES ANSI 51	YES	Tall Kraft Box	>=85%	285	500	-75F to 350F continuous 400F intermittent	White Clear Black Aluminum	Acetoxy	Cartridge Pail Drum
Neutral Cure	NO	Premium Removable Nozzle & Cap	NO	NO	Premium White Logo Box	>=85%	255	550	-75F to 350F continuous 400F intermittent	White Clear Black	Oxime	Cartridge Pail Drum
Extreme High Temperature	YES	Premium Removable Nozzle & Cap	YES ANSI 51	YES	Premium White Logo Box	>=88%	300	500	-85F to 500F continuous 600F intermittent	Red	Acetoxy	Sq Tube Cartridge Pail Drum
Industrial High Temperature	NO	Fixed Nozzle	YES ANSI 51	YES	Tall Kraft Box	>=85%	275	475	-85F to 500F continuous 600F intermittent	Red	Acetoxy	Cartridge Pail Drum
Fluorosilicone Sealant	NO	SEMCO Nozzle	NO	NO	Premium White Logo Box	>=90%	900	440	-85F to 482F continuous 575F intermittent	White	Acetoxy	SEMCO Pail Drum

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Underwriters Laboratory

UL Certified sealants bear the following component listing mark:

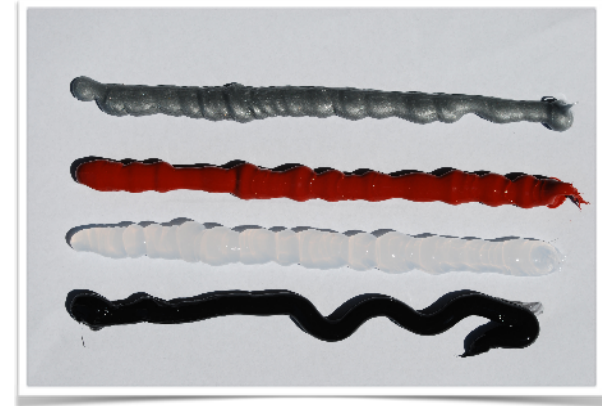


Food Equipment/Applications:

NSF/ANSI 51 Certified Sealants bear the following NSF Mark:



FDA Compliant Sealants are in compliance with regulation 21CFR177.2600



General Properties of Silicone Sealants:

- 1.) Silicones are NOT paintable (won't accept paint)
- 2.) Silicones have exceptional UV resistance (much better than organic sealants)
- 3.) Silicones have a 20-30 year in service life in many applications (extremely long lasting)
- 4.) Silicone Sealants have a very wide service temperature range
- 5.) Silicone Sealants require atmospheric moisture to cure, therefore low humidity results in a slower curing of the material vs high humidity conditions

Different Cure Types (Defined)

Cure Mechanism	By Product	Advantages	Disadvantages
Acetoxy	Acetic Acid	Good Adhesion High Temperature Food Application Certifications (NSF, FDA) Low Health & Safety Issues	Corrosive during cure Pungent Odor
Oxime	Methylethylketoxime	Good Adhesion to Plastics & Certain other substrates Low Corrosive Low Odor	Health & Safety Issue Not For Food Service Applications

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Uncured Material

Rheology - defining the flow characteristics of the uncured material.

PASTE: A non slump material that maintains its profile

FLOWABLE: A liquid that finds its own level

THIXOTROPIC: Flows when under pressure but then holds its profile

Skin Time: The time it takes for the sealant to form a skin that is dry to the touch (on the exterior surface of the sealant only)

Cure Time: The time it takes for the sealant to cure through. *Note: With all RTV's, the chemical reaction will continue after initial cure time for several days until all physical properties are achieved. For this reason, caution should be taken before testing or exerting undue demands on the adhesive until full properties are achieved.*

Cured Material

Hardness - the final hardness of the cured sealant (measured in Shore A durometer)

Elongation - The percentage the material will stretch from it's original state before breaking stated as a percentage

(i.e. 500% means that a 1" piece of material will stretch to 5" before breaking)

Tensile - Force required to break the cured material under tension

Surface Preparation: Surface preparation is critical to proper adhesion and success with the product selected. In order to get proper adhesion, surfaces should be clean, free of any foreign matter and dry. Proper surface preparation follows.

- * For metals, glass, plastics and other similar materials prepare the surface by applying a solvent such as acetone, IPA, mineral spirits, etc... Be sure to follow all safety precautions when using solvents and ensure proper ventilation.
- * For porous surfaces, use sandpaper or wire brush where needed to ensure a clean surface.
- * Do not use Silicone RTV in applications for continuous or complete water submersion.
- * Do not clean substrates with detergent soap and water as soap residue will negatively affect adhesion
- * For difficult to bond substrates: mechanical roughening, chemical treatment, use of primers, corona treatment or plasma treatment may be required. Consult with JIT Silicones technical staff for additional guidance

Substrate(s): Surfaces which the sealants are being adhered to.

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General Substrate Adhesion Guide

	All Purpose	General Purpose	HVAC/R	Neutral Cure	Extreme High Temp	Industrial High Temp	Fluorosilicone
Substrate (0-5: 5 is BEST)	5	5	5	5	5	5	5
ABS	0	0	0	0	0	0	0
Acrylic	3	3	3	5	3	3	3
Anodized Aluminum	2	2	2	5	2	2	2
Brass	2	2	2	5	2	2	2
Carbon Steel	2	2	2	5	2	2	2
Copper	2	2	2	5	2	2	2
EPDM	2	2	2	3	2	2	2
Galvanized Steel	2	2	2	5	2	2	2
Glass	5	5	5	5	5	5	5
Milled Steel	3	3	3	4	3	3	3
Milled Aluminum	3	3	3	4	3	3	3
Neoprene	5	5	5	5	5	5	5
Polycarbonate	4	4	4	5	4	4	4
Phenolic G-10	5	5	5	5	5	5	5
Polypropylene	0	0	0	0	0	0	0
Polystyrene	0	0	0	5	0	0	0
PVC	0	0	0	3	0	0	0
Silicone Rubber	5	5	5	5	5	5	5
Stainless Steel	2	2	2	5	2	2	2
Wrought Iron	3	3	3	5	3	3	3

IMPORTANT NOTE: The above chart is offered as a general guide for adhesion of RTV Silicones. This chart is not meant as a replacement for customer testing to validate suitability in specific applications, nor a guarantee of performance with specific substrates. Ultimate suitability of materials in applications is fully the responsibility of the customer.

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