



American Sealants, Inc.

"High Performance Silicones, Sealants, and Adhesives"

ASI 502 High Performance 100% Silicone

PRODUCT DATA SHEET

OEM Industrial and Construction Product

Features:

- 100% Silicone Sealant
- High Performance, Excellent Adhesion
- Resistant to UV degradation and Weathering
- Mold and Mildew Resistant
- NSF and UL listed
- Bonds to a Variety of Common Substrates
- Excellent Tensile Strength and Versatility

Additional Benefits:

- Contains No Solvents or Isocyanates which makes ASI 502 VOC Compliant
- Easy to Dispense and work with at a Variety of Extreme Temperatures
- Withstands a wide range of high heat and extreme cold
- Fast Tack Free Time

Common Applications:

ASI 502 is an excellent sealant and/ or adhesive for many Commercial, Industrial, and Construction applications where a long-term, permanently flexible bond or seal is required. Such applications include:

- OEM Applications (depending on substrates)
- Bathroom Installation/Sealing
- HVAC
- General Sealing and Waterproofing
- General Construction
- Aluminum Siding and Metal Siding
- General Industrial Applications
- Metal Building and Portable Housing Applications
- Glass Glazing
- Formed in place gaskets
- Sheet Metal Work
- Food Service Installations and Walk-in Refrigerators
- Engine Components
- Telecommunications Including Coaxial Cable Connectors
- Etc. (Can be used for various applications depending upon substrate)

Description:

ASI 502 High Performance 100% Silicone Sealant Adhesive is a one-part, moisture-curing RTV (room temperature vulcanizing) silicone that cures to a strong, silicone rubber that maintains long-term durability and flexibility. ASI 502 contains no solvents or isocyanates which makes it VOC compliant. Due to the formulation, ASI has received numerous accolades for its tensile strength, adhesion, and overall performance. ASI 502 is a non-slump sealant and can be applied to vertical or overhead surfaces without flowing or sagging. Because ASI 502 is a 100% silicone sealant, it has excellent resistance to weathering including ozone, ultra-violet radiation, freeze-thaw conditions and airborne chemicals. ASI 502 can be applied to surface temperatures from -18°C to +50°C (0°F to +120°F) and after curing, withstands constant operating temperatures from -57°C to +205°C (-70°F to 400°F).

Common Bonding Substrates:

ASI 502 can be used on a variety of substrates that are not listed below. Please inquire or test on those substrates. We have listed some common substrates for your viewing:

- Aluminum
- Ceramics
- Glass
- Granite
- Marble
- Metals
- Most Woods
- Most Plastics
- Porcelain
- PVC
- Steel
- Etc. (substrates may vary depending upon application)

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Directions:

ASI 502 is ready to use and requires no mixing or additives. The cure mechanism begins as soon as the sealant comes in contact with the air. At conditions of 25°C (77°F) and 50% relative humidity, the sealant will skin in 10 minutes and fully cure in 24 hours (1/8" bead) and reaches its maximum adhesion in 7 days. Higher humidity accelerates curing. Tooling, if necessary, should be done before skinning takes place. In applications where partial or total confinement of sealant is prevalent, the time required for proper cure is generally lengthened by the degree of confinement.

Surface Preparation:

All surfaces should be clean and dry. If necessary, bonding surfaces can be solvent wiped with naphthas, ketones or chlorinated solvents. Specific solvents would include xylol, toluol and mineral spirits. In case of plastics, determine suitability of solvent prior to use. Allow surface to dry thoroughly before applying sealant. Do not solvent wipe with alcohols or oil-containing solvents such as Varsol. Priming for ASI 502 is not normally required for applications to nonporous surfaces. Unprimed adhesion can be easily tested by applying a small trial bead and allowing 7 days for maximum adhesion to occur. If primer is required, contact ASI.

Listed Properties:

Characteristics	Test Method	Results
Shore A Hardness	ASTM D2240	23+2
Tensile @ Break	ASTM D412	250+25 psi
Elongation @ Break	ASTM D412	400+25%
Modulus @ 100% Elongation	ASTM D412	70+10 psi
Tear Strength	ASTM 624 (Die B)	30 + 10 ppi
Adhesion Strength (Peel)	TT-S-001543, 3.5.9	
Glass		24+2ppi
Aluminum (Primed)		24+2ppi
Sag, or Slump	TT-S-001543, 3.5.2	Nil
Shrinkage (Weight Loss)	TT-S-001543, 3.5.5	<5%
Extrusion Rate	1/8" orifice@ 50 psi	130+5gm/min
Application Temperature	ASI TEST METHOD	1-18°C to +50°C (-0°F to 120°F)
Constant Operating Temperature	ASI TEST METHOD	-57°C to +205°C (-70°F to 400°F)
Tack Free Time	TT-S-001543, 3.5.6	10 Minutes
Time to Full Cure (1/8" Bead)	ASI TEST METHOD	24 Hours
Joint Movement Capability	4:1 Safety Factor	1+25%
Chemical Resistance	List Available	Excellent
Color Retention	ASI TEST METHOD	Excellent
Weatherability	ASI TEST METHOD	Excellent
Electrical Properties @ 22°C (72°F)		
Dissipation Factor	ASTM D150	50 Hz - 0.0010 1 kHz - 0.0008 1MHz - 0.0002
Dielectric Constant	ASTM D150	50 Hz - 2.7 1kHz - 2.7 1MHz - 2.7
Volume Resistivity, Ω·cm	ASTM D257	6 x 10 ¹⁴
Surface Resistivity, Ω	ASTM D257	1 x 10 ¹⁶
Dielectric Strength, KV/mm	ASTM D149	25

Colors:

ASI 502's colors are clear, white, black, bronze, aluminum and almond. Special colors are available upon request. Call for price and availability.

Packaging:

ASI 502 is supplied in:
(2.8 fl. oz.) squeeze tube,
(10.2 fl. oz.) caulking cartridge,
(40 lb.) pail and (440 lb.) drum.

Special Packaging Available upon requests.

Safety Precautions:

ASI 502 releases small amounts of acetic acid during cure. Adequate ventilation should be provided with extensive use of this sealant. On direct contact, uncured sealant may irritate eyes. Flush eyes well with water and call a physician. Avoid prolonged contact with skin.

Storage:

ASI 502, when stored in original, unopened container at or below 32°C (90°F), has a shelf life of 12 months from date of shipment.

Warranty Limitations:

ASI warrants only that its products will meet its specifications. ASI shall in no event be liable for incidental or consequential damages. Except as expressly stipulated, ASI's liability, expressed or implied is limited to the stated selling price of any defective goods.

Information on this data sheet can change without notice and it is therefore not recommended that these figures be used in spec writing. If you have any questions contact manufacturer.

FDA STATUS:

ASI 502 is permitted under regulations of the Food and Drug Administration where incidental food contact might be involved. FDA Regulation number is 175.105

MILITARY SPECIFICATIONS:

ASI 502 meets the requirements of MIL-46106 Type 1.

CONSTRUCTION SPECIFICATIONS:

ASI 502 meets Federal Specifications TT-S-001543A, Class B and TT-S02300, Type 2, Class B. ASI 502 meets and exceeds ASTM C920.