



American sealants, Inc.
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Product Data

ASI 502 Industrial Silicone Sealant/Adhesive

DESCRIPTION

ASI 502 Industrial 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 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. Fully cured, ASI 502 has excellent adhesion to glass, metal, porcelain, ceramic, wood, most plastics and many other nonporous substrates. 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 +233°C (-70° F to 450°F).

TYPICAL USES

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

- formed-in-place gaskets for axle housings, differentials, junction box covers, etc.
- adhering appliance trim and sealing appliance parts
- adhering name plates, letters and signs
- sealing joints in ductwork

- sealing truck trailers, cabs, marine portholes and cabins
- sheet metal
- skylights
- aquariums

General Sealing: Food service installations, walk-in refrigerators, trailers, engine components, seal and waterproof, coaxial cable connectors, weatherize switch parts and instrument mountings.

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 cure. 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. It is recommended that bonding surfaces 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

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.

PAINTING

ASI 502 sealant should not be applied to surfaces that will be painted. Painting over sealant is not recommended because the paint film does not stretch with the extension of the sealant.

COLORS

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

PACKAGING

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



File No. E209770



TYPICAL PHYSICAL PROPERTIES

CHARACTERISTIC	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±2 ppi
Aluminum (Primed)		24±2 ppi
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±5 gm/min
Service Temperature	----	-18°C to +50°C 0°F to +120°F
Tack Free Time	TT-S-001543, 3.5.6	10 Minutes
Time to Full Cure (1/8" Bead)	----	24 Hours
Joint Movement Capability	4:1 Safety Factor	±25%
Chemical Resistance	List Available	Excellent
Color Retention	----	Excellent
Weatherability	----	Excellent
Electrical Properties @ 72°F (22°C)		
Dissipation Factor	ASTM D150	50 Hz - 0.0010 1 kHz - 0.0008 1 MHz - 0.0002
Dielectric Constant	ASTM D150	50 Hz - 2.7 1 kHz - 2.7 1 MHz - 2.7
Volume Resistivity, Ω .cm	ASTM D257	6×10^{14}
Surface Resistivity, Ω	ASTM D257	1×10^{16}
Dielectric Strength, KV/mm	ASTM D149	25

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

USDA STATUS

American Sealant, Inc., has on file documentation from the USDA that states ASI 502 sealants are chemically acceptable for use on structural surfaces in official establishments operating under the Federal Meat and Poultry Inspection Program.

The final granting of authorization for the proposed use of such compounds is the responsibility Of

the inspector in charge of the official plant. Technical assistance will be provided by the Product Safety Branch of the USDA upon request.

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.

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.