



Product Data

ASI 405 Low-Modulus NonCorrosive* RTV Silicone

DESCRIPTION

ASI 405 Industrial Silicone Sealant Adhesive is a one-part, moisture curing, RTV (room temperature vulcanizing) silicone sealant adhesive that cures to a strong, silicone rubber that maintains long-term durability and flexibility. ASI 405 is a non-slump sealant and can be applied on vertical or overhead surfaces without flowing or sagging. Because ASI 405 is a 100% silicone sealant, it has excellent resistance to weathering including ozone, ultraviolet radiation freeze-thaw conditions and airborne chemicals. Fully cured, ASI 405 has excellent adhesion to glass, metal, porcelain, ceramic, wood, most plastics and many other nonporous substrates. ASI 405 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 +204 C (-70 F to +400°F).

TYPICAL USES

ASI 405 is an excellent sealant and 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

DIRECTIONS

ASI 405 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 20 minutes and fully cure in 24 hours (1!4 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

Provided that all bonding surfaces are clean and dry, ASI 405 has excellent unprimed adhesion to most substrates. If there is any doubt about contamination, surfaces should be solvent wiped with oil-free solvents, such as xylol, toluol, naphtha or nonflammable chlorinated solvents. Do not solvent wipe with oil-based solvents such as Varsol.

PRIMING

Due to substrate variability, an evaluation should be made to determine bond strength for each specific application. If adhesion testing shows that a stronger bond is desired, use of a primer is suggested.

PAINTING

ASI 405 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 and the adhesion of paint to ASI 405 is not adequate.

COLORS

ASI 405's colors are clear and white. Special colors are available upon request. Call for price and availability.

PACKAGING

ASI 405 is supplied in:
300 ml (10.2 fl. oz.) caulking cartridge;
5 gal. (40 lb.) pail and
55 gal. (450 lb.) drum.

* Noncorrosive to aluminum and steel per MIL-A- 46146A

TYPICAL PROPERTIES

UNCURED:

Type	One-part, RTV silicone rubber
Appearance	Smooth, non-slump paste
Specific Gravity	1.04
Extrusion Rate	500g/min (1/8" bead 90 psi)
Application Temperature Range	-18°C to +50°C (0°F to +120°F)
Cure Method	Amine, moisture cure
Skin Over Time	20 minutes
Cure Time	24 hours (1/4" bead)
Slump/Sag	Nil

CURED:

at 25°C (77°F) and 50% R.H. for 7 days (1/4" bead)

Durometer Hardness (Shore A) (ASTM D 2240)	23
Tensile Strength (ASTM D 412)	220 psi
Elongation at Break (ASTM D 412)	400%
Tear Resistance (ASTM D 624, Die B)	35 ppi
Coefficient of expansion (in/in,°F)	(15 X 10 ⁻⁵)
Dielectric Strength (ASTM D 149)	500 volts/mil
Volume Resistivity (ASTM D 257)	9 X 10 ¹⁵ ohm/cm
Dissipation Factor (ASTM D 150)	0.001 at 60 Hz
Dielectric Constant (ASTM D 150)	2.80 at 60 Hz
Temperature Range After Cure	-57°C to 204°C (-70°F to 400°F)
Shear Strength (lb/in ²) ⁽²⁾	130
Peel Strength lb/in ⁽³⁾	40
Shrink Factor	Nil

MILITARY SPECIFICATIONS

ASI 405 meets the requirements of MIL-A-461 46A. †

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ASI 405 meets the U.S. Federal specifications TT-S-001543A and TT-S002300.

HANDLING AND SAFETY

Uncured product contact irritates eyes. In case of contact with eyes, immediately flush eyes with water for 15 minutes. If irritation persists, get medical attention.

Wearers of contact lenses should not handle lenses until all sealant

has been cleaned from the fingertips; sealant will transfer to lenses and cause severe eye irritation. To clean from the skin, wipe very thoroughly with a dry cloth or paper towel before washing with soap and water.

Product releases methanol and ammonia during application and curing. Use mechanical ventilation to stay below TLV of 25 ppm ammonia. Uncured product contact may irritate the skin.

Materials Safety Data Sheets are available upon request. Similar information for solvents and other chemicals used with our products may be obtained from your suppliers.

WARRANTY AND 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.

† Will discolor sensitive metals such as copper and brass when tested per MIL-A-46146A. If you require a sealant that does not discolor copper and brass, suitable sealants are available from ASI.