

302 General Purpose Silicone Sealant

NuFlex
SEALANTS

ACETOXY SILICONE TECHNICAL DATA SHEET

NuFlex® 302 General Purpose Silicone Sealant is a 100% medium modulus, one component caulking material with a consistency similar to that of toothpaste. **NuFlex® 302** cures to form a tough, rubbery solid upon exposure to moisture in the air. Because it does not flow due to its own weight, the sealant can be applied overhead or on sidewall joints and surfaces without sagging, slumping or running off. It adheres to clean metal, glass, most types of wood, silicone resin, vulcanized silicone rubber, ceramic, natural and synthetic fiber, painted surfaces and many plastics.

NuFlex® 302 has good resistance to weathering, vibration, moisture, ozone and extreme temperatures. It may be applied in sub-zero weather without loss of extrusion or physical property characteristics and is effective to -46°C (-50°F).

FEATURES & TYPICAL USES:

NuFlex® 302 can be used for the following: 1) Caulking and sealing around bathtubs, shower stalls, bathroom vanities, kitchen counters, sinks, windows and doors. 2) To draftstop and waterproof eavestroughs and soffits. 3) For replacing ceramic tiles and making new gaskets for dishwasher doors, skid and mar proofing vases, ashtrays and picture frames. 4) For sealing windshields in cars, vans and boats. 5) For repairing or installing body-side moulding. 6) For making gaskets to replace costly paper gaskets, for timing chain and valve covers and for water pump or thermostat housings... any application that requires a permanently flexible waterproof seal that will withstand moisture, heat and vibration.

Caution: NuFlex® 302 general-purpose silicone sealer can corrode or may not adhere to copper, brass (and copper-containing alloys), magnesium, zinc and galvanized metals (and other zinc-containing alloys).

SURFACE PREPARATION & APPLICATION:

- Applying: **NuFlex® 302** is applied ready to use. It flows readily from its container under pressure. The paste-like consistency makes it easy to work with. A spatula, wooden paddle or wetted finger can be used to tool the surface.
- Cure Time: Cure time is affected by relative humidity, degree of confinement and cross-sectional thickness of the sealant. Sections of up to 3.2 mm (1/8") thick become rubbery solids in about 24 hours at room temperature and 50% relative humidity.
- In applications where **NuFlex® 302** may be partially or totally confined during cure, the time required for proper cure is generally lengthened by the degree of confinement. Every application involving confinement during cure should be thoroughly tested before production commences.
- Curing time increases with the thickness of the sealant. A 12.7 mm (1/2") cross section for example, may require 3 or 4 days for complete cure. However, the cure will have penetrated the outer 3.2 mm (1/8") in about 24 hours.
- Adhered to glass, metal or most woods. **NuFlex® 302** has a typical peel strength of 20 lbs. per inch, after 72 hours at room temperature.
- Bonding: 1) Thoroughly clean and degrease metal and plastic surfaces. Then rinse all surfaces, except plastic, with acetone. Rubber surfaces should be roughened with sandpaper, then wiped with acetone. Follow the precautions given on the solvent container. 2) Apply **NuFlex® 302** to the prepared surfaces in a uniform thickness. Best adhesion is obtained with a 0.4 - 0.8mm (15 - 30 mil) glue line. If the adhesive is used between two surfaces, put the second surfaced in place, using enough pressure to displace the air but not the adhesive. 3) Let the unit stand undisturbed at room temperature to cure.
Sealing: The use of **NuFlex® 302** in sealing application follows approx. the same step-by-step procedures as outlined for bonding application.

MANUFACTURED BY:

NUCO INC.	T:	519.823.4994	TF:	1.800.853.3984
150 Curtis Drive	F:	519.823.1099	E:	sales@nucoinc.com
Guelph, ON N1K 1N5				



FEATURES:

- NSF Approved.
- 100% Silicone.
- 100% RTV.
- Adheres to many substrates.
- Excellent extreme temperature performance.

AVAILABLE SIZES & COLOUR:

- 83 mL (2.8 fl.oz.) tube
- 300 mL (10.1 fl.oz.) cartridge
- 12 cartridges per case
- 270 cases per skid (83 mL)
- 144 cases per skid (300 mL)
- Available in larger sizes*
- Available colors include: clear, white, translucent (milky white), black, brown, medium brown, bronze, almond, aluminum, & grey.
- *Colours should be tested to application requirements prior to use. Colours may vary by manufacture.



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CAUTION:

Use in well ventilated areas and avoid breathing vapors. On contact, uncured sealant irritates eyes. Flush eyes with lukewarm water. Call physician. Avoid skin contact and do not ingest. Keep out of reach of children. For complete safety information consult Material Safety Data Sheet. Sealant releases acetic acid (vinegar-like odour) during cure.

SHELF-LIFE & STORAGE:

Shelf-life is 12 months from date of shipment from our plant when stored in clean, dry area with temperature between 40°F to 90°F (4°C to 32°C). For best results, keep the sealant in tightly closed containers when not in use.

TYPICAL PROPERTIES:

These values are not intended for use in preparing specifications. Spec Writers; please contact NUCO Inc. before writing specifications if any further information is required.

Description	Specification
As Supplied...	
Specific Gravity:	1.01
Extrusion Rate (3.2 mm (1/8") orifice, 90 psi air pressure) g/minute:	400
Flow Rate (sag or slump):	Nil
Application Temperature Range	-29°C to 50°C (-20°F to 122°F)
Tack-Free Time at 25°C (77°F) and 50% R.H. - in minutes:	10 - 20
Cure Time at 25°C (77°F) at 50% R.H. (3.2 mm (1/8") Thickness) in hours:	24
As Cured – Physical – after 7 days at 25°C (77°F) and 50% relative humidity:	
ASTM C 661 – Durometer Hardness Shore A, points:	25
ASTM D 412 Die C – Tensile Strength, MPa (psi):	2.24 (325)
ASTM D 412 Die C – Elongation, percent:	550
ASTM D 746 - Brittle point, °C (°F):	-62 (-80)
ASTM D 2137 A - Volume Coefficient of Thermal Expansion:	0°C to 100°C (32°F to 212°F) 9.3 x 10 ⁻⁴
Thermal Conductivity, Cal/[(sec)(°C)(cm)]:	0.45 x 10 ⁻³
As Cured – Electrical – after 7 days at 25°C (77°F) and 50% relative humidity:	
ASTM D 257 – Volume Resistivity (OHM – cm):	1.5 x 10 ¹⁵
ASTM D 149 - Dielectric Strength – kV/mm(V/mil):	21.7 (550)
ASTM D 150 - Dielectric Constant at 60 Hz, 100Hz and 100kHz:	2.8
ASTM D 150 - Dissipation Factor at 60 Hz, 100Hz and 100kHz:	0.0015
Fully cured NuFlex® 302 General Purpose can be used for extended periods at temperatures up to 232°C (450°F).	

DISCLOSURE

The information and data contained herein is BASED ON INFORMATION WE BELIEVE TO BE RELIABLE. Please read all statements, recommendations or suggestions herein in conjunction with our CONDITIONS OF SALE which apply to all goods supplied by us. We assume no responsibility for the use of these statements, recommendations or suggestions, nor do we intend them as recommendation for any use which would infringe any patent or copyright.

MANUFACTURED BY:

NUCO INC. T: 519.823.4994 TF: 1.800.853.3984
150 Curtis Drive F: 519.823.1099 E: sales@nucoinc.com
Guelph, ON N1K 1N5



SPECIFICATIONS:

NuFlex® 302 meets the following specifications:

- MIL-A-46106A,
- CAN/CGSB-19.13-M87, Class MG-2-25 - A - L,
- (2) ASTM C920, Type S, Grade NS, Class 25, use NT, G, A, O. U.S. Fed Specs TT-S-001543A and TT-S-00230C Type 2. Certified by NSF.
- Agricultural Canada Approved.
- After fully cured & washed, 302GP meets the requirements of FDA Regulation No. 21 CFR 177.2600 subject to end use.
- Note: Clear, Black, White and Aluminum. NuFlex 302 meets USDA regulation for use in federally inspected meat and poultry plants for Clear, Black, White and Aluminum colours.
- NuFlex 302 General-Purpose is recognized by Underwriters Laboratories for service to 150°C (302°F) where elongation is not essential.
- UL plastics component QMFZ2 file no. E 196754.

50 YR. DURABILITY STATEMENT:

Material will remain elastic in nature for 50 years. Independent tests indicate that silicone sealant will withstand outdoor weathering for 50 years without significant performance changes. This statement applies to the sealant itself and not to the substrates to which it is bonded to. In the event of elasticity failure, return original container and sales receipt to Nuco Inc., 150 Curtis Drive, Guelph ON N1K 1N5, Canada. NUCO's liability, expressed or implied is limited to the stated selling price of any goods found to be defective.

WARRANTY INFORMATION:

NUCO Inc., warrants only that its product will meet its specifications. NUCO shall in no event be liable for incidental or consequential damage. NUCO's liability, expressed or implied is limited to the stated selling price of any goods found to be defective.

