

# 302 High Temperature Silicone Sealant



## ACETOXY SILICONE TECHNICAL DATA SHEET

**NuFlex® 302 Hi-Temp Silicone Gasket Maker** is a one-part, non-slumping 100% silicone sealant with the consistency similar to that of toothpaste. It cures when it is exposed to moisture in the air to form a tough rubbery seal.

**NuFlex® 302 Hi-Temp** was formulated to perform at temperatures ranging from  $-65^{\circ}\text{C}$  to  $260^{\circ}\text{C}$  ( $-85^{\circ}\text{F}$  to  $500^{\circ}\text{F}$ ) under continuous operating conditions. During intermittent exposure, **NuFlex® 302 Hi-Temp** will withstand temperatures as high as  $316^{\circ}\text{C}$  ( $600^{\circ}\text{F}$ ). It is ideal for a number of sealing and bonding applications.

### FEATURES & TYPICAL USES:

The high temperature properties of **NuFlex® 302 Hi-Temp** make it ideally suited for sealing and encapsulating heating elements in appliances, aerospace gasketing, moving oven belts, industrial ovens and bag filters on smoke stacks. It is also used in applications for other critical bonding, sealing, potting, encapsulating and protective coatings where parts must perform at high temperatures. There are also many applications for **NuFlex® 302 Hi-Temp** in and around automobiles, RV's, boats and in small engines. It can be used for making and/or replacing expensive paper and cork gaskets in water pumps, timing chain/belt covers, rocker covers, heat risers, and any area where high temperatures and vibration are prevalent. **NuFlex® 302 Hi-Temp** is oxygen sensor safe.

**Do not use in direct contact with fuels such as gasoline or diesel fuel.**

### SURFACE PREPARATION & APPLICATION:

**NuFlex® 302 Hi-Temp** is supplied ready-to-use. It flows readily from its container under pressure. The paste-like consistency makes it easy to work with; a spatula or wooden paddle can be used to tool the surface.

**Tack-Free Time:** Curing progresses inward from the surface. At conditions of  $25^{\circ}\text{C}$  ( $77^{\circ}\text{F}$ ) and 50% relative humidity, a tack-free skin forms within 10-20 minutes. Tooling should be completed immediately after application. If masking tape is used to mask an area, it must be removed before the tack-free skin forms.

**Cure-Time:** Cure time is affected by relative humidity, degree of confinement and cross-sectional thickness of the sealant. Sections 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 Hi-Temp** 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 3.2mm ( $1/8''$ ) in about 24 hours.

### 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 the Material Safety Data Sheet. Sealant releases acetic acid (vinegar odour) during cure.

### SHELF-LIFE & STORAGE:

Shelf-life is 12 months from date of shipment from our plant when stored in a clean, dry area with temperatures between  $4^{\circ}\text{C}$  to  $32^{\circ}\text{C}$  ( $40^{\circ}\text{F}$  to  $90^{\circ}\text{F}$ ). For best results, keep the sealant in tightly closed containers when not in use.

### MANUFACTURED BY:

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FORM: 302HT\_TDS.DOC

REV.: 3 DATE: 05/08



### FEATURES:

- NSF Approved.
- 100% Silicone.
- 100% RTV.
- Adheres to many substrates.
- Withstands up to  $316^{\circ}\text{C}$  ( $600^{\circ}\text{F}$ ).

### 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: **red & black.**



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Page 2 of 2

### SPECIFICATIONS:

NuFlex® 302 Hi-Temp sealant is designed to meet the requirements of:

- MIL-A-46106A,
- Amendment 2, Type 1.
- NuFlex® 302 Hi-Temp sealant meets USDA regulations for use in Federally inspected meat and poultry plants.
- Certified by NSF.
- Agricultural Canada Approved.
- NuFlex® 302 Hi-Temp is recognized by Underwriters Laboratories for service to 150°C (302°F) where elongation is not essential.
- UL plastics component QMF22 file no. E 196754

### 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.

### 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
<b>As Supplied...</b>	
Specific Gravity:	1.01
Extrusion Rate (3.2 mm (1/8") orifice, 90 psi air pressure) g/minute:	335 g/minute
Flow Rate (sag or slump):	Nil
Tack-Free Time at 25°C (77°F) and 50% R.H. - in minutes:	17 Minutes
Cure Time at 25°C (77°F) at 50% R.H. (3.2 mm (1/8") Thickness) in hours:	24 Hours
<b>As Cured – Physical – after 3 days at 25°C (77°F) and 50% relative humidity:</b>	
ASTM C 661 – Durometer Hardness Shore A, points:	26
ASTM D 412 Die C – Tensile Strength, MPa (psi):	2.4 (350)
ASTM D 412 Die C – Elongation, percent:	600
ASTM D 746 - Brittle point, °C (°F):	-62 (-80)
ASTM D 2137 A - Volume Coefficient of Thermal Expansion of	
Thermal Conductivity, Cal/[(sec)(°C)(cm)]:	9.3 x 10 <sup>4</sup>
Thermal Conductivity, Cal/[(sec)(°C)(cm)]:	0.45 x 10 <sup>3</sup>

### 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.

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