



FORM IN PLACE GASKET NOLATO CONDUCTIVE SILICONE RUBBER 8813



Trishield®

CHARACTERISTICS

Nolato 8813 is a conductive silicone rubber.

- A two-component thermal cure silicone filled with conductive Ni/C particles.
- It is used to produce integrated EMI shielding gaskets by dispensing and Trishield forming directly on telecom or other industrial components.
- The patented Trishield gasket* offers a triangularly shaped narrow gasket with less material consumption and less compression force.
- Low viscosity offers short cycle times in any dispensing machine.
- Excellent shielding combined with good mechanical properties.
- The aluminum compatible conductive filler offers enhanced galvanic corrosion resistance and stability in severe environments.
- Operating temperatures between -55°C and +125°C.
- Good adhesion to most metal and metalized surfaces.
- Typical gasket height from 0.8 to 2.0 mm. Width to height ratio is < 1.
- Recommended compression between 10 and 50%.

APPLICATIONS

- Nolato 8813 shielding is a low cost alternative to mass producing gaskets for metallic and plated aluminum housings and castings.
- Typical applications include EMI shielding gaskets in mobile phone base stations.

PROCESSING

Nolato 8813 is a two-component compound paste, dispensed as a bead directly onto the component with a dispensing machine. The dispensed gasket is given a narrow shape in the Trishield forming unit. Curing is done in a hot air oven at 100°C for 30 minutes.

PRODUCT DATA

| PROPERTY | TEST PROCEDURE | UNIT | 8813 |
|--|-----------------------|-------------------|------------------|
| Base Material | | | Silicone Rubber |
| Conductive Filler | | | Nickel/Graphite |
| Density, uncured | | g/cm ³ | 1.9 |
| Viscosity A comp. at shear rate 10 ^{s-1} | Nolato FOU-04/5 | Pas | 65 |
| Viscosity B comp. at shear rate 10 ^{s-1} | Nolato FOU-04/5 | Pas | 65 |
| Viscosity mixed at shear rate 10 ^{s-1} | Nolato FOU-04/5 | Pas | 65 |
| Electrical resistance | Nolato FOU-04/6 | mOhm | 300 |
| Adhesion | Nolato FOU-04/7 | | Cohesive failure |

*Production of Trishield gaskets require a license from Nolato. The license includes rights to produce and market Trishield gaskets and technical support and the special forming unit.

IDEA

MODUS ADVANCED TAKES YOU FROM IDEA TO IGNITION











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MECHANICAL PROPERTIES

| PROPERTY | TEST PROCEDURE | UNIT | 8813 |
|--|----------------|-------------------|------------------|
| Density, cured | ISO 2781 | g/cm ³ | 2.1 |
| Durometer/Hardness | ISO 7619 | Shore A | A 73 |
| Tensile strength | ISO 37 | MPa | 2.51) |
| Elongation at break | ISO 37 | % | 170 |
| Tear strength | ISO 34-1C | N/mm | 15 ²⁾ |
| Compression set, 72 hours/100°C | ISO 815 | % | 55 |
| Compression modulus, 10% strain 20% strain | ISO 7743 | MPa | 15 20 |
| Flammability | UL 94 | | V0 ³⁾ |

1) 1 MPa = 145 psi

2) 1 N/mm = 5.71 lb/in

3) Tested on a 0.8 mm thick gasket adhered to an aluminum substrate with a thickness of 2 mm.

ELECTRICAL AND SHIELDING PROPERTIES

| PROPERTY | TEST PROCEDURE | UNIT | 8813 |
|---|--|--------|------|
| Volume resistivity, as molded | MIL-DTL-83528C | mOhmcm | 8 |
| Volume resistivity, heat aged 48h/156°C | MIL-DTL-83528C | mOhmcm | 16 |
| Volume resistivity, heat aged 1000h/125°C | MIL-DTL-83528C | mOhmcm | 26 |
| Average shielding effect, 0.3 – 20 GHz Gasket on aluminum, fresh | Nolato cavity to cavity test method | dB | 130 |

RoHS INFORMATION

Nolato 8813 fulfills the requirements set by the EU Directive 2002/95/EC (RoHS).

SAFETY INSTRUCTIONS

Due to the content of nickel, Nolato 8813 is classified as harmful (Class Xn) according to EU directives. To avoid irritation due to skin contact with nickel, wearing gloves while handling is recommended. A material safety data sheet can be sent on request.

WARRANTY

The data given in this product information should be taken only as a guide and not a specification. Data are based on statistical evaluation on data measured on a number of batches at Nolato.

The recommendations and data given are based on our experience to date, however, no liability can be assumed in connection with their usage and processing.

| CUSTOMERS WHO USE TRISHIELD® MAY ALSO BE INTERESTED IN: | |
|---|--|
| | |

EMI SHIELDING

COMPATHERM

COMPASHIELD°

CUSTOMERS ALSO SEARCHED:

form in place gasket ii liquid gaskets gasket tack gasket tack gasket tack conductive material form in place gaskets dispensed gasket form-in-place conductive gasket gask

liquid gasket paste gasket emi gasket conductive silicone gasket emi silicone emi silicone emi shielding gasket formed gasket electrically conductive gasket silver silicone nickel graphite silicone

THE NOLATO GROUP

Nolato is an advanced high-tech polymer partner with operations in Europe, Asia and North America. We develop and manufacture products in materials such as plastic, silicone and TPE. Our customer offering comprises everything from concept development, product design and process optimization to high-volume production, post-processing, assembly and logistics

We are Modus! With multiple locations in North America and China, Modus Advanced, Inc. is a diversified custom manufacturer that converts EMI Shielding, Environmental Gasket Materials, Microwave Absorbers, Acoustic Materials, Thermal Interface Materials and other high performance materials into finished parts. Modus utilizes its 40 years as an established provider of high quality, reliable products to create precisely what customers specify. Innovative processes; custom fabrication utilizing performance materials; an on time delivery record of more than 99% means Modus is well positioned to help your company succeed.

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