

Data Sheet Trishield Conductive Silicone Rubber Nolato 8813

Nolato 8813 is a conductive silicone rubber used to produce integrated EMI shielding gaskets by dispensing.

Nolato 8813 key properties:

- Typical gasket height from 0,8 to 1,2 mm.
- Recommended compression between 10 and 50%.
- Operating temperatures between -55°C and +125°C.
- Good adhesion to most metal and metallised surfaces.
- Low viscosity offers short cycle times in any dispensing machine.
- Thermal cure silicone.

1. Applications

Nolato 8813 is particularly suitable for production of gaskets on large series of aluminium castings when there is a demand of a gasket with excellent shielding properties. Typical applications include dispensed EMI shielding gaskets in mobile phone base stations.

2. Typical Product Data

	Test procedure	Unit	8813
Base material			Silicone rubber
Conductive filler			Ni/C
Density, uncured		g/cm ³	1,9
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

2.1. Mechanical Properties

	Test procedure	Unit	8813
Density, cured	ISO 2781	g/cm ³	2,1
Hardness	ISO 7619	Shore A	73
Tensile strength ¹⁾	ISO 37	MPa	2,5
Elongation at break	ISO 37	%	170
Tear strength ²⁾	ISO 34-1C	N/mm	15
Compression set, 72 hours/100°C	ISO 815	%	55
Flammability ³⁾	UL 94		V0

¹⁾ 1 MPa = 145 psi ²⁾ 1 N/mm = 5,71 lb/in ³⁾ If tested on a 0,8 mm thick gasket adhered to an aluminium substrate with a thickness of 2 mm.

2.2. Electrical and Shielding Properties

	Test procedure	Unit	8813
Volume resistivity, as moulded	MIL-DTL-83528C	mOhmcm	8
Volume resistivity, aged 48h/156°C	MIL-DTL-83528C	mOhmcm	16
Average shielding effect, 0,3-20 GHz	Nolato cavity to cavity test method	dB	130

3. Processing

Nolato 8813 is a two-component compound of pasty consistency. The component A and B are delivered in 1000 ml cartridges with a shelf life of at least 9 months if stored at -18°C. The components are mixed in a ratio of 1:1 by weight prior to use. The mixed material is dispensed as a bead directly on the component with a standard dispensing machine. The dispensed gasket could be given a narrow shape in the Trishield forming unit. Curing is done in a hot air oven at 150°C for 30 minutes. For detailed information please refer to the "Trishield Mixing and handling instruction".

4. RoHS Information

Nolato 8813 fulfils the requirements set by the EU Directive 2011/65 (RoHS).

5. Safety Instructions

Nolato 8813 is according to EU directive 1272/2008 (CLP) classified as hazardous, due to the content of nickel. Nickel may cause sensitisation by skin contact. It is advisory to never touch the gasket without gloves. A material safety data sheet can be sent on request.

6. Warranty

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. The typical property data as shown above should not be used as a specification.