

Document Product Data Sheet		No. DS 8800	Rev 5	
Prepared by Karin Sundberg	Checked Magnus Mattsson	Date 2011-12-28	Page 1(2)	

## Conductive Silicone Rubber Nolato 8800

### 1. Characteristics

Nolato 8800 is a conductive silicone rubber.

- A two-component thermal cure silicone filled with conductive Ag/Ni 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.
- Low compression forces.
- Operating temperatures between -55°C and +125°C.
- Good adhesion to most metal and metallised surfaces.
- Typical gasket height from 0,8 to 2,0 mm. Width to height ratio is < 1.
- Recommended compression between 10 and 50%.

### 2. Applications

- Nolato 8800 is particularly suitable for low cost production of gaskets on large series of metallic housings as plated aluminium castings when there is a demand of excellent shielding.
- Typical applications include EMI shielding gaskets in mobile phone base stations.

### 3. Processing

Nolato 8800 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 4 month if stored at -18°C. The components are mixed in a ratio of 1:7,2 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 is given a narrow shape in the Trishield forming unit. Curing is done in a hot air oven at 100°C for 30 minutes. For detailed information please refer to the "Mixing and handling instruction".

### 4. Product data

	Test procedure	Unit	8800
Base material			Silicone rubber
Conductive filler			Ag/Ni
Density, uncured		g/cm <sup>3</sup>	2,6
Viscosity A comp. at shear rate 10 <sup>s-1</sup>	Nolato FOU-04/5	Pas	90
Viscosity B comp. at shear rate 10 <sup>s-1</sup>	Nolato FOU-04/5	Pas	45
Viscosity mixed. at shear rate 10 <sup>s-1</sup>	Nolato FOU-04/5	Pas	75
Electrical resistance	Nolato FOU-04/6	mOhm	20
Adhesion	Nolato FOU-04/7		Cohesive failure

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

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## 5. Mechanical properties

	Test procedure	Unit	8800
Density, cured	ISO 2781	g/cm <sup>3</sup>	3,1
Hardness	ISO 7619	Shore A	55
Tensile strength	ISO 37	MPa	2,9 <sup>1</sup>
Elongation at break	ISO 37	%	240
Tear strength	ISO 34-1C	N/mm	14 <sup>2</sup>
Compression set, 72 hours/100°C	ISO 815	%	25
Compression modulus, 10% strain 20% strain	ISO 7743	MPa	3,8 6,5
Flammability	UL 94		V0 <sup>3</sup>

<sup>1</sup> 1 MPa = 145 psi    <sup>2</sup> 1 N/mm = 5,71 lb/in

<sup>3</sup> Tested on a 0,8 mm thick gasket adhered to an aluminium substrate with a thickness of 2 mm.

## 6. Electrical and shielding properties

	Test procedure	Unit	8800
Volume resistivity, as moulded	MIL-DTL-83528C	mOhmcm	15
Volume resistivity, heat aged 48h/156°C	MIL-DTL-83528C	mOhmcm	17
Volume resistivity, heat aged 1000h/125°C	MIL-DTL-83528C	mOhmcm	80
Average shielding effect, 0,3 – 9 GHz Gasket on Ni/Sn plated aluminium, fresh	Nolato, modified MIL STD 285	dB	107
Average shielding effect, 0,3 – 9 GHz Gasket on Ni/Sn plated aluminium, heat aged 72h/80°C	Nolato, modified MIL STD 285	dB	91
Average shielding effect, 0,3 – 9 GHz Gasket on Ni/Sn plated aluminium, damp heat aged 72h/70°C/97%RH	Nolato, modified MIL STD 285	dB	86

## 7. RoHS information

Nolato 8800 fulfils the requirements set by the EU Directive 2002/95/EC (RoHS).

## 8. Safety instructions

Nolato 8800 is not considered as hazardous according to EU directive 1999/45/EC and is not subject to the directive of classification, packaging and labelling of dangerous goods. A material safety data sheet can be sent on request.

## 9. 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.