



TRISHIELD®

Aug 2024

Experience and innovation



Trishield® 2.0 Offers the lowest compression force requirements on the market.

Trishield®, Nolato's dispensing technology, has been widely used by leading companies in high-tech industries requiring EMI shielding for over a decade. Trishield® offers a solution that combines excellent shielding effectiveness with superior mechanical performance.





The Trishield® technology is used to form the dispensed EMC gaskets into a triangular shape, thus reducing material usage and the compression forces required.

Trishield® 2.0 is an innovative development of the Trishield® concept that further enhances the original benefits of the Trishield® concept. Trishield® 2.0 consists of an improved forming unit and a new family of conductive elastomer materials. Trishield® 2.0 reduces the compression force required up to 60%, reduces the material usage up to 42%, and the footprint up to 35% compared to standard D-shaped gaskets, while still providing excellent EMI shielding effectiveness.



Property	Test standard	Unit	8817	8950
Base material	-	-	Silicone	Silicone
Conductive filler	-	-	Ni/C	Ni/C
Volume resistivity	MIL-DTL-83528C	mOhmcm	12	25
Shielding, average 0.3-20 GHz	Nolato cavity to cavity test method	dB	110	110
Density	ISO 2781	g/cm ³	1,9	1,8
Hardness	ISO 7619	Shore A	63	45
Tensile strength	ISO 37	MPa	2,6	1,2
Elongation at break	ISO 37	%	260	150
Tear strength	ISO 34-1C	N/mm	16	8
Compression set, 72h/100°C	ISO 915	%	30	30
Flammability	UL 94	-	-	V0

- **Up to 60% lower compression force**
 - Less fasteners needed
 - Possible to increase tolerances on mechanics
 - Less machining needed on mechanics
 - Thinner and more flexible covers
- **Lower material consumption**
 - Cost saving
- **Optimal height/width ratio (narrow gaskets)**
 - Space saving
- **Double output**
 - Possible to run with dual dispensing heads
- **Excellent shielding properties**
 - Up to 110 dB
- **Global access**
 - Our production partners are located all over the world

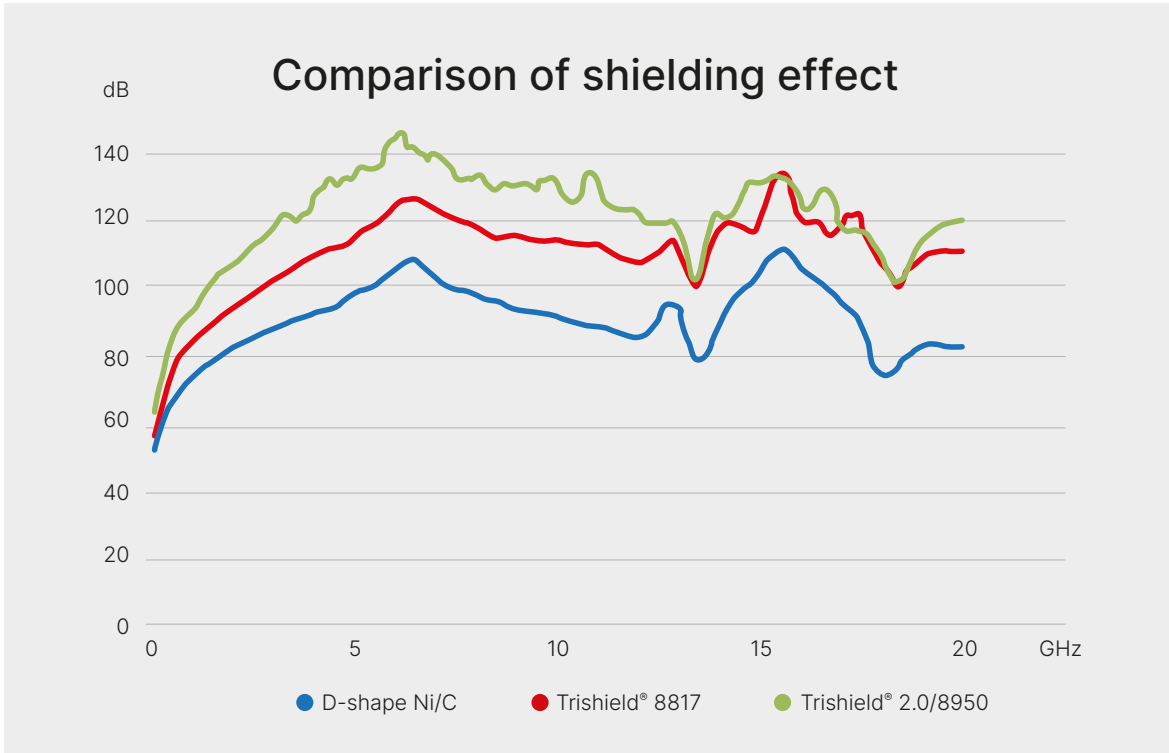
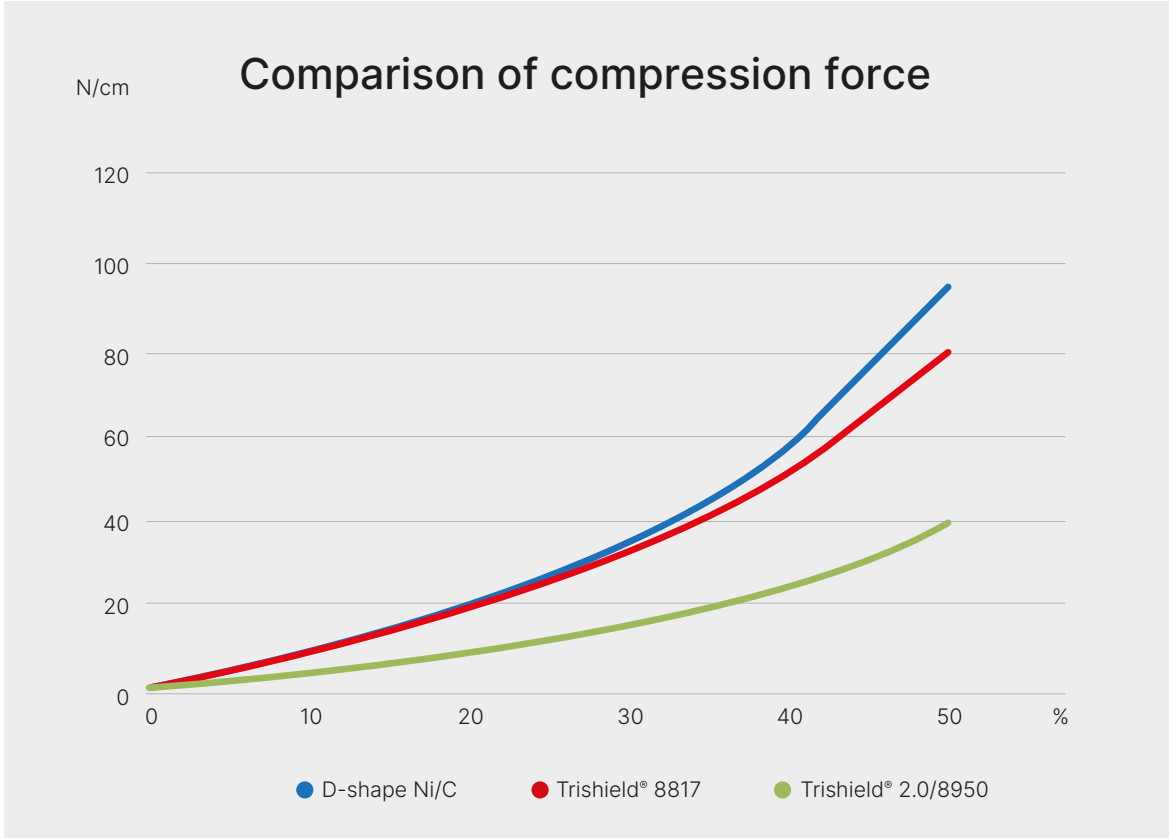
Product	Material	Shape	Gasket Width	Gasket Height	Reduction mtrl usage	Space saving	Comment
D-shape	Ni/C		2,0 mm	1,6 mm	-	-	Trishield® 2.0/8950 savings versus D-Shape Ni/C
Trishield®2.0	8950		1,3 mm	1,6 mm	-42 %	-35 %	
Trishield®	8817		1,5 mm	1,6 mm	-	-	Trishield® 2.0/8950 savings versus Trishield®/8817
Trishield®2.0	8950		1,3 mm	1,6 mm	-21 %	-13 %	

Test is made inhouse Nolato. We will gladly calculate your savings in your specific project.

Trishield® 2.0 can either be directly installed in an existing Trishield® forming unit or as a new installment, depending on customer requirements. Nolato offers partner agreements (EMC Production Partner) by licensing the Trishield® 2.0 technology.

The license also includes technical support and training thereby ensuring a carefree implementation and stable production.





Trishield® RTV

Trishield® RTV is the latest EMC product in the Trishield® family. The room temperature curing material allows usage in combination with heat sensitive materials, such as zinc, magnesium as well as various plastics and heat sensitive surface treatments. It can be used both as a conductive adhesive [FIPG] and to form gaskets that cures before assembly [CIPG].

Examples of usage as adhesive [FIPG] is mounting of covers onto a PCB or assembly of housings

around electronics where an EMC feature is needed. The Trishield® forming step allows a high narrow gasket before assembly, that takes up big tolerance using less material than traditional options.

Trishield® RTV can also be used for traditional beads with the reduced compression force and material usage that comes with the Trishield® concept. Pls contact our sales organization for further information.



Product data	Test procedure	Unit	Nolato RTV 8140
Base material	-	-	Silicone rubber
Conductive filler	-	-	Ni/C
Electrical resistance	Nolato FOU-04/6	mOhm	200
Adhesion	Nolato FOU-04/7		>20N/cm
Density cured	ISO12154	g/cm ³	2,3
Hardness	ISO 48-4	Shore A	70
Tensile strength	ISO 37	MPa	2,5
Volume resistivity	MIL-DTL-83528C	mOhmcm	10
Shielding, average 0.3–20 GHz	Nolato cavity to cavity test method	dB	>100



Nolato EMC & Thermal Solutions

Nolato is a world leading developer and supplier of material and know-how for EMI shielding solutions made of electrically conductive silicon and Thermal Interference Materials. Our headquarters and Nolato Tech Center are located in Hallsberg, Sweden with additional manufacturing sites in Beijing and Suzhou in China, Penang in Malaysia, Mosonmagyaróvár in Hungary, Maldon in UK, Bangalore in India, Querétaro in Mexico and New Jersey in USA. Nolato offers local production on a global scale with more than seventy EMC Production Partners around the world manufacturing the Trishield gasket.

Founded in 1970, Nolato EMC & Thermal Solutions became a part of the Nolato Group in 1988. Nolato's quality and environmental management systems have been certified with ISO 9001, ISO14001, IATF 16949 and MIL 83528.

