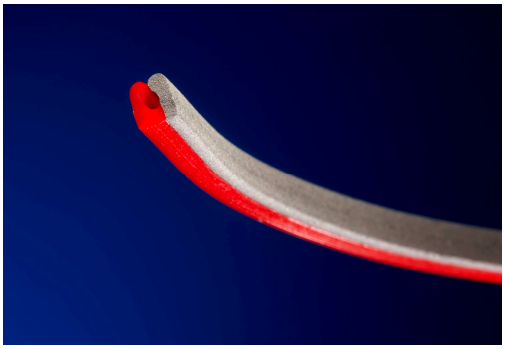
# DATA SHEET OF COMPASHIELD EE GASKET

## Introduction



Compashield EE gaskets developed by Nolato is extruded in parallel with dual conductive/non-conductive gaskets, provide both optimum EMI and environmental shielding in a single, cost-effective design.

### Features and benefits

- Combination of excellent shielding effect and environmental sealing
- Unique design for simple installation
- Secured sealing thanks to splicing
- Space saving
- Optimized conductive/non-conductive material combination
- Broad range of metal filler meets all needs
- Low compression set
- Low compression force
- Available also in cut-into length, or on the roll
- Fast prototype for customized profiles within 5 working days

### Applications

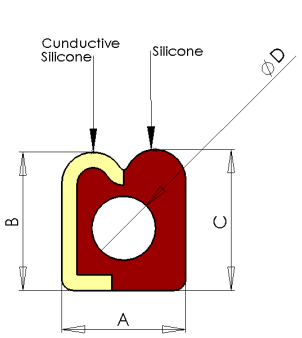
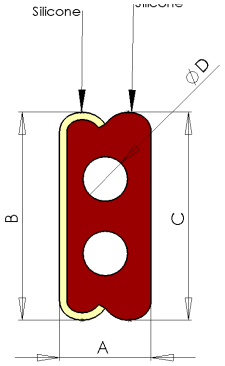
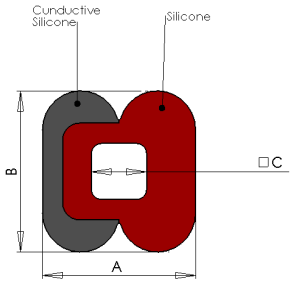
Typical applications of Compashield EE gaskets include mainly telecom communications equipment, while it's applicable also for military appliance, rack mounted cabinet, doors and panels.

## Typical material properties

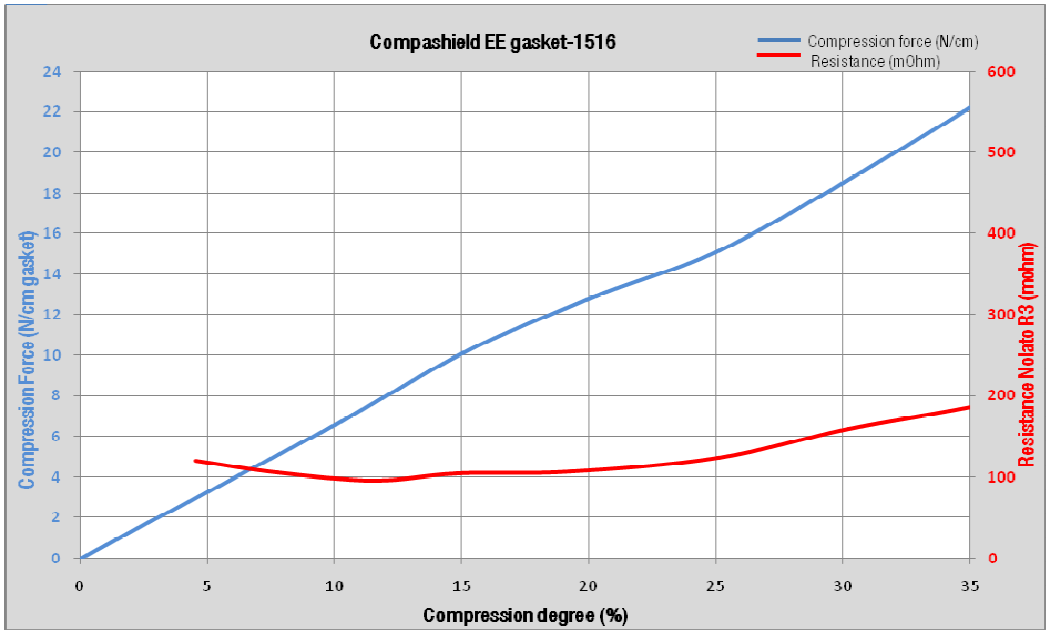
| Property | Test procedure | Unit | 1540 | 8648 | 8651 |
|---|---|---|---|---|---|
| Base material | | | Silicone | Silicone | Silicone |
| Conductive filler | | | - | Ni/C | Ag/Al |
| Volume resistivity, as moulded | MIL-DTL-83528C | mOhmcm | - | 5,6 | 3 |
| Volume resistivity, aged 188C/48h | MIL-DTL-83528C | mOhmcm | - | 7,8 | 4 |
| Shielding effect<br>Average 0.3-20 GHz<br>Average 20-50 GHz | Nolato<br>cavity-to-cavity | dB | - | 140 | 130<br>110 |
| Density | ISO 2781 | g/cm3 | 1,1 | 2,4 | 2,1 |
| Hardness | ISO 7619 | Shore A | 40 | 80 | 80 |
| Tensile strength | ISO 37 | Mpa | 8,5 | 4,3 | 3,5 |
| Elongation at break | ISO 37 | % | 650 | 140 | 200 |
| Tear strength | ISO 34-1C | N/mm | 30 | 16 | 16 |
| Compression set,<br>72 h,100℃ | ISO 815 | % | 8 | 40 | 31 |
| Flammability | UL 94 | | V1 | V0 | V0 |
| Compression modulus,<br>10% strain<br>20% strain | ISO 7743 | MPa | 4,0<br>4,5 | 10,9<br>13,1 | 8,8<br>9,7 |

## Availability

Typical configurations of Compashield® EE gasket are pictured as below. Many of other profiles and dimensions are available based on the request of the customers.

| | Article No.1516 | Article No.1560 | Article No.1610 |
|---|---|---|---|
| **Typical profile** |  |  |  |
| **Nominal dimensions** | A: 3.20±0.15<br>B: 3.56±0.15<br>C: 3.63±0.15<br>D: 1.60±0.1 | A: 2.46±0.15<br>B: 5.59±0.15<br>C: 5.59±0.15<br>D:1.06±0.1 | A: 4.57±0.15<br>B: 4.75±0.15<br>C: 1.65±0.1 |

## Compression/ Resistance performance




*Test is made on Compashield EE gasket model 1516. Tests result for other profiles or dimensions are available based on request. Recommended compression degree 10% to 30% in the assembled state.

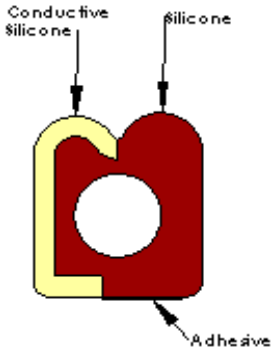
## Compression set on EE gasket

| Property | Test condition | Compashield EE gasket |
|---|---|---|
| Compression set, *ISO 815 | 72 h,100℃ | 10% |
| Compression set *dry heat | 1000h,85℃ | 12% |

## Installation

**Standard method- loose installation:**
EE gasket could usually be mounted loosely into the flange groove as the standard installation method.

**Method with tape attachment:**

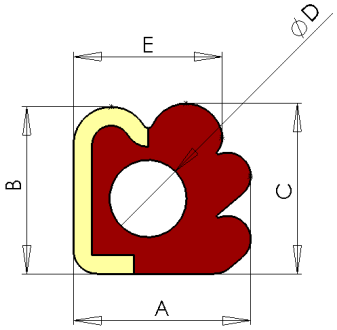



For easier handling in case of transportation Compashield EE gasket can be mounted onto the flange by using a double-coated adhesive tape on the back side. Remove the release film and position the gasket using light pressure. When the gasket is properly positioned, firmly press onto the flange.

Nolato can upon request deliver the EE gasket with tape on the back side.

The tape has an adhesive that adheres strongly to silicon rubber and an acrylic resin adhesive that adheres on metal and plastic materials, etc.

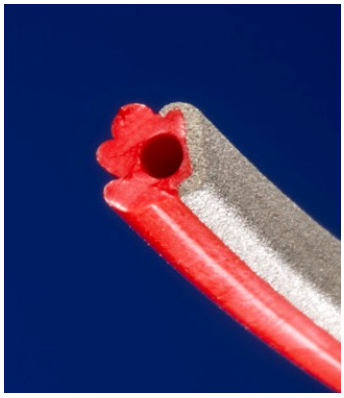
**Nolato recommended solution EE with hook:**




Compashield EE gasket with 'hook' is an improved version of the standard EE gasket. This solution offers several benefits. The gasket could be fixed in place without back tape and offers an extremely good shielding effect thanks to the unique design.

Hooks for grip eliminates the need for adhesives and tapes. The hooks press the conductive silicone towards the contacting walls, and keep the gasket in position. High contact pressure gives better contact and better shielding.

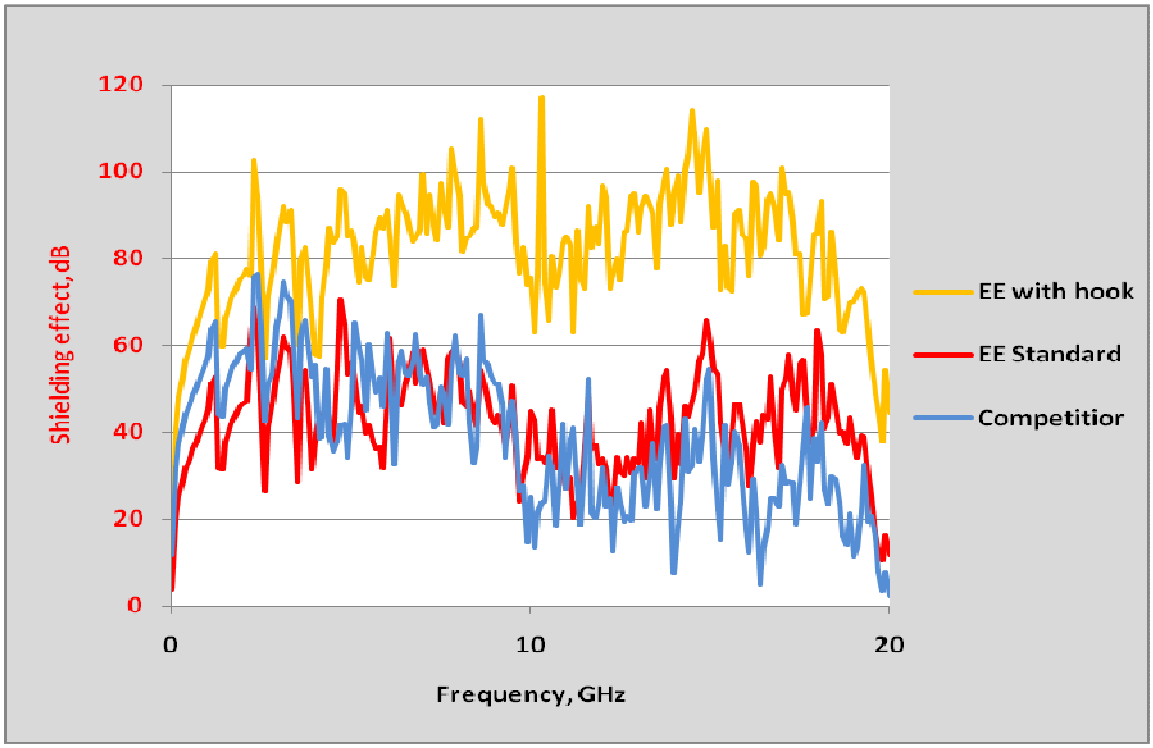
This is a user environmental friendly solution.



**3 great benefits of EE with hook**

- Extremely good shielding effectiveness,30dB improvement in comparison with standard profile
- 10%-20% cost saving on backside tape and assembly
- Assembly 30% quicker

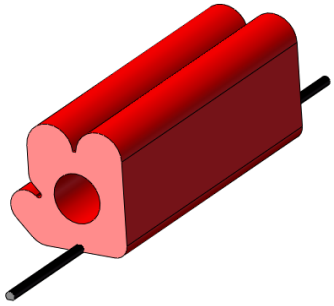
## Comparison on shielding effect of EE gasket




*Test is made on Compashield EE gasket model 1560 as reference.

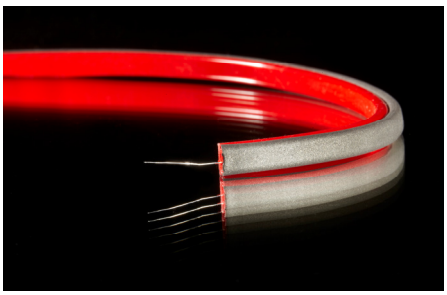
*Compashield EE with hook is patent pending, patent application number SE1050492-6 and WO2011/146003 A1.

**Nolato featured solution Compashield Anti-stretch:**



Compashield Anti-stretch is a newly developed solution from Nolato for the customers have high requirement on sealing. It's available for both EMI or environmental shielding, or both at the same time.

This solution means the silicone rubber material being extruded together with a thread. The thread could be in metal or textile, depends on the different purposes of application. By this way the length of the gasket is fixed, which provides the possibility to easy assembly with high precision for the operators.



**4 great benefits of Compashield Anti-stretch**

- Fast assembly with 100% precision in length
- Improved secured sealing
- Higher output due to lower risk for assembly mistake
- Available to form the gasket with the metal thread