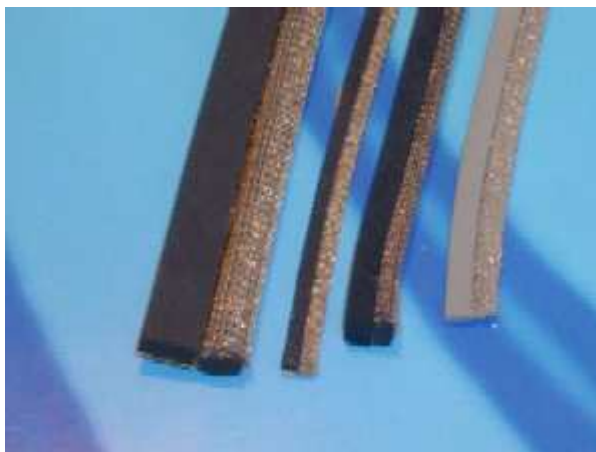


SOLIANI emc s.r.l.  Protezioni Interferenze Elettromagnetiche EMI - RFI - ESD - TEMPEST	SOLEMI ®	COMPANY WITH QUALITY SYSTEM CERTIFIED BY DNV = AS/EN/JISQ 9100 =	COMPANY WITH QUALITY SYSTEM CERTIFIED BY DNV = ISO 9001 =	Specifica: SOL-07 Rev. 2 25/09/2015 Pag. 1/5
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TECHNICAL SPECIFICATION

Twinshield Gaskets



The Twinshield type conductive gaskets are made up of one conductive part that provides the electromagnetic shielding function, and one part in elastomer for environmental sealing.

Applications

Gasket for the shielding of electric and magnetic fields where there is also a requirement for watertight sealing. Elastic recovery is obtained with expanded materials of various types such as Silicone, Neoprene and EPDM. IP sealing part is combined with shielding part. Utilized for containers, electrical boxes, electronics cabinets, etc., with the IP64 and the IP65 environmental sealing requirement.

Provision

In spools or pieces cut to size with perforations ready to install.

Process specification

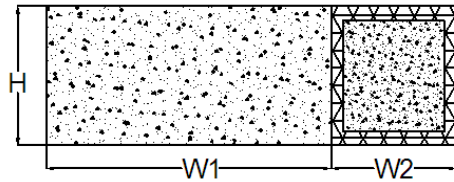
Manufacturing process according to "IO_PRD1_06 Processo Incollaggio Twinshield - Ed. 4".

PART NUMBER FOMULATION

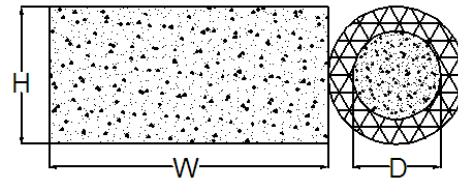
Ex: D.B.R.100.100.50.PU60.2.MO.100.ADLBG

1. Section Type

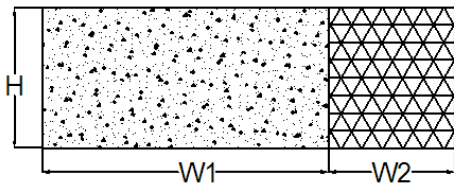
NOTE: Quotes in millimeters. If the dimensions H and D are equal, H can be omitted in the part number



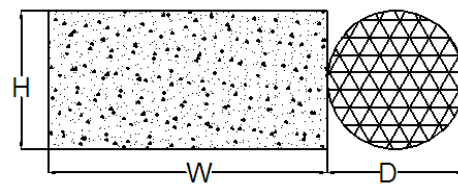
D.B.R.W1x10.W2x10.Hx10



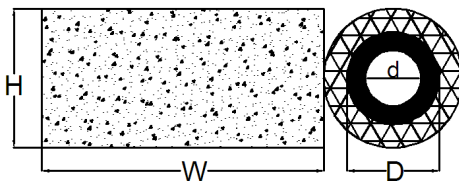
D.B.O.Wx10.Dx10.Hx10



D.A.R.W1x10.W2x10.Hx10



D.A.O.Wx10.Dx10.Hx10



D.B.O.T.Wx10.Dx10xdx10.Hx10

DAR and DAO configuration can be used only in case of permanent closure, no repeated opening and closure.

Tolerances of the product are defined according to "IO_PRD1_02 Parameters and Tolerances - Ed. 3".

Ex: **D.B.R.100.100.50.PU60.2.MO.100.ADLBG L=742MM**

2. Elastomer type

Material	EPDM Sponge EDPM-cr	Neoprene Sponge cr201	Neoprene Sponge cr205	Socaprene	Poyurethane sponge type: EUROBATEX	Polyurethane sponge: D40	Polyurethane sponge: D60 UL94 HBF	Polyurethane sponge: D90	Silicone sponge	Transparent Silicone sponge	EPDM type: SP-50- EPM/TN	EPDM type: SP-100- EPM/TN	EPDM type: SP-MICRO- EPM/TN
Code	EPDM341	N201	N205	CIG3	EBX	PU40	PU60	PU90	SE	S	SP50	SP100	SPMICRO
Color	Black	Black	Black	Gray	Black	White	Dark gray	Dark gray	White	Transparent	Black	Black	Black
Density	110-150 kg/m3	130-170 kg/m3	210-300 kg/m3	170-220 kg/m3	60 kg/m3	40 kg/m3	60-65 kg/m3	70-95 kg/m3	0,50-0,60 g/cm3	1,16 g/cm3	0,430 +/- 0,050 g/cm3	0,400 +/- 0,050 g/cm3	0,600 +/- 0,080 g/cm3
Hardness	20-40 SH 00	38-55 SH 00	45-65 SH 00	38-55 SH 00	/	/	/	/	/	63 SH 00	/	/	/
Compression Resistance	14/35 KPa (25% 22 h Room T.)	35/63 kPa (25% 22 h Room T.)	63/91 kPa (25% 22 h Room T.)	35/63 kPa (25% 22 h Room T.)	N.D.	N.D.	6,0 kPa (40%)	2,0 kPa (50%)	N.D.	N.D.	0,120 MPa (25% 22 h Room T.)	0,10 MPa (25% 22 h Room T.)	0,250 MPa (25% 22 h Room T.)
Water Absorbance (ASTM D 1056)	3%	0,70%	0,60%	0,90%	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Breaking lengthness (DIN 53571)	190%	129%	156%	236%	N.D.	200%	260%	150%	350-450%	381	N.D.	N.D.	N.D.
Breaking resistance (DIN 53571)	500 kPa	810 kPa	1001 kPa	756 kPa	/	130 kPa	160 kPa	250 kPa	N.D.	8,9 MPa	N.D.	N.D.	N.D.
Flame resistance	/	94 HB	94 HB	94 V0 >4mm (UL94)	UL94 V0	UL94 HF1 – MVSS302 SE	UL94 HBF	/	Fino a 200 - 260°C	N.D.	/	/	/
Using temperature (in continue)	From - 50 to 100°C up to 110°C intermitting	From -40 to +85°C up to 100°C intermitting	From -40 to +85°C up to 100°C intermitting	From -40 to +85°C up to 100 °C intermitting	From -45 to + 120°C	From -40 to + 80 °C up to 120 °C intermitting	From - 40 to + 120 °C	From - 40 to + 120 °C	From - 40 to + 120 °C	From - 40 to + 120 °C	From -35 to +110°C	From - 35 to + 110 °C	From - 35 to + 110 °C

Ex: D.B.R.100.100.50.PU60.2.MO.100.ADLBG L=742MM

3. Number of Layers

Valid only for shielding part with elastomer core (section DBR, DBO and DBOT)

Number	Code
1 Layer	1
2 Layers	2
3 Layers	3
4 Layers	4
5 Layers	5
6 Layers	6

Ex: D.B.R.100.100.50.PU60.2.MO.100.ADLBG L=742MM

Notes: Possible also with layers of different types (Ex: 2.MO.2.CWS)

4. Conductive Wire

Conductive Wire			
Name	Code	Dimensions	Material
Copperweld	CWS	0,09 or 0,11 mm	Tin plated 40% Copper clad steel
Monel	MO	0,09 or 0,11 mm	Main components: Ni-Fe-Cu
Tin-Copper	RS	0,12 mm	Tin coated copper
Stainless steel	SS	0,06 – 0,11 mm	Stainless steel AISI 304
Alluminum	AL	0,11 mm	Alluminum wire n° 3.3555
P-91	P-91	550 dtex 1800 Nm	Flame retardant yarn in Polyacrilonitrile and copper coated with tin – 70% PAN FR – 30% Cu+Sn
NyAg	PaAg	0.170 mm	Nylon 6.6 filament yarn
P-140	P-140	350 dtex 28500 Nm	Flame retardant yarn in Polyacrilonitrile and copper coated with tin – 50% PET – 50% Cu+Sn

Notes: MO0,09 indicates Monel wire with 0.09 mm diameter
MO. indicates Monel wire with 0.11 mm diameter

Shieldig effectiveness (Valid only for shielding part with elastomer core DBR, DBO and DBOT)					
Material	Layers	Magnetic Field – 100 kHz	Electrical Field – 10 MHz	Plane wave – 1 GHz	Plane wave – 10 GHz
MONEL	1		65	80	
MONEL	2	30-45	75	84	60
MONEL + CWS	2+2	30-45	85	92	>60
MONEL + CWS	2+3	68	90	>100	75

Shielding effectiveness (Valid for full metal gaskets DAR, DAO)				
Material	Magnetic Field – 100 kHz	Electrical Field – 10 MHz	Plane wave – 1 GHz	Plane wave – 10 GHz
MONEL	60	130	90	80
CWS	80	>130	105	95

Ex: D.B.R.100.100.50.PU60.2.**MO**.100.ADLBG L=742MM

5. Side with adhesive

Last three numbers, if present, indicate the sides with the adhesive. Possible without adhesive.

Ex: D.B.R.100.100.50.PU60.2.MO.**100**.ADLBG L=742MM

6. Biadhesive tape

Material	Code	Adhesive	Temperature range
TESA 4914	ADB	Modified acrylic	Up to 200° C

Ex: D.B.R.100.100.50.PU60.2.MO.100.**ADLBG** L=742MM

7. Type of supply

If the length is indicated it means that the gasket is supplied in pieces, if the length is not present it means that the gasket is supplied in linear meters.

Ex: D.B.R.100.100.50.PU60.2.MO.100.ADLBG **L=742MM**