



Marco Ruber Compound # T1002 Technical Datasheet

Encapsulated O-Ring – Outer Shell Data

Material	FEP ASTM D2116-95a	MC227
Description	Fep (fluorinated ethylene propylene) Fluoropolymer translucent virgin grade	
Application	This material has excellent chemical inertness, heat resistance and low coefficient of friction	
Temperature	Low temperature service limit -76F (-60 C). Upper temperature continuous service limit +428F (+204 C).	
Products	Jacket material for our range of Encapsulated O Rings	
Approvals	This grade of material is compliant with US FDA regulation 21 CFR 177.1550 § (a) (1) and (b) as finished articles. 3-A Sanitary Standards for Multiple-Use Plastic Materials Used as Product Contact Surfaces for Dairy Equipment Number 20-17. US Pharmacopeia (USP) Class V1	

Physical Properties

General

Specific Gravity	ASTM D792	2.15
Hardness shore D (slab)	ASTM D2240	55
Elongation %	ASTM D638	300
Tensile strength Psi (Mpa) (Dumbbell)	ASTM D638	4350(30)
Flexural modulus Psi (Mpa) (Dumbbell)	ASTM D790	95065(655)
MIT folding endurance (0.18-0.20mm film)	ASTM D2176	80,000

Thermal

Melting point F ©	D2116	490(255)
Coefficient of linear thermal expansion 100 – 160F (38-71 C)	D696	10-5 K ⁻¹

Environmental

Water absorption % 24 Hrs	D570	< 0.01
Weathering		excellent

This information is to the best of our knowledge accurate and reliable. However, Marco Rubber makes no warranty, expressed or implied, that parts manufactured from this material will perform satisfactorily in the customer's application. It's the customer's responsibility to evaluate parts prior to use.

Silicone Cord Data

Material	Silicone 75 Shore Red 'FDA/3-A' ASTM D 2000 M2GE 707 A19B37EO36	MC203
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Description	Low compression set Silicone O Ring material, extrusion grade Is FDA compliant to CFR 21 177-2600 Is 3-A 18-03 Class 1 compliant (except for tensile strength)	
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Application	This material has excellent thermal resistance to both high and low temperatures. Is good with oxygen and ozone attack and very high permeability resistance.	
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Temperature	Low temperature service limit -76F (-60C). Upper temperature continuous service limit 428F (+220C).	
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Products	Encapsulated O Rings (core) VulcOrings	
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Physical Properties		
Original		
Specific Gravity	ASTM D1817	1.58
Durometer shore A (slab)	ASTM D2240	73
Elongation % (Dumbbell)	ASTM D412	165
Tensile strength Psi (Mpa) (Dumbbell)	ASTM D412	1088 (7.5)
Compression set % 22h @ 347F (175C) (slab)	ASTM D395B	9.2
Heat Ageing 70h @ 437F (225C) ASTM D573		
Durometer change points shore A		-1
Elongation change %		-26
Tensile strength change Psi (Mpa)		-145 (-1)
Weight loss grams		0
Fluid Immersion Oil No 3 70h @ 302F (150C) ASTM D 471		
Volume change %		+33
Durometer change points shore A		-21
Elongation change %		0
Tensile strength change Psi (Mpa)		-218 (-1.5)

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