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## Marco Compound # T1001

### Technical Datasheet

<b>Material</b>	FEP ASTM D2116-95a	MC227
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<b>Description</b>	Fep (fluorinated ethylene propylene ) Fluoropolymer translucent virgin grade	
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<b>Application</b>	This material has excellent chemical inertness, heat resistance and low coefficient of friction	
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<b>Temperature</b>	Low temperature service limit -76F (-60 C). Upper temperature continuous service limit +428F (+204 C).	
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<b>Products</b>	Jacket material for our range of Encapsulated O Rings	
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<b>Approvals</b>	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	
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### 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 <sup>-1</sup>

#### Environmental

Water absorption % 24 Hrs	D570	< 0.01
Weathering		excellent



## Marco Compound # T1001 Viton O-ring

<b>Material</b>	Genuine Viton® 'A' 75 Shore ASTM D 2000 M2HK 710 B37 B38 C12
<b>Description</b>	Low compression set Viton 'A' O Ring Grade. Copolymer with 66% fluorine content. Cure system is Bisphenol.
<b>Application</b>	This material has excellent resistance to oils, fuels, lubricants, most mineral acids, aliphatic and aromatic hydrocarbons.
<b>Temperature</b>	Low temperature service limit -4F (-20 C). Upper temperature continuous service limit 400F (+204 C).
<b>Products</b>	Extrusions (cords/profiles/tubes) Mouldings (Custom/O Rings) VulcOrings & Encapsulated O Rings

### Physical Properties

#### Original

Specific Gravity	ASTM D1817	2.32
Durometer shore A (slab)	ASTM D2240	79
Elongation % (Dumbbell)	ASTM D412	233
Tensile strength Psi (Mpa) (Dumbbell)	ASTM D412	1672 (11.52)
Modulus @ 100% %	ASTM D945	7.2
Compression set % 22h @ 347F (175C) (slab)	ASTM D395B	4.6
22h @ 400F (200C)		7.0
Low temperature TR-10 °F (C) *	ASTM D1329	1.4 (-17)

\* nominal value based on a typical 75 shore vulcanizate

#### Heat Ageing 70h @ 482F (250C) ASTM D573

Durometer change points shore A	+4
Elongation change %	-34
Tensile strength change Psi (Mpa)	+537 (+3.7)
Weight loss grams	0.02

#### Fluid Immersion Oil No3 70h @ 302F (150C) ASTM D 471

Volume change %	+4.56
Durometer change points shore A	0.5
Elongation change %	-6.5
Tensile strength change Psi (Mpa)	+68 (+0.47)

#### Fluid Immersion Fuel C 70h @ 302F (23C) ASTM D471

Volume change %	+3.0
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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.

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Durometer change points shore A		-1	
Elongation change %			-3
Tensile strength change Psi (Mpa)		-32	
<b>Ozone Resistance</b> 70h @ 40C (50pphm)	ASTM D1171		Pass

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