



Marco Compound # P1001

90 Durometer, Translucent, High Performance Polyurethane Technical Datasheet

Common Names:

Polyurethane (AU, EU)

General description:

Polyurethane is a widely used compound due to its superior strength, tear and abrasion resistance. Polyurethane also provides excellent permeation resistance. Marco compound P1001 uses a specialty Cast TODI cure system which yields greatly increased performance over Millable Gum type Polyurethane materials. This compound also has increased hardness and extrusion resistance for use in high pressure environments. Please contact engineering@marcorubber.com for assistance in selecting a specialized compound when increased resistance to temperature, lubricants, or physical properties is required.

Features:

- Good hydraulic oil and gasoline resistance
- Resistant to pure aliphatic hydrocarbons (propane, butane, fuel)
- Resistance to mineral and silicone oils and greases
- Resistant to Water, oxygen, ozone and aging
- Excellent tear and abrasion resistance

Limitations:

- Not compatible with acids, ketones, esters, ethers, alcohols, glycols
- Hot water, steam, alkalis and amines

Service Temperature:

-65 to 250°F (-54 to 121°C)

PHYSICAL PROPERTY STANDARDS

ORIGINAL PROPERTIES	Specification Requirements	Typical Test Results
Hardness, Shore A	90 +/- 5	93
Color	Translucent	Translucent
Tensile Strength, psi	5,000 min.	6,200
Ultimate Elongation, %	450 min.	560
Modulus @ 100%, psi	-----	1,800
Modulus @ 300%, psi	-----	3,300
Specific Gravity – ASTM D 297	Report	1.17

Information within is believed to be accurate and reliable. However, Marco Rubber makes no warranty, expressed or implied, that parts supplied in this material will perform satisfactorily in specific applications. It's the customer's responsibility to evaluate prior to use.

HEAT RESISTANCE – ASTM D 573 (70 hrs. @ 100°C)	Specification Requirements	Typical Test Results
Hardness Change, points	+15 max.	-1
Tensile Strength Change, %	-20 max.	-10
Ultimate Elongation Change, %	-40 max.	-7

COMPRESSION SET – ASTM D 395 Method B (70 hrs. @ 70°C)	Specification Requirements	Typical Test Results
Permanent Set, %	35 max.	21

COMPRESSION SET – ASTM D 395 Method B (70 hrs. @ 100°C)	Specification Requirements	Typical Test Results
Permanent Set, %	65 max.	62

FLUID RESISTANCE - Water – ASTM D 471 (70 hrs. @ 100°C)	Specification Requirements	Typical Test Results
Hardness Change, points	+/- 10	-1
Volume Change, %	-50 max.	-15
Ultimate Elongation Change, %	-50 max.	+5
Volume Change, %	0 to +25	+4

FUEL RESISTANCE – Unleaded Gasoline – ASTM D 471(70 hrs. @ 23°C)	Specification Requirements	Typical Test Results
Hardness Change, points	+/- 10	-3
Tensile Strength Change, %	-60 max.	-18
Ultimate Elongation Change, %	-60 max.	-2
Volume Change, %	0 to +40	+7

OIL RESISTANCE –ASTM # 1 Oil – ASTM D 471 (70 hrs. @ 100°C)	Specification Requirements	Typical Test Results
Hardness Change, points	-5 to +15	NC
Tensile Strength Change, %	-25 max.	-12
Ultimate Elongation Change, %	-45 max.	-5
Volume Change, %	-10 to +5	NC

OIL RESISTANCE – IRM # 903 Oil, - ASTM D 471 (70 hrs. @ 100°C)	Specification Requirements	Typical Test Results
Hardness Change, points	0 to -15	-3
Tensile Strength Change, %	-45 max.	-12
Ultimate Elongation Change, %	-45 max.	-4
Volume Change, %	0 to +35	+4

TEAR RESISTANCE – ASTM D624, Die C	Specification Requirements	Typical Test Results
PLI	500	690

Date: 2016-5-11

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