



Marco Compound # P1004

90 Durometer, General Use Polyurethane

Technical Datasheet

Common Names:

Polyurethane (AU, EU)

General description:

Polyurethane is a widely used material due to its excellent mechanical properties including high tensile strength and great tear, abrasion, and permeation resistance. Marco compound P1004 is a 90 durometer millable gum Polyether type Polyurethane. 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 RT 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:

-30 to 180° F (-34 to 82° C)

Specification

ASTM D2000 M3BG910 A14 B14 EA14 EO14 Z1 Z2 (Z1= Ether type, Z2= Translucent).

PHYSICAL PROPERTY STANDARDS

ORIGINAL PROPERTIES	Specification Requirements	Typical Test Results
Hardness, Shore A	90 +/- 5	91
Color	Translucent-Yellow	Translucent-Yellow
Tensile Strength, psi	1,450 min.	2,846
Ultimate Elongation, %	100 min.	180
Specific Gravity	Report	1.23

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.	-0
Tensile Strength Change, %	-20 max.	-15
Ultimate Elongation Change, %	-40 max.	-18

COMPRESSION SET – ASTM D 395 Method B (22 hrs. @ 100°C)	Specification Requirements	Typical Test Results
Permanent Set, %	50 max.	29

WATER RESISTANCE – ASTM D 471 (70 hrs. @ 100°C)	Specification Requirements	Typical Test Results
Hardness Change, points	+/-10	-1
Tensile Strength Change, %		-1
Ultimate Elongation Change, %		+8
Volume Change, %	+/-15	+4

OIL RESISTANCE – IRM # 1 Oil, - ASTM D 471 (70 hrs. @ 100°C)	Specification Requirements	Typical Test Results
Hardness Change, points	-7 to +5	-2
Tensile Strength Change, %	-20 max.	-17
Ultimate Elongation Change, %	-40 max.	-16
Volume Change, %	-5 to +10	+5

Date: 2016-5-11