EPDM o-rings, or ethylene propylene o-rings, offer lower cost steam and chemical resistance. With great heat stability and resistance to compression set, EPDM is often characterized by wide range of applications and resistance to the elements. E1055 is a general purpose, 70A durometer, peroxide cured material.

ABOUT #E1055

E1055 is peroxide cured for improved aging, thermal stability, and chemical resistance. Alternative hardness and color options available.

FEATURES

· Resistance to weathering and outdoor environments.
· Good Permeation Resistance.
· Good heat and compression resistance.
· Resistant to ketones, hot and cold water, steam, alkalis, polar solvents, ozone, sunlight, alcohols, glycol engine coolant and Skydrol (phosphate ester hydraulic fluid).

APPLICATION EXAMPLES

· Applications involving solvents, acids, brake fluids, and other aggressive chemicals.
· Steam applications
· Outdoor weathering applications

ADDITIONAL INFORMATION

· Service Temperature of -65° to 300°F
· Cure System: Peroxide
· Spec: ASTM D2000 M3DA710 A25 A26 B35 B36 B44 C32 EA14 F19 Z1 (Z1= Peroxide)

PHYSICAL PROPERTIES

ORIGINAL PROPERTIES	ASTM D2000 Requirements	Typical Test Results
Hardness, Shore A	70 +/- 5	73
Color	Black	Black
Tensile Strength, MPa (psi)	10.0 (1,450) min.	16.6 (2404)
Ultimate Elongation, %	200	300
Modulus @ 100% Elongation, psi	-----	620
Tear Strength, kgf/cm	-----	36
Specific Gravity	-----	1.155
HEAT RESISTANCE – A25, (70 hrs. @ 125°C)	ASTM D2000 Requirements	Typical Test Results
Hardness Change, points, max.	-----	0
Tensile Strength Change, %, max.	-----	-8
Ultimate Elongation Change, %, max.	-----	-4
Volume Change, %	-----	0
HEAT RESISTANCE – A25, (70 hrs. @ 150°C)	ASTM D2000 Requirements	Typical Test Results
Hardness Change, points, max.	+/- 10	1
Tensile Strength Change, %, max.	+/- 20	-7
Ultimate Elongation Change, %, max.	-20	-4
COMPRESSION SET – B13, ASTM D 395 Method B (22 hrs. @ 125°C)	ASTM D2000 Requirements	Typical Test Results
Permanent Set, %, max.	-----	11
COMPRESSION SET – B13, ASTM D 395 Method B (22 hrs. @ 150°C)	ASTM D2000 Requirements	Typical Test Results
Permanent Set, %, max.	25	15
COMPRESSION SET – B13, ASTM D 395 Method B (70 hrs. @ 100°C)	ASTM D2000 Requirements	Typical Test Results
Permanent Set, %, max.	-----	13
OZONE RESISTANCE– C32, ASTM D 1171 Method B	ASTM D2000 Requirements	Typical Test Results
No Cracks	Pass	Pass
FLUID RESISTANCE, WATER – EA14, ASTM D 471 (70 hrs. @ 100°C)	ASTM D2000 Requirements	Typical Test Results
Hardness Change, points, max.	-----	-3
Tensile Strength Change, %, max.	-----	4
Ultimate Elongation Change, %, max.	-----	2
Volume Change, %	+/- 5	1.2
LOW TEMPERATURE RESISTANCE – F19, ASTM D 2137 Method A, 9.3.2		
(Non-brittle after 3 min. @ -55°C)	Non Brittle	Pass

FLUID RESISTANCE, DOT #3 OIL – EA14, ASTM D 471 (70 hrs. @ 125°C)	ASTM D2000 Requirements	Typical Test Results
Hardness Change, points, max.	-----	-5
Tensile Strength Change, %, max.	-----	-4
Ultimate Elongation Change, %, max.	-----	2
Volume Change, %	-----	2
FLUID RESISTANCE, DOT #3 OIL – EA14, ASTM D 471 (70 hrs. @ 150°C)	ASTM D2000 Requirements	Typical Test Results
Hardness Change, points, max.	-----	-5
Tensile Strength Change, %, max.	-----	-6
Ultimate Elongation Change, %, max.	-----	5
Volume Change, %	-----	2.7
FLUID RESISTANCE, DOT #4 OIL – EA14, ASTM D 471 (70 hrs. @ 125°C)	ASTM D2000 Requirements	Typical Test Results
Hardness Change, points, max.	-----	-4
Tensile Strength Change, %, max.	-----	-1
Ultimate Elongation Change, %, max.	-----	2
Volume Change, %	-----	3.6
FLUID RESISTANCE, DOT #4 OIL – EA14, ASTM D 471 (70 hrs. @ 150°C)	ASTM D2000 Requirements	Typical Test Results
Hardness Change, points, max.	-----	-5
Tensile Strength Change, %, max.	-----	1
Ultimate Elongation Change, %, max.	-----	6
Volume Change, %	-----	4.2