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Compound Data Sheet  
Parker O-Ring Division United States

# MATERIAL REPORT

DATE: 5-3-2000

**TITLE:** Evaluation of Parker Compound C1278-80.

**PURPOSE:** To obtain general data.

**CONCLUSION:** Parker Compound C1278-80 provides resistance to a broad range of refrigerants and lubricants, while performing in a broader temperature range than existing Neoprene formulations.

Recommended temperature limits: -35°F to 250°F

Recommended For

Carbon Dioxide

Ammonia

Refrigerants

Silicone oil and grease

Water and water solvents at low temperatures

Not Recommended For

Aromatic hydrocarbons, e.g. benzene

Chlorinated hydrocarbons

Polar solvents, e.g. ketones, esters, ethers, acetones

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## REPORT DATA

C1278-80 2-214 Test ResultsBasic Physical Properties

Hardness	81
Tensile Strength, psi.	1604
Elongation, %	239
<u>Compression Set, 70 H @ 257 °F, 2-214 O-Rings</u>	
% Max. Deflection	35.1
<u>Heat Aging, 70 H @ 257 °F</u>	
Hardness Change, pts	+6
Tensile Change, %	+5
Elongation Change, %	-16
<u>Fluid Immersion, ASTM #1 Oil, 70 H @ 257 °F</u>	
Hardness Change, pts.	-2
Tensile Change, %, max	+8
Elongation Change, % max.	+6
Volume Change, % max.	+3.4
<u>Fluid Immersion, PAG Refrigerant Oil, 70 H @ 257 °F</u>	
Hardness Change, pts.	-1
Tensile Change, %, max	-10
Elongation Change, % max.	-8
Volume Change, % max.	+4.2
<u>Fluid Immersion, R134A, 70H @ RT</u>	
Volume Change, % max.	+0.6
<u>Glass Transition Temperature by DSC, 20°C/ min heat rate</u>	
T(g) by DSC, °C	-42.0
<u>Volume Change in Refrigerants and Refrigerant Lubricants</u>	
R22/3GS oil, 50/50, 70H @ 125°C	+35.9
R12/3GS oil, 50/50, 70H @ 125°C	+24.3
R22, 70H @ 125°C	+3.3
R12, 70H @ 125°C	+1.9
R123, 70H @ 100°C	+18.8
R123/Mineral Oil, 50/50, 70H @ 100°C	+25.5
R134A, 70H @ 100°C	+2.4
PAG oil, 70H @ 100°C	+5.1
R134A/PAG oil, 50/50, 70H @ 100°C	+3.4
R22, 70H @ 100°C	+6.6
Mobil Arctic 22A oil, 70H @ 100°C	+34.9
R22/Mobil Arctic 22A, 50/50, 70 H @ 100 °C	+6.8