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
### REPORT DATA

#### Basic Physical Properties
- **Hardness**: 81
- **Tensile Strength, psi.**: 1604
- **Elongation, %**: 239

#### Compression Set, 70 H @ 257 °F, 2-214 O-Rings
- **% Max. Deflection**: 35.1

#### Heat Aging, 70 H @ 257 °F
- **Hardness Change, pts.**: +6
- **Tensile Change, %**: +5
- **Elongation Change, %**: -16

#### Fluid Immersion, ASTM #1 Oil, 70 H @ 257 °F
- **Hardness Change, pts.**: -2
- **Tensile Change, %, max**: +8
- **Elongation Change, % max.**: +6
- **Volume Change, % max.**: +3.4

#### Fluid Immersion, PAG Refrigerant Oil, 70 H @ 257 °F
- **Hardness Change, pts.**: -1
- **Tensile Change, %**: -10
- **Elongation Change, % max.**: -8
- **Volume Change, % max.**: +4.2

#### Fluid Immersion, R134A, 70H @ RT
- **Volume Change, % max.**: +0.6

#### Glass Transition Temperature by DSC, 20°C/ min heat rate
- **T(g) by DSC, °C**: -42.0

#### Volume Change in Refrigerants and Refrigerant Lubricants
- **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