

COMPOUND DATA SHEET

Parker O-Ring Division, North America

MATERIAL REPORT

| | | Report Number: Date: | 809211 7/6/2011 | ESC ENGINEERED SEAL PRODUCTS® 100% Employee-Owned | | |
|---|--|--|--------------------|---|--|--|
| <u>Title:</u> | Evaluation of Parker Compound VG286-80 | | | | | |
| Elastomer Type: | Fluorocarbon (FKM) | | | | | |
| Purpose: | To obtain typical test data. | | | | | |
| Specification: | N/A | | | | | |
| <u>Color:</u> | Black | | | | | |
| Recommended Temperature Range: -50°F to 400°F | | | | | | |
| <u>Recommended For:</u> | | Mineral oil and grease, IRM 901 oil, IRM 902 oil, IRM 903 oil, non- flammable hydraulic fluids, silicone oils and greases, aliphaic hydrocarbons (propane, butane, natural gas), aromatic hydrocarbons (benzene, toluene), chlorinated hydrocarbons (trichloroethylene and carbon tetrachloride), gasoline (including high alcohol content), high vacuum, ozone, weather, and aging resistance. | | | | |
| Not Recommended For: | | Glycol based brake fluids, ammonia gas, amines, alkalis, superheated steam, and low molecular weight organic acids (formic and acetic acids). | | | | |

Additional Approvals: N/A

REPORT DATA

| | Test | Test |
|-------------------------------------|--------------------|---------------|
| Original Physical Properties | Method | Results |
| Hardness, Shore A, pts. | ASTM D2240 | 80 |
| Tensile Strength, PSI | ASTM D412 | 2609 |
| Ultimate Elongation, % | ASTM D412 | 161 |
| Specific Gravity | ASTM D297 | 1.78 |
| Heat Resistance | | |
| <u>168 hrs. @ 392°F</u> | | |
| Hardness Change, pts. | ASTM D865 | +2 |
| Tensile Strength Change, % | | +14 |
| Ultimate Elongation Change, % | | -20 |
| Weight Loss,% | | 0 |
| Compression Set (Buttons) | | |
| <u>70 hrs. @ 392°F</u> | | |
| Percent of Original Deflection, Max | ASTM D395 Method B | 8 |
| Fluid Resistance | | |
| Distilled Water, 70 hrs @ 212°F | | |
| Hardness Change, pts. | ASTM D471 | 0 |
| Tensile Strength Change, % | | 0 |
| Ultimate Elongation Change, % | | -1 |
| Volume Change, % | | +3 |
| Fluid Resistance | | |
| <u>Diesel # 2, 70 hrs @ 212°F</u> | | |
| Hardness Change, pts. | ASTM D471 | -4 |
| Tensile Strength Change, % | | -19 |
| Ultimate Elongation Change, % | | -3 |
| Volume Change, % | | +5 |
| Fluid Resistance | | |
| Methanol, 70 hrs @ 75°F | | |
| Hardness Change, pts. | ASTM D471 | -10 |
| Tensile Strength Change, % | | -38 |
| Ultimate Elongation Change, % | | -28 |
| Volume Change, % | | +24 |
| Fluid Resistance | | |
| Efron 818, 70 hrs @ 212°F | | |
| Hardness Change, pts. | ASTM D471 | -5 |
| Tensile Strength Change, % | | -7 |
| Ultimate Elongation Change, % | | +4 |
| Volume Change, % | | +6 |
| | | Parker O-Bing |

| Fluid Resistance | Test | Test |
|------------------------------------|------------|----------------|
| Zinc Bromide Brine, 70 hrs @ 212°F | Method | <u>Results</u> |
| Hardness Change, pts. | ASTM D471 | 0 |
| Tensile Strength Change, % | +3 | |
| Ultimate Elongation Change, % | -1 | |
| Volume Change, % | | +2 |
| | | |
| Low Temperature Resistance | | |
| TR-10, temperature °F | ASTM D1329 | -31 |

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