



APPLE RUBBER PRODUCTS INC.

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Apple Rubber Products, Inc. Laboratory Report

Material: 70 Fluorsilicone vs 75 Fluorocarbon (Standard) vs 75 Fluorocarbon (Ultra Low Temperature)

Original Physical Properties

| Material | 70 FS | 75 VT | 75 VT LT |
|---------------------------------------|----------------|--------------|----------|
| Apple Compound Number | 01FS7AP | 01VT7EE | 23VT7AP |
| Specification | AMS-R 25988 | AMS- 7276 | TBD |
| Durometer (ASTM D2240), Shore A, Pts. | 72 | 76 | 73 |
| Tensile (ASTM D412), psi | 959 | 2391 | 1965 |
| Elongation (ASTM D412), % | 213 | 192 | 190 |
| Specific Gravity (ASTM D297) | 1.69 | 1.85 | 1.87 |

Compression Set (ASTM D395), 20 hours @ 175°C

| | | | |
|----------------|----|---|----|
| Compression, % | 25 | 9 | 10 |
|----------------|----|---|----|

Standand Post Cure

| | | | |
|--------------|-----|-----|-----|
| Time (hours) | 4 | 16 | 16 |
| Temp (°C) | 200 | 250 | 232 |

Outgas Testing ASTM E 595

24 hours @ 125°C, 5 x 10⁻⁵ torr vacuum

| | | | |
|----------|-------|-----|-------|
| TML (%) | .21 | .28 | 0.1 |
| CVCM (%) | <0.01 | .01 | <0.01 |

Vacuum Post Cure

| | | | |
|--------------|-----|-----|-----|
| Time (hours) | 4 | 16 | 16 |
| Temp (°C) | 200 | 250 | 232 |

Outgas Testing ASTM E 595

24 hours @ 125°C, 5 x 10⁻⁵ torr vacuum

| | | | |
|----------|-------|-----|------|
| TML (%) | .13 | .07 | 0.07 |
| CVCM (%) | < .01 | .01 | 0.03 |

Temperature of Retraction (TR)

| | | | |
|----------------------|-----|-----|-----|
| ASTM D1329 (TR10) °C | -59 | -15 | -40 |
|----------------------|-----|-----|-----|

Date: 03/19/2012

Signature: John A. Tranquill