

# Fluoraz FEPM 797

Perfluoroethylene Propylene Copolymer

Greene, Tweed & Co.

Message:

Fluoraz FEPM 797 is a Perfluoroethylene Propylene Copolymer (FEP) product. It is available in North America.

| General Information                  |               |                   |             |
|--------------------------------------|---------------|-------------------|-------------|
| Appearance                           | Black         |                   |             |
| Forms                                | Pellets       |                   |             |
| Physical                             | Nominal Value | Unit              | Test Method |
| Specific Gravity                     | 1.63          | g/cm <sup>3</sup> | ASTM D297   |
| Hardness                             | Nominal Value | Unit              | Test Method |
| Rockwell Hardness (M-Scale)          | 83            |                   | ASTM D785   |
| Durometer Hardness (Shore A)         | 80            |                   | ASTM D2240  |
| Mechanical                           | Nominal Value | Unit              | Test Method |
| Coefficient of Friction <sup>1</sup> |               |                   | ASTM D1894  |
| vs. Itself - Dynamic                 | 0.50          |                   |             |
| vs. Itself - Static                  | 0.80          |                   |             |
| Elastomers                           | Nominal Value | Unit              | Test Method |
| Tensile Stress                       |               |                   | ASTM D1414  |
| 50% Strain                           | 3.86          | MPa               |             |
| 100% Strain                          | 9.14          | MPa               |             |
| Tensile Strength (Break)             | 19.3          | MPa               | ASTM D1414  |
| Tensile Elongation (Break)           | 230           | %                 | ASTM D1414  |
| Tear Strength <sup>2</sup>           | 55.2          | kN/m              | ASTM D624   |
| Compression Set <sup>3</sup>         |               |                   |             |
| 23°C, 70 hr                          | 19            | %                 | ASTM D395   |
| 149°C, 70 hr                         | 36            | %                 | ASTM D395   |
| 175°C, 166 hr                        | 40            | %                 | ASTM D395   |
| 200°C, 22 hr                         | 27            | %                 | ASTM D395   |
| 200°C, 22 hr                         | 40            | %                 | ASTM D395B  |
| 200°C, 70 hr                         | 34            | %                 | ASTM D395   |
| 232°C, 70 hr                         | 39            | %                 | ASTM D395   |
| 242°C, 70 hr                         | 22            | %                 | ASTM D395   |
| 288°C, 70 hr                         | 64            | %                 | ASTM D395   |
| Aging                                | Nominal Value | Unit              | Test Method |
| Change in Tensile Strength in Air    |               |                   | ASTM D573   |
| 149°C, 70 hr                         | 0.0           | %                 |             |
| 232°C, 70 hr                         | -10           | %                 |             |
| 276°C, 70 hr                         | -56           | %                 |             |

| 288°C, 70 hr                         | -68           | %        |             |
|--------------------------------------|---------------|----------|-------------|
| Change in Ultimate Elongation in Air |               |          | ASTM D573   |
| 149°C, 70 hr                         | 7.0           | %        |             |
| 232°C, 70 hr                         | 11            | %        |             |
| 276°C, 70 hr                         | 13            | %        |             |
| 288°C, 70 hr                         | -22           | %        |             |
| Change in Durometer Hardness in Air  |               |          | ASTM D573   |
| 149°C, 70 hr                         | 2.0           |          |             |
| 232°C, 70 hr                         | -1.0          |          |             |
| 276°C, 70 hr                         | 0.0           |          |             |
| 288°C, 70 hr                         | -2.0          |          |             |
| Change in Tensile Strength           |               |          | ASTM D471   |
| 135°C, 70 hr, in Ford ATF            | -12           | %        |             |
| 135°C, 70 hr, in Wagner 21B          | -14           | %        |             |
| 175°C, 70 hr, in Stauffer 7700 Fluid | -25           | %        |             |
| 200°C, 1000 hr, in Castrol 325       | -17           | %        |             |
| 240°C, 100 hr, in Castrol 325        | -22           | %        |             |
| 242°C, 70 hr, in Steam <sup>4</sup>  | -44           | %        |             |
| Change in Ultimate Elongation        |               |          | ASTM D471   |
| 135°C, 70 hr, in Ford ATF            | 17            | %        |             |
| 135°C, 70 hr, in Wagner 21B          | 24            | %        |             |
| 175°C, 70 hr, in Stauffer 7700 Fluid | 15            | %        |             |
| 200°C, 1000 hr, in Castrol 325       | 12            | %        |             |
| 240°C, 100 hr, in Castrol 325        | 25            | %        |             |
| 242°C, 70 hr, in Steam <sup>5</sup>  | -32           | %        |             |
| Change in Durometer Hardness         |               |          | ASTM D471   |
| 135°C, 70 hr, in Wagner 21B          | -4.0          |          |             |
| 175°C, 70 hr, in Stauffer 7700 Fluid | -16           |          |             |
| 191°C, 70 hr, in Ford ATF            | -7.0          |          |             |
| 200°C, 1000 hr, in Castrol 325       | -10           |          |             |
| 240°C, 100 hr, in Castrol 325        | -15           |          |             |
| 242°C, 70 hr, in Steam <sup>6</sup>  | -2.0          |          |             |
| Change in Volume                     |               |          | ASTM D471   |
| 135°C, 70 hr, in Ford ATF            | 8.0           | %        |             |
| 135°C, 70 hr, in Wagner 21B          | 6.9           | %        |             |
| 175°C, 70 hr, in Stauffer 7700 Fluid | 25            | %        |             |
| 200°C, 1000 hr, in Castrol 325       | 10            | %        |             |
| 240°C, 100 hr, in Castrol 325        | 12            | %        |             |
| 242°C, 70 hr, in Steam <sup>7</sup>  | 2.0           | %        |             |
| Thermal                              | Nominal Value | Unit     | Test Method |
| CLTE - Flow                          | 2.2E-4        | cm/cm/°C | ASTM E228   |
| Service Temperature                  | -5 to 232     | °C       |             |

|                       |                                    |            |
|-----------------------|------------------------------------|------------|
| Rubber Classification | FEPM                               | ASTM D1418 |
| TR 10/50              | 6                                  | °C         |
|                       |                                    | ASTM D1329 |
| NOTE                  |                                    |            |
| 1.                    | Method C                           |            |
| 2.                    | Die B                              |            |
| 3.                    | In air, 25% of original deflection |            |
| 4.                    | 500 psi                            |            |
| 5.                    | 500 psi                            |            |
| 6.                    | 500 psi                            |            |
| 7.                    | 500 psi                            |            |

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