

**POLYTETRAFLUOROETHYLENE (PTFE), SINTER
MOLDING COMPOUND****WSL-M4D632-A****1. SCOPE**

The material defined by this specification is a polytetrafluoroethylene (PTFE) compound suitable for compression molding and subsequent sintering.

2. APPLICATION

This specification was released originally for material used for fuel system tubing where high temperature and alternate fuel resistance is required.

3. REQUIREMENTS**3.0 STANDARD REQUIREMENTS FOR PRODUCTION MATERIALS**

Material suppliers and part producers must conform to the Company's Standard Requirements For Production Materials (WSS-M99P1111-A).

3.4 MOLDING COMPOUND

3.4.1 Melting Peak Temperature 317 - 337 °C
(ASTM D 1457)

3.5 MOLDED TEST SPECIMEN

3.5.1 Preparation of Test Specimens

Test specimens shall be prepared according to ASTM D 1457.

3.5.2 Density 2.14 – 2.16 g/cm³
(ASTM D 1457)

3.5.3 Tensile Strength at Max Load, min 20 MPa
(ASTM D 1457)

3.5.3.1 Elongation at Break, min 200%

3.6 HEAT AGING

(ASTM D 573, 168h at 204 +/- 2 °C)

3.6.1 Tensile Strength Change +/- 10%
(ASTM D 1457)

3.6.2 Elongation Change +/- 10%
(ASTM D 1457)

Date	Action	Revisions
2005 09 20	Revised	Inserted 3.0; Deleted 3.1, 3.2, 3.3, 3.11, 3.12, 4
1989 02 07	Released	NL001 168890-081



**3.7 IMMERSION IN 85% FUEL C +15% METHANOL**
(ASTM D 471, 168 h at 40 +/- 2° C)3.7.1 Tensile Strength Change +/- 15%
(ASTM D 1457)3.7.2 Elongation Change +/- 25%
(ASTM D 1457)**3.8 IMMERSION IN 85% FUEL C +15% ETHANOL**
(ASTM D 471, 168 h at 40 +/- 2 ° C)3.8.1 Tensile Strength Change +/- 15%
(ASTM D 1457)3.8.2 Elongation Change +/- 25%
(ASTM D 1457)**3.9 IMMERSION IN OXIDIZED (SOUR) FUEL**
(FLTM AZ 105-01, PN 90, 168 h at 40 +/- 2 °C)3.9.1 Tensile Strength Change +/- 15%
(ASTM D 1457)3.9.2 Elongation Change +/- 25%
(ASTM D 1457)**3.10 THERMAL INSTABILITY INDEX, max** 7.0
(ASTM D 1457)**5. GENERAL INFORMATION**

The information given below is provided for clarification and assistance in meeting the requirements of this specification.

5.1 PARTICLE SIZE 350 - 650
(ASTM D 1457) micrometer**5.2 EXTRUSION PRESSURE** 15.5 - 36.2 MPa
(ASTM D 1457, 400:1 reduction)