

**POLYTETRAFLUOROETHYLENE (PTFE)
PASTE EXTRUSION COMPOUND****WSK-M4D632-A2****1. SCOPE**

The material defined by this specification is a fine powdered polytetrafluoroethylene (PTFE) compound suitable for paste extrusion process.

2. APPLICATION

This specification was released originally for material used for throttle cable liners.

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 (ASTM D 1457)	315 - 355 °C
3.4.2	Particle Size (ASTM D 1457)	350 - 650 micrometre
3.4.3	Apparent Density (ASTM D 1457)	420 - 550 g/1000 cm ³

3.5 MOLDED TEST SPECIMEN**3.5.1 Preparation of Test Specimens**

Test specimens shall be prepared according to ASTM D 1457. (The sinter conditions shall be as recommended by the supplier of the PTFE compound.)

3.5.2	Density (ASTM D 1457)	2.14 - 2.24 g/cm ³
3.5.3	Tensile Strength at Max Load, min (ASTM D 1457)	18 MPa

3.5.3.1	Elongation at Break, min	200%
---------	--------------------------	------

3.5.4	Heat Aging Performance (ISO 188/ASTM D 573, 150 +/- 50 air changes/h, 1000 h at 204 +/- 2 °C. Unaged property values shall be determined at the time of the aged properties determination)	
-------	---	--

Date	Action	Revisions
2005 09 21	Revised	Inserted 3.0; Deleted 3.1, 3.2, 3.3, 3.7, 3.8 & 4
1991 08 01	Released	EP00E01089487000

**Documents**Rodigas
Document Sharing Hub



3.5.4.1	Tensile Strength at Max Load Change (Test Method per para 3.5.3)	+/- 10%
3.5.4.2	Elongation at Break Change (Test Method per para 3.5.3)	+/- 10%

3.6	THERMAL INSTABILITY INDEX, max (ASTM D 1457)	50
------------	--	----

5. GENERAL INFORMATION

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

5.1	COEFFICIENT OF LINEAR THERMAL EXPANSION (ASTM D696)	15 - 20 ⁻⁵ / °C
5.2	EXTRUSION PRESSURE (ASTM D 1457, Reduction Ratio 400:1 or min 500:1)	5 - 20 MPa or 25 - 55 MPa
5.3	SINTERING CONDITIONS FOR TEST SPECIMENS (ASTM D 1457)	
	Initial Temperature	290 °C
	Rate of Heating	120 +/- 10 °C/h
	Sintering 1	30 minutes at 380 +/- 5 °C
	Cooling Rate	60 +/- 5 °C/h
	Sintering 2	25 minutes at 294 +/- 5 °C
	Cooling Period to Room Temperature	30 minutes

5.4 RECYCLING CODE

SAE

PTFE



OPTIONAL