3M™ Dyneon™
High Temperature Perfluoroelastomer
PFE 132TBZ

Features and Benefits

- Upper use temperature of 315°C
- Excellent compression set resistance offering enhanced sealing force retention and seal life
- Ideal for dry side (thermal processes) semiconductor applications including plasma
- Low metal ion content with low extractables

Note: Data in this document are not for specification purposes.

Typical Properties

Property	
Specific Gravity	2.0
Color	White
Form	Crumb
TR 10	-2°C (28°F)
Brittleness Point	-35°C (-31°F)
Mooney Viscosity – ML (1+10) @ 121°C	100

Product Description

3M™ Dyneon™ PFE 132TBZ is a technically advanced high temperature perfluorelastomer (HT PFE). It is designed to meet the challenges of higher temperature plasma applications. It is classified as FFKM per ASTM D1418. Its fully fluorinated backbone structure provides a very broad chemical and thermal stability.

Product Form

Dyneon PFE 132TBZ is packaged in crumb form. It is available in 2 kg and 10 kg boxes.

Safety/Toxicology

Before processing 3M perfluoroelastomers, read and follow all precautions and directions for use contained in the product label and Material Safety Data Sheet (MSDS). General handling precautions and directions for use include: (1) Store and use all 3M perfluoroelastomers only in well ventilated areas; (2) Do not smoke in areas contaminated with dust from 3M perfluoroelastomers; (3) Avoid eye contact; (4) After handling 3M perfluoroelastomers wash any contacted skin with soap and water. Potential hazards, including evolution of toxic vapors, can occur during compounding or processing under excessively high temperature conditions. Appropriate local exhaust ventilation such as vapor extractor units should be installed above compounding or processing equipment. When compounding, be sure to read and follow all precautions and directions for use from other compound ingredient suppliers.

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Typical Properties of Vulcanizates

Compound	phr
PFE 132TBZ	94
Aerosil® R972	1.5
PFE 01CZ	7.5
TiO_2	5

Typical Rheological Properties [ASTM D5289]
Moving Die Rheometer (MDR)
100 cpm, 0.5° Arc, 12 Minutes @ 188°C (370°F)

Property	
ML, Minimum Torque, Inch-lb (dN m)	1.3 (1.5)
t_s2, Time to 2 Inch-lb Rise from Minimum – Minutes	1.7
t'50, Time to 50% Cure – Minutes	2.8
t'90, Time to 90% Cure – Minutes	6.2
MH, Maximum Torque, Inch-lb (dN m)	16.0 (18.1)

Typical Physical Properties
Press Cure 15 Minutes @ 188°C (370°F)
Post Cure 24 Hours @ 250°C (482°F)

Property	
Tensile, psi (MPa)	2260 (15.6)
100% Modulus, psi (MPa)	1002 (6.9)
Elongation at Break, %	241
Hardness, Shore A [ASTM D2240]	79

Compression Set Resistance [ASTM D395 Method B, -214 O-rings]

70 Hours @ 232°C (450°F) – 25% Deformation	36
70 Hours @ 300°C (572°F) – 25% Deformation	73

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