

3M Advanced Materials Division

3M™ Dyneon™ Fluoroplastic Granules THV 815GZ

Features and Benefits

- Excellent chemical resistance
- Excellent permeation resistance to fuels
- Bondability to other plastics and elastomers without the need for surface treatments
- Low flammability
- Processing profile allows co-processing with olefinic plastics and hydrocarbon elastomers
- High transparency
- Excellent UV stability
- Low refractive index

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

Typical Values

Property	Test Method	THV 815GZ
Melting Point	ASTM D4591	225°C (437°F)
Melt Flow Index 265°C/5 kg	ASTM D1238	12 g/10 min
Specific Gravity	ASTM D792	2.06 g/cm ³
Tensile at Break	ASTM D638 (film)	29 MPa (4,210psi)
Elongation at Break	ASTM D638	430%
Flexural Modulus	ASTM D790	525 MPa (76,200 psi)

Product Description

3M™ Dyneon™ Fluoroplastic THV 815GZ is a fluorothermoplastic containing fluorinated monomers. Because of its well-balanced profile of low flammability, thermal stability, permeation resistance and melt processability, this product should preferably be used for extruded film, profiles and tubes, for example in automotive fuel hoses.

Storage and Material Handling

3M™ Dyneon™ Fluoroplastic THV 815GZ has an unlimited shelf life provided it is stored in a clean, dry place. THV 815GZ is hydrophobic and generally does not require drying before processing unless high humidity conditions create surface moisture adsorption. Open 200 kg drums only under proper ventilation.

Processing Recommendations

The processing recommendations depend on a variety of factors and it is best advised to contact a technical service person before embarking on extrusion trials. However, one can use the following as a starting point for the extrusion of THV 815GZ.

Cooling on the feed throat of the extruder to maintain a temperature of 30 – 80 °C, Zone 1 250 °C, Zone 2 270 °C, Zone 3 280 °C, the die and other tooling around 290 °C. Typical processing temperatures for injection moulding are around 260 – 290 °C for the nozzle temperature and 50 – 100 °C for the mould. A screen pack of 1000 µm / 500 µm / 200 µm is recommended. Corrosion resistant equipment and an air exhausting system are highly recommended for safe processing.

Safety/Toxicology

This is a fluoroplastic material, so normal precautions observed with fluoroplastics should be followed. Before processing this product, be sure to read and follow all precautions and directions for use contained in the product label and the Safety Data Sheet. General handling/processing precautions include: (1) Process only in well-ventilated areas; (2) Do not smoke in areas contaminated with powder/residue from this product; (3) Avoid eye contact; (4) After handling this product, wash any contacted skin with soap and water. Potential hazards, including evolution of vapors, can exist if processing occurs under excessively high temperature conditions. Appropriate local exhaust ventilation such as vapor extractor units should be installed above processing equipment. When cleaning processing equipment, do not burn off any of this product with an open flame or in a furnace.

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