

3M™ Dyneon™ Fluoroplastic Agglomerate THV 221AZ

Features and Benefits

- Solvent soluble for coating applications
- Ultra flexible of THV grades, no plasticizers needed
- High transparency
- Low flammability
- Melting point compatible with many substrates for co-extrusion, compounding, or coating
- Bondable to itself and other substrates
- Compounding versatility

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

Typical Properties

Property	Test Method	
Melting Point	ASTM D4591	115°C
Melt Flow Index 265°C/5 kg	ASTM D1238	20 g/10 min
Specific Gravity	ASTM D792	1.93 g/cm ³
Tensile at Break	ASTM D638 (film)	20 MPa (2,900 psi)
Elongation at Break	ASTM D638	600%
Flexural Modulus	ASTM D790	80 MPa (12,000 psi)

Product Description

3M™ Dyneon™ Fluoroplastic Agglomerate THV 221AZ is a flexible, transparent fluoroplastic composed of tetrafluoroethylene, hexafluoropropylene, and vinylidene fluoride in the form of agglomerate or coarse powder. It is soluble in ketones, esters, or ethers and can be used to prepare solutions to coat a range of substrates to provide surfaces with good weatherability and anti-soiling properties. This agglomerate form can also be used for compounding. Dyneon THV 221AZ processes at relatively low temperatures compared to other fluoroplastics and may not require the same level of corrosion resistant equipment as that used with higher melting fluoroplastics. However, it should be remembered that THV is a fluoroplastic and should be treated accordingly.

Storage and Material Handling

THV 221AZ has an unlimited shelf life provided it is stored in a clean, dry place. THV 221AZ is hydrophobic, and generally does not require drying before processing unless high humidity conditions create surface moisture adsorption.

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 Material 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 toxic 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.

Packaging

THV 221AZ is available in 25 kg (55 lb) bags and 50 kg (110 lb) boxes.

Product Stewardship—Replacement Emulsifier: Dyneon™ and Dynamar™ fluoroplastic products identified with a “Z” at the end of the product name indicate products that are made using a replacement emulsifier. This emulsifier, which Dyneon began using in the manufacturing processes for these products in 2008, is a polymerization aid used to manufacture certain fluoropolymers and is not an intended ingredient in the polymers. The new emulsifier eliminates the use of the former polymerization aid, APFO (ammonium perfluorooctanoate, the ammonium salt of perfluorooctanoic acid (PFOA)), in the manufacture of these fluoropolymers. The use of the replacement emulsifier in the manufacture of these products is consistent with our product stewardship principles and our commitment to US EPA’s Voluntary PFOA Stewardship Program under which fluoropolymer manufacturers agreed to work towards eliminating PFOA in emissions and product content by the year 2015. **We are pleased to report that Dyneon completely eliminated the use of APFO in its manufacturing processes in December 2008.**

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