

## Solvay Specialty Polymers Torlon® 4000TF Polyamide-imide (PAI) (Unverified Data\*\*)

Category : Polymer , Thermoplastic , Polyamide-imide (PAI) , Polyamide-Imide, Extruded

### Material Notes:

Torlon 4000TF is a neat resin polyamide-imide (PAI) fine powder designed for compounding with other polymers and specialty additives. It is the base resin utilized in all Torlon injection molded compounds. Its powder form enables designers to enhance custom compounds and specialty applications with the well-known properties of Torlon polyamide-imide, from its unstoppable performance under extreme conditions to excellent resistance against wear, creep and chemicals. Torlon 4000TF is a fine-particle powder suitable for compression molded parts. It has a maximum particle size of 150 µm with 95% less than 75 µm. The majority of material is the range of 30-40 µm. The IV for this grade is greater than 0.50, the typical range is 0.50-0.65. A coarse-particle powder version, Torlon 4000T, is also available. A water soluble analog of Torlon 4000T is available as Torlon AI-50. The strength and wear properties of compression molded compounds can be uniquely improved through addition of Torlon 4000TF powder. Polytetrafluoroethylene (PTFE) and related fluoropolymer compounds show higher strength, greatly reduced creep behavior and better performance in wear-resistant applications, when Torlon 4000TF is added. Torlon 4000TF serves as a high temperature, high performance matrix binder for other diverse compression molded parts such as clutches, brake pads and their components, fused metal powders and thermoplastic magnets. The fine powder also may be used in thermal spray processes such as flame spray and high-velocity oxyfuel (HVOF) spray techniques. In addition to molded components, Torlon PAI powders are suitable for use in other high performance forms. For example, these powders are soluble in dipolar aprotic solvents such as N-methyl pyrrolidone (NMP), dimethylacetamide (DMAC), dimethylsulfoxide (DMSO) and dimethylformamide (DMF). Solutions of these systems can be sprayed into coatings, cast into films, spun into fibers and cast or spun into specialty membranes. High strength, high temperature capable adhesives can be also formulated from Torlon PAI powders. Torlon PAI powders may be incorporated into epoxy and other thermoset systems to provide additional strength, ductility and heat resistance. Injection Notes: Drying Time/Temp: 4 hrs @ 300°F Drying Time/Temp: 16 hrs @ 250°F Information provided by Solvay Specialty Polymers.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Solvay-Specialty-Polymers-Torlon-4000TF-Polyamide-imide-PAI-nbspUnverified-Data.php](http://www.lookpolymers.com/polymer_Solvay-Specialty-Polymers-Torlon-4000TF-Polyamide-imide-PAI-nbspUnverified-Data.php)

Physical Properties	Metric	English	Comments
Viscosity Measurement	>= 0.50 @Temperature 25.0 °C	>= 0.50 @Temperature 77.0 °F	0.5% in NMP; Intrinsic Viscosity

Processing Properties	Metric	English	Comments
Drying Temperature	177 °C	351 °F	
Dry Time	3.00 hour	3.00 hour	

Descriptive Properties	Value	Comments
Availability	Africa & Middle East	
	Asia Pacific	
	Europe	

Descriptive Properties	Value	Comments
	North America	
	South America	
Features	Flame Retardant	
	Good Chemical Resistance	
	High Heat Resistance	
Forms	Powder	
Generic	PAI	
Processing Method	Coating	
	Compression Molding	
Uses	Blending	
	Cast Film	
	Coating Applications	

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