

Hydrosize® HP-1621
High Temperature Sizing Solution

Description: Hydrosize® HP-1621 is a high temperature aqueous polyimide sizing that is essentially solvent-free and HAPS free. HP-1621 has excellent thermal and thermo-oxidative stability with the onset of degradation approaching 500°C (932°F) and a glass transition temperature (Tg) greater than 245°C. HP-1621 has excellent adhesion properties and is abrasion resistant.

Hydrosize® HP-1621 was designed to withstand the compounding conditions and form strong interfacial bonding with PEEK, polyimides, high temperature polyamides and other high performance resins. The sizing (and thus the interface) will remain stable during extended high temperature continuous use conditions.

Attributes

- Excellent thermal and thermo-oxidative stability
- Onset of degradation approaches 500°C
- High Tg (>225°C)
- Long term use temperature is 371°C
- Abrasion resistance
- Excellent adhesion

Compatibility

- PEEK
- Polyimide (Ultem, Kapton)
- High temperature polyamide

Applications

- Fiber reinforcements
- Adhesives
- Coatings

Typical Properties	
Viscosity (cP)	2000 – 10,000
Non-Volatiles (%)	14 - 16
2% Weight Loss* (°C)	492-502
5% Weight Loss* (°C)	530 - 544
Specific Gravity (g/mL)	1.05 – 1.15
pH	8.0 – 9.5
Appearance	Transparent Amber Solution

*In air, heating rate = 20°C/min

Technical Support: Hydrosize® Technologies, Inc. scientists have extensive knowledge and practical experience with binders and sizings, their application to fibers, and their influence on composite properties. Please do not hesitate to request our assistance. The test methods used to determine the reported properties are available upon request.

Storage: To ensure maximum stability and properties this dispersion should be stored between 5°C (41°F) and 20°C (68°F). PREVENT FREEZING. The product should be stored indoors in tightly closed containers away from heat sources and sunlight. If frozen, warm to room temperature and mix well before using. All storage areas should conform to local fire and building codes. Hydrosize® HP-1621 should be stored away from all sources of flame or combustion.

Standard Package: Non-returnable, plastic or lined fiberwall drums of 450 lbs. net weight.

Safety: Read and understand the Material Safety Data Sheet before working with this product.

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