

# Hyflon® AD 40H

## perfluoropolymer

Hyflon® AD 40H is an amorphous perfluoro-polymer available in powder form.

Hyflon® AD polymers resemble semicrystalline perfluoropolymers in their performance properties as they exhibit high temperature stability, excellent hydrophobicity and chemical resistance as well as very low surface energy.

Key distinctive feature of Hyflon AD polymers is that they are soluble in selected solvents. In particular, their high solubility in perfluorinated solvents and their low solution viscosities make them suitable for solution process technologies.

Hyflon® AD can provide uniform and thin films or coatings (down to submicron thicknesses if

required) by casting or coating techniques and thermal treatments, well below the typical baking temperatures of semicrystalline perfluoro-polymers.

Examples of typical applications include protective coatings, interlayer dielectric films and pellicles for electronics.

Main features of Hyflon® AD 40H include:

- Amorphous glassy polymer structure
- Solubility in perfluorinated solvent
- Low dielectric constant of 2.0 at 1 kHz
- Excellent optical properties
  - high UV transmittance
  - low refractive index

### General

Material Status	• Commercial: Active	
Availability	• Africa & Middle East • Asia Pacific • Europe	• Latin America • North America
Features	• Amorphous • Chemical Resistant	• Good Thermal Stability
Uses	• Coating Applications	• Film
Forms	• Powder	
Processing Method	• Coating	• Solution Processing

### Physical

	Typical Value	Unit	Test method
Density / Specific Gravity	1.98		ASTM D792
Intrinsic Viscosity (30°C)	1.3	dl/g	ASTM D2857

### Thermal

	Typical Value	Unit	Test method
Glass Transition Temperature	90.0	°C	ASTM D3418

### Optical

	Typical Value	Unit	Test method
Refractive Index	1.331		ASTM D542

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### Additional Information

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#### Safety and Toxicology

- Before using Hyflon fluoropolymer resins consult the product Material Safety Data Sheet and follow all label directions and handling precautions.
- As with all fluoropolymer materials, handling and processing should only be carried out in well ventilated areas. Vapour extractor units should be installed above processing equipment. Fumes must not be inhaled and eye and skin contact ought to be avoided. In case of skin contact, wash with soap and water. In case of eye contact flush with water immediately and seek medical help. Do not smoke in areas contaminated with powder, vapour or fumes. See Material Safety Data Sheet for detailed advice on waste disposal methods.

#### Storage and Handling

- Hyflon fluoropolymer resins can be stored without shelf life issues when kept in a clean and dry area at ambient temperatures. Opened containers should be tightly resealed to prevent dust contamination.
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### Notes

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Typical properties: these are not to be construed as specifications.

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