

## Solvay Specialty Polymers Hyflon® PFA P220 Perfluoroalkoxy (PFA) (Unverified Data\*\*)

Category: Polymer, Thermoplastic, Fluoropolymer, PFA

## **Material Notes:**

Hyflon® PFA is a unique family of semi-crystalline, melt processable perfluoropolymers which combine excellent mechanical characteristics to unique properties such as chemical inertness, heat resistance, inherent flame resistance, low surface energy, and exceptional dielectric properties. Hyflon® PFA resins have been designed to retain their properties over a wide range of temperatures from cryogenic to 250-260°C (482-500°F) and are the material of choice in applications such as linings in the Chemical Process Industry, specialty cables, semiconductor industry, aerospace, and other challenging industries. Hyflon® PFA 220X is a low melt flow rate resin designed for blow molding applications, where very high viscosity and melt strength are needed. It also has significantly lower permeability to gasses than standard PFAs'.Additional Information: PROCESSING - Because PFA is corrosive in the melt, machinery used to process Hyflon® should be lined with corrosion resistant alloys. Clean, reworked material can be used up to 25% in weight. HEALTH SAFETY AND ENVIRONMENT - Hyflon® PFA 220X is a very inert polymer and it is not harmful if used and handled according to standard processing procedures. If handled inappropriately, it may release harmful toxic chemicals. Please refer to the Material Safety Data Sheets for more information on handling and safety. PACKAGING AND STORAGE - Hyflon® PFA 220X resin is available in 25kg (55lbs) and 600kg (1323bs) packaging. Though it has an indefinite shelf life, it is recommended to store it in a clean area, protected from direct sunlight, and possible contamination. Information provided by Solvay Specialty Polymers.

## Order this product through the following link:

http://www.lookpolymers.com/polymer\_Solvay-Specialty-Polymers-Hyflon-PFA-P220-Perfluoroalkoxy-PFA-nbspUnverified-Data.php

| Physical Properties | Metric                               | English                              | Comments   |
|---------------------|--------------------------------------|--------------------------------------|------------|
| Density             | 2.12 - 2.17 g/cc                     | 0.0766 - 0.0784 lb/in <sup>3</sup>   | ASTM D792  |
| Melt Flow           | 2.5 - 5.0 g/10 min                   | 2.5 - 5.0 g/10 min                   | ASTM D1238 |
|                     | @Load 5.00 kg,<br>Temperature 372 °C | @Load 11.0 lb,<br>Temperature 702 °F |            |

| Mechanical Properties     | Metric               | English              | Comments   |
|---------------------------|----------------------|----------------------|------------|
| Tensile Strength at Break | 4.60 MPa             | 667 psi              | ASTM D1708 |
|                           | @Temperature 280 °C  | @Temperature 536 °F  |            |
|                           | 14.5 MPa             | 2100 psi             | ASTM D1708 |
|                           | @Temperature 23.0 °C | @Temperature 73.4 °F |            |
| Elongation at Break       | >= 210 %             | >= 210 %             | ASTM D1708 |
|                           | @Temperature 23.0 °C | @Temperature 73.4 °F |            |
| Tensile Modulus           | 0.0490 GPa           | 7.11 ksi             | ASTM D1708 |
|                           | @Temperature 280 °C  | @Temperature 536 °F  |            |
|                           | 0.600 GPa            | 87.0 ksi             |            |



| Mechanical Properties | Metrickness 1.00 mm, | English<br>Bullickness 0.0394 in, | Comments ASTM D1708 |
|-----------------------|----------------------|-----------------------------------|---------------------|
|                       | Temperature 23.0 °C  | Temperature 73.4 °F               |                     |

| Thermal Properties          | Metric               | English                            | Comments                  |
|-----------------------------|----------------------|------------------------------------|---------------------------|
| Heat of Fusion              | 35.0 - 45.0 J/g      | 15.1 - 19.4 BTU/lb                 | Crystallization Heat; DSC |
|                             | 35.0 - 45.0 J/g      | 15.1 - 19.4 BTU/lb                 | DSC                       |
| CTE, linear                 | 120 - 200 μm/m-°C    | 66.7 - 111 μin/in-°F               | ASTM D696                 |
| Specific Heat Capacity      | 0.900 - 1.10 J/g-°C  | 0.215 - 0.263<br>BTU/lb-°F         | DSC                       |
|                             | @Temperature 23.0 °C | @Temperature 73.4 °F               |                           |
| Thermal Conductivity        | 0.200 W/m-K          | 1.39 BTU-in/hr-ft <sup>2</sup> -°F | ASTM C177                 |
| memai conductivity          | @Temperature 40.0 °C | @Temperature 104 °F                |                           |
| Melting Point               | 310 - 325 °C         | 590 - 617 °F                       | ASTM D3307                |
| Crystallization Temperature | 295 °C               | 563 °F                             | Peak, DSC                 |

| Descriptive Properties | Value                  | Comments |
|------------------------|------------------------|----------|
| Agency Ratings         | ASTM D 3307 Type II    |          |
| Availability           | Africa & Middle East   |          |
|                        | Asia Pacific           |          |
|                        | Europe                 |          |
|                        | North America          |          |
|                        | South America          |          |
| Features               | Flame Retardant        |          |
|                        | High Heat Resistance   |          |
|                        | Low Flow               |          |
|                        | Semi Crystalline       |          |
| Forms                  | Pellets                |          |
| Generic                | PFA                    |          |
| Processing Method      | Extrusion              |          |
| Uses                   | Aerospace Applications |          |
|                        |                        |          |



| Descriptive Properties | Cable Jacketing<br>Value        | Comments |
|------------------------|---------------------------------|----------|
|                        | Liners                          |          |
|                        | Piping                          |          |
|                        | Semiconductor Molding Compounds |          |
|                        | Tubing                          |          |

## **Contact Songhan Plastic Technology Co.,Ltd.**

Website: www.lookpolymers.com Email: sales@lookpolymers.com

Tel: +86 021-51131842 Mobile: +86 13061808058

Skype: lookpolymers

Address: United North Road 215, Fengxian District, Shanghai City, China