

## Teflon® PFA 951HP Plus

Perfluoroalkoxy

DuPont Fluoropolymers

### Описание материалов:

For inventory control purposes product name may be followed by an X.

Products labeled PFA 951HP Plus and PFA 951HP Plus X are equivalent and all information in this document is applicable to both.

#### Typical Application

With permeation resistance that is up to 60% greater than standard PFA, DuPont™ Teflon® PFA 951HP Plus is designed for applications where reduced chemical permeation, resistance to stress-cracking, and surface smoothness are critical to reducing contamination and protecting process yields. Applications for Teflon® PFA 951HP Plus include fluid handling components for high-performance chemical delivery systems, as well as tubing, unsupported pipe linings for the production of ultra-pure chemicals, and semiconductor components where purity in the parts-per-billion range is needed.

#### Description

DuPont™ Teflon® PFA 951HP Plus is a premium fluoroplastic resin available in pellet form. Teflon® PFA 951HP Plus possesses the same exceptional chemical resistance, high purity, and protection against ionic contamination as Teflon® PFA HP grades with the added benefits of improved flex life and chemical stress-crack resistance. Teflon® PFA 951HP Plus has unmatched HCl permeation resistance, and is also 45% less permeable to nitrogen than other PFAs (permeation by nitrogen is a general indication of the rate of permeation by other molecules). Additionally, the improved flex life and chemical resistance will reduce the cost of ownership of high purity fluid handling systems by reducing downtime caused by mechanical or chemical stresses. Parts molded with Teflon® PFA 951HP Plus have an exceptionally smooth finish, which can further help prevent buildup of microbial contamination in water handling systems. Table 1 shows the typical property data for Teflon® PFA 951HP Plus.

Teflon® PFA 951HP Plus is a relatively low melt flow rate (typical MFR of 2), special purpose resin with the lowest level of extractables designed to meet ultra-high purity requirements. The enhanced resistance to environmental stress-cracking makes Teflon® PFA 951HP Plus a preferred resin when extended service is required in hostile environments involving chemical, thermal, and mechanical stress. Additionally, the enhanced purity of Teflon® PFA 951HP Plus makes it suitable for applications that require improved color, lower extractable fluorides, and freedom from other foreign materials. This product contains no additives and is designed for hostile chemical environments where purity in the parts-per-billion range is needed. Examples are in semiconductor manufacture, fluid handling systems for industry or life sciences, and instrumentation for precise measurements of fluid systems. Teflon® PFA 951HP Plus combines the processing ease of conventional thermoplastics with the properties similar to those of polytetrafluoroethylene. With Teflon® PFA 951HP Plus, components can last longer under dynamic loads and resist damage caused by ozonated fluids and fluorosurfactants. Combined with exceptional chemical, permeation, and stress-crack resistance, this durability leads to a reduced cost of ownership. The high purity and fully fluorinated molecule end groups of Teflon® PFA 951HP Plus can reduce contamination to protect process yields.

Properly processed products made from neat Teflon® PFA 951HP Plus resin provide the superior properties characteristic of fluoroplastic resins: chemical inertness, exceptional dielectric properties, heat resistance, toughness and flexibility, low coefficient of friction, non-stick characteristics, negligible moisture absorption, low flammability, performance at temperature extremes, and excellent weather resistance.

In a flame situation, products of Teflon® PFA 951HP Plus resist ignition and do not promote flame spread. When ignited by flame from other sources, their contribution of heat is very small and added at a slow rate with very little smoke.

Teflon® PFA 951HP Plus meets the requirements of ASTM D 2116-07(2012), Type V

### Главная Информация

Характеристики

Высокая чистота

Низкий коэффициент трения

Низкая гигроскопичность

Низкий дым

Высокий уровень ЭСКП (устойчивость к растрескиванию)

Хорошая электрическая производительность

Хорошая гибкость

Низкий уровень жидкости

Хорошая химическая стойкость

Хорошая устойчивость к погоде

Теплостойкость, средняя  
 Термическая стабильность, хорошая  
 Хорошая прочность  
 Соответствие пищевого контакта

Используется  
 Подкладка  
 Фитинги для труб  
 Жидкостная обработка

Рейтинг агентства FDA не рассчитан

Формы Частицы

Метод обработки  
 Выдвухное формование  
 Экструзия  
 Литье из смолы  
 Прессформа сжатия  
 Литье под давлением

| Физический                                       | Номинальное значение | Единица измерения | Метод испытания       |
|--|----------------------|-------------------|-----------------------|
| Удельный вес                                     | 2.15                 | g/cm <sup>3</sup> | ASTM D792             |
| Массовый расход расплава (MFR)<br>(372°C/5.0 kg) | 2.0                  | g/10 min          | ASTM D3307, ISO 12086 |
| Поглощение воды (24 hr)                          | < 0.030              | %                 | ASTM D570             |
| Твердость  | Номинальное значение | Единица измерения | Метод испытания       |
| Твердость дюрометра (Shore D)                    | 55                   |                   | ASTM D2240, ISO 868   |
| Механические                                     | Номинальное значение | Единица измерения | Метод испытания       |
| Прочность на растяжение                          |                      |                   | ASTM D3307, ISO 12086 |
| 23°C   | 28.0                 | MPa               | ASTM D3307, ISO 12086 |
| 200°C  | 15.0                 | MPa               | ASTM D3307, ISO 12086 |
| Удлинение при растяжении                         |                      |                   | ASTM D3307, ISO 12086 |
| Fracture, 23°C                                   | 290                  | %                 | ASTM D3307, ISO 12086 |
| Fracture, 200°C                                  | 450                  | %                 | ASTM D3307, ISO 12086 |
| Флекторный модуль                                |                      |                   | ASTM D790, ISO 178    |
| 23°C   | 600                  | MPa               | ASTM D790, ISO 178    |
| 200°C  | 55.0                 | MPa               | ASTM D790, ISO 178    |
| Тепловой   | Номинальное значение | Единица измерения | Метод испытания       |
| Температура плавления                            | 315                  | °C                | ASTM D4591            |
| Электрический                                    | Номинальное значение | Единица измерения | Метод испытания       |
| Сопротивление громкости                          | 1.0E+18              | ohms-cm           | ASTM D257, ISO 1325   |
| Диэлектрическая прочность                        |                      |                   |                       |
| 0.250 mm <sup>1</sup>                            | 80                   | kV/mm             | ASTM D149             |

|   |                             |                          |                        |
|---|-----------------------------|--------------------------|------------------------|
| 0.250 mm  | 80                          | kV/mm                    | IEC 60243-1            |
| Диэлектрическая постоянная (1 MHz)                | 2.03                        |                          | ASTM D150, IEC 60250   |
| Коэффициент рассеивания (1 MHz)                   | < 2.0E-4                    |                          | ASTM D150, IEC 60250   |
| <b>Воспламеняемость</b>                           | <b>Номинальное значение</b> | <b>Единица измерения</b> | <b>Метод испытания</b> |
| Огнестойкость <sup>2</sup>                        | V-0                         |                          | UL 94                  |
| Индекс кислорода                                  | > 95                        | %                        | ASTM D2863, ISO 4589-2 |
| <b>Дополнительная информация</b>                  | <b>Номинальное значение</b> | <b>Единица измерения</b> | <b>Метод испытания</b> |
| Критическая скорость сдвига (372°C)               | 12.0                        | sec <sup>-1</sup>        |                        |
| Мит складной выносливость <sup>3</sup> (200.0 μm) | 1.8E+6                      | Cycles                   | ASTM D2176             |

Weather and Chemical Resistance: Outstanding

#### NOTE

- Method A (short time)  
  
These results are based on laboratory tests under controlled conditions and do not reflect performance under actual fire conditions, current rating is a typical theoretical value.
- 
- Depending on fabrication conditions

\* Отказ от ответственности: Информация на этой странице предоставлена производителем, и поставщик документа не несет никакой юридической ответственности. Все права защищены. Пожалуйста, немедленно свяжитесь с нами в случае каких-либо нарушений.

Свяжитесь с нами

## Susheng Import & Export Trading Co.,Ltd.

Телефон: +86-021-58958519

Мобильный телефон: +86-13424755533

Email: sales@su-jiao.com

Адрес: Господин Чжао

Район Фэнсянь, Шанхай, Китай



WeChat