# KF POLYMER

(PVDF Polyvinylidene Fluoride)

KUREHA

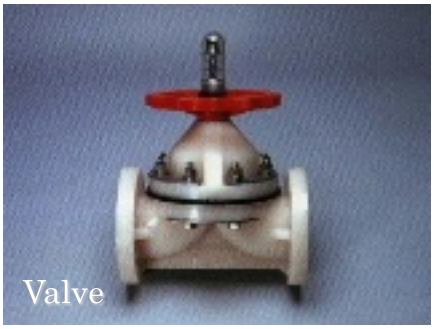
*Pursuit for Excellence*

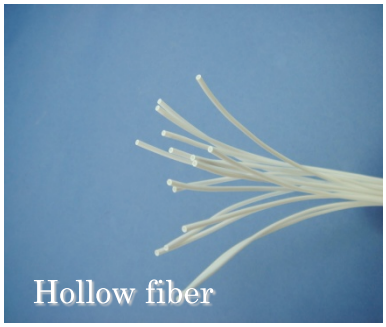
## Features of KF Polymer

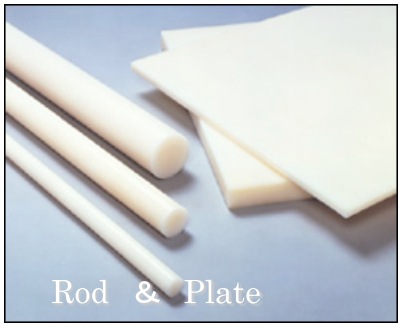
KF Polymer is a fire-resistant engineering plastic which maintains the excellent performance of a fluoro-resin. It shows well-balanced molding processability similar to general-purpose resins. KF polymer is being used in applications where heat resistance, anticorrosion, and weather-resistance are key use criteria .

## Typical Applications

◇ Chemical valves, Pump part, & Fittings
◇ Binder for lithium ion batteries
◇ Hollow fiber for filtration of city water and sewage
◇ Film & Sheet


Valve


Hollow fiber


Rod & Plate

## Typical Properties of KF Polymer

| Properties | | | Polymer Type | Homo | | | | Co |
|---|---|---|---|---|---|---|---|---|
| | | | Grade | T#, W# | | | | |
| Item | Unit | Standard | Conditions | 850 | 1000 | 1100 | 1300 | 2950 |
| **Physical properties** | | | | | | | | |
| Relative density | $g/cm^3$ | ASTM D792 | | 1.77 - 1.79 | | | | |
| Solution viscosity (Inherent viscosity) | dl/g | | 30°C DMF ±0.05 | 0.85 | 1.00 | 1.10 | 1.30 | 1.05 |
| Melt viscosity | Pa・□ | ASTM D3835 | 240°C $50sec^{-1}$ | 1200 | 2200 | 3300 | 5000 | 2700 |
| MFR | g/10min | ASTM D1238 | 230°C 5kg | 18-26 | 6-9 | 2-4 | 0.6-0.9 | 4-8 |
| **Thermal properties** | | | | | | | | |
| Melting point | °C | ASTM D3418 | | 173 | 173 | 173 | 173 | 172 |
| Heat distortion temperature | °C | ISO 75-2 | 1.8MPa | 80 | 79 | 75 | 72 | 70 |
| **Mechanical properties** | | | | | | | | |
| Tensile yield strength | MPa | ISO 527-2 | | 57 | 57 | 59 | 67 | 54 |
| Tensile break elongation | % | | | 76 | 28 | 36 | 25 | 29 |
| Tensile modulus | MPa | | | 2510 | 2330 | 2430 | 2580 | 2120 |
| **Electrical properties** | | | | | | | | |
| Volume resistivity | Ω cm | ASTM D257 | | $10^{15-16}$ | | | | |
| **Flame resistance** | | | | | | | | |
| Burning Rate | | UL94 | 1.47mm$^t$ | V-0 | | | | |

Thank you for interest in our "KF Polymer" data sheet.
The data contained in this data sheet are based on our knowledge and experience at the time of publication. In view of the many factors that may affect processing and application of our product, these data do not relieve processors from carrying out their own investigation and tests; neither do these data imply any guarantee of certain properties, nor the suitability of the product for a specific purpose.