Polyethylene Fine Powder

FLO-THENE UF

An ultra-fine, low-density polyethylene resin powder with a particle size (D50) of approximately 20 µm.

Since additives such as emulsifiers and lubricants are not used in the manufacturing process, FLO-THENE UF retains the original properties of polyethylene resin, including its inherent chemical resistance to both acids and alkalis. Four grades are available, with different melt flow rates (MFRs), enabling the selection of a grade appropriate to the intended application.

FLO-THENE UF-20S electron micrograph





SUMITOMO SEIKA



Application recommendations

| Grade | | UF-1.5N | UF-4 | UF-20S | UF-80 |
|------------------|--|---------|------|--------|-------|
| Appropriate Uses | Fiberglass-reinforced plastics (FRP): SMC/BMC, etc. | | 0 | 0 | 0 |
| | Master batch | 0 | 0 | 0 | 0 |
| | Carbon binders | 0 | 0 | 0 | |
| | Alkaline batteries | | | 0 | 0 |
| | Additives for adhesives | | | 0 | |
| | Ink and paint additives | 0 | | 0 | 0 |
| | Resin and rubber modifiers | | 0 | 0 | 0 |
| | Heat sealing agents | | | 0 | 0 |

Example of use: FRP additive to reduce shrinkage

Compounding unsaturated polyesters and other thermosetting resins with small quantities of FLO-THENE UF is expected to be effective in reducing shrinkage, increasing crack resistance and moisture resistance, improving filler dispersion, etc.

General properties

| Grade | | | | | | | |
|----------------------------------|-------------------------|-----------------------------------|-------------------|---------|-------|--------|-------|
| Test method | | Test item | Unit | UF-1.5N | UF-4 | UF-20S | UF-80 |
| Resin properties | MFR at 190°C | JIS K7210 | g/10min | 1.4±0.3 | 4±0.8 | 20±4 | 75±15 |
| | Density | JIS K7112 | g/cm ³ | 0.920 | 0.926 | 0.919 | 0.919 |
| | Tensile stress at break | JIS K7161 | MPa | 16 | 16 | 10 | 9 |
| | Tensile strain at break | JIS K7161 | % | 600 | 550 | 550 | 150 |
| | Melting point | JIS K7121 | °C | 110 | 113 | 106 | 106 |
| | Brittleness temperature | JIS K7216 | °C | <-65 | <-65 | - | - |
| | Durometer hardness | JIS K7215 | Shore D scale | 47 | 50 | 45 | 43 |
| Powder physical properties | Particle size (D50) | In-house method (laser method) | μm | ≦25 | ≦25 | ≦30 | ≦30 |
| | Volatile matter content | In-house method | wt% | ≦0.06 | ≦0.06 | ≦0.06 | ≦0.06 |

Precautions for Use

- Avoid long-term storage, and store and release on a first-in, first-out basis.
- Store at room temperature and away from direct sunlight.
- With storage, the product may harden, but this does not affect its physical properties.

The values in this catalog are based on in-house analysis and testing and are not guaranteed.

- ✓ The information in this catalog is subject to change without notice.
- ✓ For product safety information, please refer to the Safety Data Sheet (SDS).
- \checkmark Feel free to contact us using the information below for any of the following reasons.
 - Something in the information is unclear
 - You want to reprint the information
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