

# Composite PP

## FH44

### Non-dioxin flame retardant PP composite

#### Application

Automotive E&E parts, Washing machine interior parts, Motor Case

#### Characteristics

Flame retardant (UL94 V-0 certification), Harmless to human and environment (Non-Dioxin), Long term thermal resistance, Excellent heat deformation resistance

#### Physical properties

| Item                        | Test Method | Unit               | Typical Value |
|-----------------------------|-------------|--------------------|---------------|
| Melt index (230°C)          | ASTM D1238  | g/10min            | 5             |
| Specific gravity            | ASTM D792   | g/cm <sup>3</sup>  | 1.32          |
| Tensile strength (at yield) | ASTM D638   | kg/cm <sup>2</sup> | 310           |
| Elongation (at break)       | ASTM D638   | %                  | 30            |
| Flexural modulus            | ASTM D790   | kg/cm <sup>2</sup> | 32,000        |
| Izod Impact Strength (23°C) | ASTM D256   | kg cm/cm           | 3.7           |
| Rockwell hardness           | ASTM D785   | R scale            | 96            |
| Heat distortion temperature | ASTM D648   | °C                 | 134           |
| Shrinkage Ratio             | HTC METHOD  | %                  | 1.0 ~ 1.3     |
| Flame-retardancy            | UL94        | -                  | V-0           |

Note: The above physical property value is a representative value for reference and is not a product quality standard.

#### Processing conditions

| Item                          | Unit               | Typical value |
|-------------------------------|--------------------|---------------|
| Cylinder temperature (rear)   | °C                 | 170 ~ 180     |
| Cylinder temperature (middle) | °C                 | 180 ~ 200     |
| Cylinder temperature (front)  | °C                 | 180 ~ 210     |
| Nozzle temperature            | °C                 | 190 ~ 220     |
| Mold temperature              | °C                 | 40 ~ 70       |
| Injection pressure            | kg/cm <sup>2</sup> | 400 ~ 800     |
| Back pressure                 | kg/cm <sup>2</sup> | 5 ~ 20        |
| Injection speed               | %                  | 50 ~ 80       |

※ Actual injection conditions should be adjusted according to the type of injection machine, mold, and part size.

**Certification**

Hanwha TotalEnergies Petrochemical FH44 is not suitable for food packaging or medical supplies.

For further inquiries, please contact Hanwha TotalEnergies Petrochemical Composite Development Team.

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