

# WanBlend® WHT-HF8685

Thermoplastic Polyurethane Elastomer (Polyether)

Wanhua Chemical Group Co., Ltd.

Message:

WHT-HF8675 is polyether-based flame retardant thermoplastic Polyurethane (TPU) compound, supplied in form of white pellets, which combine the zero halogen objective with excellent mechanical properties and processability.

Applications:

Extrusion - wire and cable

General extrusion and injection molding where flame retardant properties are required.

| General Information          |                           |                   |             |
|------------------------------|---------------------------|-------------------|-------------|
| Additive                     | Flame Retardant           |                   |             |
| Features                     | Flame Retardant           |                   |             |
|                              | Good Processability       |                   |             |
|                              | Halogen Free              |                   |             |
| Uses                         | Wire & Cable Applications |                   |             |
| Appearance                   | White                     |                   |             |
| Forms                        | Pellets                   |                   |             |
| Processing Method            | Extrusion                 |                   |             |
|                              | Injection Molding         |                   |             |
| Physical                     | Nominal Value             | Unit              | Test Method |
| Density                      | 1.19                      | g/cm <sup>3</sup> | ASTM D792   |
| Hardness                     | Nominal Value             | Unit              | Test Method |
| Durometer Hardness (Shore A) | 82 to 88                  |                   | ASTM D2240  |
| Elastomers                   | Nominal Value             | Unit              | Test Method |
| Tensile Stress               |                           |                   | ASTM D412   |
| 100% Strain                  | 5.50                      | MPa               |             |
| 300% Strain                  | 7.50                      | MPa               |             |
| Tensile Strength             | 11.0                      | MPa               | ASTM D412   |
| Tensile Elongation (Break)   | 450                       | %                 | ASTM D412   |
| Tear Strength                | 79.0                      | kN/m              | ASTM D624   |
| Flammability                 | Nominal Value             |                   | Test Method |
| Flame Rating                 | V-0                       |                   | UL 94       |
| Injection                    | Nominal Value             | Unit              |             |
| Drying Temperature           | 90.0 to 100               | °C                |             |
| Drying Time                  | 2.0 to 3.0                | hr                |             |
| Rear Temperature             | 165                       | °C                |             |
| Middle Temperature           | 170                       | °C                |             |
| Front Temperature            | 175                       | °C                |             |

|                       |               |      |
|-----------------------|---------------|------|
| Nozzle Temperature    | 185           | °C   |
| Injection Pressure    | 65.0          | MPa  |
| Extrusion             | Nominal Value | Unit |
| Drying Temperature    | 90.0 to 100   | °C   |
| Drying Time           | 3.0 to 4.0    | hr   |
| Cylinder Zone 1 Temp. | 165           | °C   |
| Cylinder Zone 3 Temp. | 175           | °C   |
| Cylinder Zone 5 Temp. | 185           | °C   |
| Die Temperature       | 180           | °C   |

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