

Product Information

**VESTODUR® X7085 BK V306020**

**GLASS FIBER-REINFORCED POLYBUTYLENE TEREPHTHALATE COMPOUND FOR PARTS WITH HIGH SURFACE QUALITY**



**VESTODUR X7085 BK V306020** is a 45% glass fiber- reinforced, polymer-modified polybutylene terephthalate compound for injection molding.

The compound is suitable for parts that are subjected to high mechanical and thermal loads. Compared with commonly used glass fiber-reinforced PBT compounds with similar stiffness parts of VESTODUR X7085 have in particular a high surface quality.

VESTODUR X7085 BK V306020 is supplied as cylindrical pellets in polyethylene packaging.

For information, please follow the general recommendations in our flyer "VESTODUR® Polybutylene terephthalate - Compounds".

The use of colorants may affect property values.

Inside the original and undamaged packaging, the product has a shelf life of at least 2 years when stored in dry rooms at temperatures not exceeding 30°C.

**Key Features**

**Industrial Sector**  
Automotive and Mobility

**Processing**  
Injection molding

**Delivery form**  
Pellets, Granules

**Resistance to**  
Heat (thermal stability)

**Conformity**  
Automotive

**Additives**  
Glass fibers

**Mechanical properties ISO**

|                  | dry           | Unit | Test Standard |
|------------------|---------------|------|---------------|
| Tensile modulus  | <b>2.25E6</b> | psi  | ISO 527       |
| Tensile strength | <b>26100</b>  | psi  | ISO 527       |
| Stress at break  | <b>26100</b>  | psi  | ISO 527       |

|  |               |                      |             |
|--|---------------|----------------------|-------------|
| Strain at break, B                         | <b>2</b>      | %                    | ISO 527     |
| Charpy impact strength, +23°C              | <b>33.8</b>   | ftlb/in <sup>2</sup> | ISO 179/1eU |
| Type of failure                            | <b>C</b>      | -                    | -           |
| Charpy impact strength, -30°C              | <b>23.8</b>   | ftlb/in <sup>2</sup> | ISO 179/1eU |
| Type of failure                            | <b>C</b>      | -                    | -           |
| Charpy notched impact strength, +23°C      | <b>5.71</b>   | ftlb/in <sup>2</sup> | ISO 179/1eA |
| Type of failure                            | <b>C</b>      | -                    | -           |
| Charpy notched impact strength, -30°C      | <b>5.71</b>   | ftlb/in <sup>2</sup> | ISO 179/1eA |
| Type of failure                            | <b>C</b>      | -                    | -           |
| Flexural modulus, 23°C                     | <b>2.09E6</b> | psi                  | ISO 178     |
| Flexural strength, 23°C                    | <b>39500</b>  | psi                  | ISO 178     |
| Flexural strain at flexural strength, 23°C | <b>2.3</b>    | %                    | ISO 178     |
| Flexural stress at break, 23°C             | <b>39500</b>  | psi                  | ISO 178     |
| Flexural strain at break, 23°C             | <b>2.3</b>    | %                    | ISO 178     |

| <b>Thermal properties</b>                   | <b>dry</b> | <b>Unit</b> | <b>Test Standard</b> |
|---|------------|-------------|----------------------|
| Temp. of deflection under load A, 1.80 MPa  | <b>410</b> | °F          | ISO 75-1/-2          |
| Temp. of deflection under load B, 0.45 MPa  | <b>433</b> | °F          | ISO 75-1/-2          |
| Vicat softening temperature A, 10 N, 50 K/h | <b>428</b> | °F          | ISO 306              |
| Vicat softening temperature B, 50 N, 50 K/h | <b>410</b> | °F          | ISO 306              |

| <b>Physical properties</b> | <b>dry</b> | <b>Unit</b>       | <b>Test Standard</b> |
|----------------------------|------------|-------------------|----------------------|
| Density                    | <b>1.7</b> | g/cm <sup>3</sup> | ISO 1183             |
| Water absorption           | <b>0.4</b> | %                 | Sim. to ISO 62       |
| Density                    | <b>1.7</b> | g/cm <sup>3</sup> | ASTM D 792           |

| <b>Burning Behav.</b>                 | <b>dry</b>    | <b>Unit</b> | <b>Test Standard</b> |
|---------------------------------------|---------------|-------------|----------------------|
| Burning behav. at 1.5 mm nom. thickn. | <b>HB</b>     | class       | IEC 60695-11-10      |
| Thickness tested                      | <b>0.0630</b> | in          | -                    |

|                               |               |       |                 |
|-------------------------------|---------------|-------|-----------------|
| Burning behav. at thickness h | <b>HB</b>     | class | IEC 60695-11-10 |
| Thickness tested              | <b>0.0315</b> | in    | -               |

| <b>Rheological properties</b> | <b>dry</b>  | <b>Unit</b>            | <b>Test Standard</b> |
|-------------------------------|-------------|------------------------|----------------------|
| Melt volume-flow rate, MVR    | <b>12</b>   | cm <sup>3</sup> /10min | ISO 1133             |
| Temperature                   | <b>250</b>  | °C                     | -                    |
| Load                          | <b>2.16</b> | kg                     | -                    |
| Molding shrinkage, parallel   | <b>0.1</b>  | %                      | ISO 294-4, 2577      |
| Molding shrinkage, normal     | <b>1.3</b>  | %                      | ISO 294-4, 2577      |
| Mold temperature              | <b>176</b>  | °F                     | -                    |

| <b>Test specimen production</b>       | <b>dry</b>  | <b>Unit</b> | <b>Test Standard</b> |
|---------------------------------------|-------------|-------------|----------------------|
| Injection Molding, melt temperature   | <b>500</b>  | °F          | ISO 294              |
| Injection Molding, mold temperature   | <b>176</b>  | °F          | ISO 294              |
| Injection Molding, injection velocity | <b>7.87</b> | in/s        | ISO 294              |

### Characteristics

#### Applications

Encapsulation

#### Color

Black

#### Special Characteristics

High heat resistant, Low warpage / Low shrinkage

#### Additives

Heat stabilizer