

## Technical Data Sheet

### CirculenRecover EP PA66 GF20 H BLK968001



Polyamide 66

#### Product Description

20% glass fiber reinforced, heat stabilized Polyamide 66 formulated on mechanical recycled sourcing. Standard color is black, color matching for dark colors possible. Automotive structural applications are possible. Sustainability: According with the requirements of Standard ISO 14021:2016, Circulen Recover EP PA66 GF20 H BLACK contains 75% of recycled material that is fully based on pre-consumer waste. Recycled content according to DIN SPEC 91446:2021-12: R75 Data Quality Level according to DIN SPEC 91446:2021-12: DQL4 Data Quality Level according to VDA 284: DQL Automotive

|                             |                                   |
|-----------------------------|-----------------------------------|
| <b>Processing Method</b>    | Injection Molding                 |
| <b>Attribute</b>            | Heat Stabilized; Medium Viscosity |
| <b>Filler/Reinforcement</b> | Glass Fiber, 20%                  |
| <b>Resin ID</b>             | PA66 GF20                         |

| Typical Properties                               | Nominal Value | Units              | Test Method |
|--------------------------------------------------|---------------|--------------------|-------------|
| <b>Physical</b>                                  |               |                    |             |
| Density, (Method A)                              | 1.27          | g/cm <sup>3</sup>  | ISO 1183    |
| Apparent (Bulk) Density                          | 0.60 to 0.80  | g/cm <sup>3</sup>  | ISO 60      |
| Viscosity Number                                 | 145           | cm <sup>3</sup> /g | ISO 307     |
| <b>Mechanical</b>                                |               |                    |             |
| Tensile Strain at Break                          |               |                    |             |
| (Type 1A, 5 mm/min)                              | 2.3           | %                  | ISO 527-2   |
| (Type 1A, 5 mm/min) - Conditioned                | 10            | %                  | ISO 527-2   |
| Tensile Stress at Break                          |               |                    |             |
| (Type 1A, 5 mm/min)                              | 120           | MPa                | ISO 527-2   |
| (Type 1A, 5 mm/min) - Conditioned                | 70.0          | MPa                | ISO 527-2   |
| Tensile Modulus                                  |               |                    |             |
| (1 mm/min, Type 1A)                              | 6900          | MPa                | ISO 527-1   |
| (1 mm/min, Type 1A) - Conditioned                | 4000          | MPa                | ISO 527-1   |
| <b>Impact</b>                                    |               |                    |             |
| Charpy Impact Strength - Notched                 |               |                    |             |
| (23 °C, Type 1, Edgewise, Notch A)               | 5.0           | kJ/m <sup>2</sup>  | ISO 179     |
| (-30 °C, Type 1, Edgewise, Notch A)              | 4.5           | kJ/m <sup>2</sup>  | ISO 179     |
| (23 °C, Type 1, Edgewise, Notch A) - Conditioned | 8.0           | kJ/m <sup>2</sup>  | ISO 179     |
| Charpy Impact Strength - Unnotched               |               |                    |             |
| (23 °C, Type 1, Edgewise)                        | 40            | kJ/m <sup>2</sup>  | ISO 179     |
| (-30 °C, Type 1, Edgewise)                       | 37            | kJ/m <sup>2</sup>  | ISO 179     |
| (23 °C, Type 1, Edgewise) - Conditioned          | 70            | kJ/m <sup>2</sup>  | ISO 179     |

|                                                                     |      |        |            |
|---------------------------------------------------------------------|------|--------|------------|
| <b>Thermal</b>                                                      |      |        |            |
| Deflection Temperature Under Load Unannealed (0.45 MPa), (Flatwise) | >250 | °C     | ISO 75-2/B |
| Deflection Temperature Under Load Unannealed (1.80 MPa), (Flatwise) | 230  | °C     | ISO 75-2/A |
| <b>Flammable</b>                                                    |      |        |            |
| Burning Rate, (FMVSS 302)                                           | <100 | mm/min | FMVSS 302  |
| <b>Additional Information</b>                                       |      |        |            |
| Water Absorption Sat/23C, - Conditioned                             | 2.1  | %      | ISO 62     |
| <b>UL Information</b>                                               |      |        |            |
| Flame Rating                                                        | HB   |        | UL 94      |

| <b>Injection Parameters</b> | <b>Nominal</b> |              |
|-----------------------------|----------------|--------------|
|                             | <b>Value</b>   | <b>Units</b> |
| Drying Time                 | 3.0 to 4.0     | hr           |
| Drying Temperature          | 80             | °C           |
| Suggested Max Moisture      | 0.040 to 0.10  | %            |
| Processing (Melt) Temp      | 280 to 300     | °C           |
| Mold Temperature            | 60 to 120      | °C           |