

Terblend N NG-04

Acrylonitrile Butadiene Styrene / Polyamide (ABS/PA)

TECHNICAL
DATASHEET

DESCRIPTION

Terblend® N NG-04 is a 20% glass fiber reinforced ABS/PA blend with high dimensional stability and rigidity.

FEATURES

- Very high dimensional stability
- Very high rigidity
- High softening temperature
- Glass fiber reinforced (20%)

APPLICATIONS

- Automotive parts
- Overhead consoles
- Housings

| Property, Test Condition | Standard | Unit | Values |
|--|-------------|-------------------------|--------|
| Rheological Properties | | | |
| Melt Volume Rate, 240 °C/10 kg | ISO 1133 | cm ³ /10 min | 15 |
| Mechanical Properties | | | |
| Tensile Modulus | ISO 527 | MPa | 5400 |
| Tensile Stress at Break, 23 °C | ISO 527 | MPa | 60 |
| Tensile Strain at Break, 23 °C | ISO 527 | % | 3.2 |
| Flexural Modulus, 23 °C | ISO 178 | MPa | 4500 |
| Flexural Strength, 23 °C | ISO 178 | MPa | 115 |
| Charpy Notched Impact Strength, 23° C | ISO 179/1eA | kJ/m ² | 8 |
| Charpy Notched Impact Strength, -30 °C | ISO 179/1eA | kJ/m ² | 5 |
| Charpy Unnotched Impact Strength, 23 °C | ISO 579 | kJ/m ² | 30 |
| Charpy Unnotched Impact Strength, -30 °C | ISO 579 | kJ/m ² | 25 |
| Izod Notched Impact Strength, 23 °C | ISO 180/A | kJ/m ² | 9 |
| Izod Notched Impact Strength, -30 °C | ISO 180/A | kJ/m ² | 5 |
| Hardness, Ball Indentation | ISO 2039-1 | MPa | 107 |
| Thermal Properties | | | |
| Vicat Softening Temperature VST/B/50 (50N, 50 °C/h) | ISO 306 | °C | 114 |
| Vicat Softening Temperature, VST/A/50 (10N, 50 °C/h) | ISO 306 | °C | 180 |

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|---|-----------------|----------------------|------------------|
| Coefficient of Linear Thermal Expansion | ISO 11359 | 10 ⁻⁶ /°C | 40 |
| Heat Deflection Temperature A; (unannealed; 1.8 MPa) | ISO 75 | °C | 100 |
| Heat Deflection Temperature B; (unannealed; 0.45 MPa) | ISO 75 | °C | 164 |
| Electrical Properties | | | |
| Relative Permittivity (1 MHz) | IEC 62631-2-1 | - | 2.9 |
| Dissipation Factor (1 MHz) | IEC 62631-2-1 | 10 ⁻⁴ | 130 |
| Volume Resistivity | IEC 62631-3-1 | Ohm*m | 10 ¹³ |
| Surface Resistivity | IEC 62631-3-1 | Ohm | 10 ¹⁴ |
| Other Properties | | | |
| Density | ISO 1183 | kg/m ³ | 1200 |
| Moisture Absorption, Equilibrium 23 °C/50% RH | ISO 62 | % | 0.9 |
| Glass Fibre content | - | % | 20 |
| UL94 rating at 1.5 mm thickness | IEC 60695-11-10 | - | HB |
| Processing | | | |
| Melt Temperature Range | ISO 294 | °C | 240 - 270 |
| Mold Temperature Range | ISO 294 | °C | 60 - 80 |
| Drying Temperature | - | °C | 80 - 90 |
| Drying Time | - | h | 4 - 8 |
| Molding shrinkage, free, longitudinal | - | % | 0.3 |

Typical values for uncolored products

Please note that all processing data stated are only indicative and may vary depending on the individual processing complexities.

Please consult our local sales or technical representatives for details.

SUPPLY FORM

Terblend® N is supplied as cylindrical or lenticular pellets. The bulk density is from about 0.55-0.65 g/cm³. Standard pack: 25 kg PE sack, palletized and film-secured. Subject to agreement, other means of packing are possible, e.g. 1000 kg bulk containers (octagonal IBCs, or intermediate bulk containers, made from corrugated board with sack insert) or shipping by road tanker can be arranged. Terblend® N pellets can be stored for prolonged periods in dry areas subject to normal temperature control without any changes in mechanical properties.

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However, with sensitive colors storage over some years can cause some color change. In poor storage conditions, Terblend® N absorbs moisture, which can be removed again by drying. Packs stored in cold areas should be brought to ambient temperature before opening to prevent condensation on the pellets.

PRODUCT SAFETY

Given appropriate processing of the products and suitable ventilation measures in production areas, no adverse effects on the health of process operator have been found. Workplace limits for styrene, acrylonitrile and 1,3-butadiene, as given in the applicable national listings, must be adhered to. The values currently applicable in Germany under TRGS 900 (issue of September, 1999) for maximum workplace concentrations are as follows. Styrene: 20 ml/m³ = 85 mg/m³; acrylonitrile: 3 ml/m³ = 7 mg/m³; 1,3-butadiene: 5 ml/m³ = 11 mg/m³. Appendix I of Directive 67/548/EWG (issue of 1999) classifies acrylonitrile and 1,3-butadiene in carcinogenic category II (substances which should be regarded as carcinogenic in humans). Experience has shown that during appropriate processing of Terblend® N with suitable ventilation the values obtained are well below the limits mentioned above. TRGS 402 (Germany) can be used for determining and assessing the concentrations of hazardous substances in the air within working areas. Inhalation of gaseous degradation products (e.g. caprolactam), such as those which may arise on severe overheating of the material or during pumped evacuation, must be avoided. Further information can be found in our Terblend® N safety data sheets.

DISCLAIMER

The above mentioned data are accurate to the best of our knowledge. They are based upon reputable labs and industry standard testing methods. These are only typical values and actual product specification may deviate at industrial range. Therefore, no data in this technical data sheet shall constitute a warranty or representation regarding product features, fitness of the product for a specific purpose or application or its processability. INEOS Styrolution disclaims all liability in connection therewith. The customer himself is required to verify whether or not the product is suitable for the further processing or application intended and whether or not the product complies with the relevant statutory requirements. Unless explicitly and individually otherwise agreed in writing, INEOS Styrolution's sole and exclusive liability with respect to its products is set forth in INEOS Styrolution's General Terms and Conditions for Sale.