

# Desmovit® DP R9930

Thermoplastic Polyurethane Elastomer (Ester/Ether)

geba Kunststoffcompounds GmbH

Message:

Ether Based Injection Moulding Type with a Glass Fibre Content of 20 %

Characteristics:

very high stiffness, extreme impact strength and fl exibility at low temperature, very good hydrolysis and microbial resistance, seawater proof, good UV resistance, high shock resistance & high fl exibility, good noise absorption, excellent colorability and printability

Applications:

mechanically highly stressed components of technical applications (indoor and outdoor), protectors for skiing, horse riding and motor sports, fi shing net sinker, helmets, winter sport products such as ski tips, ski edge protection parts, ski bindings, ski boots, goggles, housings in the offshore area

| General Information      |                                   |       |             |
|--------------------------|-----------------------------------|-------|-------------|
| Filler / Reinforcement   | Glass Fiber,20% Filler by Weight  |       |             |
| Features                 | Excellent Printability            |       |             |
|                          | Good Colorability                 |       |             |
|                          | Good Flexibility                  |       |             |
|                          | Good UV Resistance                |       |             |
|                          | High Impact Resistance            |       |             |
|                          | High Stiffness                    |       |             |
|                          | Hydrolysis Resistant              |       |             |
|                          | Low Temperature Flexibility       |       |             |
|                          | Low Temperature Impact Resistance |       |             |
|                          | Microbe Resistant                 |       |             |
|                          | Noise Damping                     |       |             |
|                          | Salt Water/Spray Resistant        |       |             |
| Uses                     | Shock Resistant                   |       |             |
|                          | Outdoor Applications              |       |             |
|                          | Safety Equipment                  |       |             |
|                          | Safety Guards                     |       |             |
|                          | Safety Helmets                    |       |             |
| Processing Method        | Sporting Goods                    |       |             |
|                          | Injection Molding                 |       |             |
| Physical                 | Nominal Value                     | Unit  | Test Method |
| Density                  | 1.31                              | g/cm³ | ISO 1183/A  |
| Molding Shrinkage        |                                   |       |             |
| Across Flow              | 0.58                              | %     |             |
| Flow                     | 0.20                              | %     |             |
| Hardness                 | Nominal Value                     | Unit  | Test Method |
| Shore Hardness (Shore D) | 71                                |       | ISO 868     |

| Mechanical                       | Nominal Value | Unit              | Test Method   |
|----------------------------------|---------------|-------------------|---------------|
| Tensile Stress (Yield)           | 73.0          | MPa               | ISO 527-2/200 |
| Tensile Strain (Break)           | 6.0           | %                 | ISO 527-2/200 |
| Flexural Modulus <sup>1</sup>    |               |                   | ISO 178       |
| -30°C                            | 4600          | MPa               |               |
| 23°C                             | 3000          | MPa               |               |
| Flexural Stress <sup>2</sup>     |               |                   | ISO 178       |
| -30°C                            | 161           | MPa               |               |
| 23°C                             | 87.2          | MPa               |               |
| Abrasion                         | 102           | mm <sup>3</sup>   | ISO 4649      |
| Impact                           | Nominal Value | Unit              | Test Method   |
| Charpy Notched Impact Strength   |               |                   | ISO 179/1eA   |
| -30°C                            | > 8.5         | kJ/m <sup>2</sup> |               |
| 23°C                             | > 18          | kJ/m <sup>2</sup> |               |
| Charpy Unnotched Impact Strength |               |                   | ISO 179/1eU   |
| -30°C                            | 70            | kJ/m <sup>2</sup> |               |
| 23°C                             | > 60          | kJ/m <sup>2</sup> |               |
| Thermal                          | Nominal Value | Unit              | Test Method   |
| Heat Deflection Temperature      |               |                   |               |
| 0.45 MPa, Unannealed             | 174           | °C                | ISO 75-2/B    |
| 1.8 MPa, Unannealed              | 121           | °C                | ISO 75-2/A    |
| Vicat Softening Temperature      | 115           | °C                | ISO 306/B50   |
| CLTE                             |               |                   | DIN 53752-A   |
| Flow                             | 1.4E-5        | cm/cm/°C          |               |
| Transverse                       | 1.2E-4        | cm/cm/°C          |               |
| Injection                        | Nominal Value | Unit              |               |
| Drying Time                      | 2.0           | hr                |               |
| Processing (Melt) Temp           | 200 to 230    | °C                |               |
| Mold Temperature                 | 40.0 to 80.0  | °C                |               |
| NOTE                             |               |                   |               |
| 1.                               | 1.0 mm/min    |                   |               |
| 2.                               | 2.0 mm/min    |                   |               |

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