

BIO

Impact Protection

Mitigate fear. Protect your devices.

D30's dilatant materials are designed to absorb and dissipate energy in response to blunt force impact.

D30® Bio is the world's leading clear plant-based impact protection material.

Providing the same protection D30 is renowned for, D30® Bio saves on fossil-based resources and can be used in both crystal-clear and colour products.

D30® Bio helps reduce water consumption and allows for sustainable waste management, offering the ability to recycle material waste from the production process directly back into it, avoiding post-industrial waste.

Compatible with injection moulding or similar processes and used for the protection of consumer electronics, D30® Bio is the solution to protect devices, people and planet.

Material Features

- Same trusted D30® Protection
- Suitable for clear and colour products
- Leading plant-based content
- Made from renewable resources
- Optimal and consistent melt flow TPE grade for trouble-free, high-quality moulding



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Typical Properties

	Method reference*	Test Condition	D30 [®] Bio
Density (kg/m ³)	ISO 845:2009	-	1160.0
MFR (g/10 min)	ISO 1133	200°C, 2.16 kg	9.9
Hardness (Shore A)	ASTM D2240 - 05 (2010)	3s	93.3
Tensile Strength at Break (MPa)	ISO 37:2017 Type 1	500mm/min	20.7**
Tensile Elongation at Break (%)	ISO 37:2017 Type 1	500mm/min	499.3**
Tear Strength (N/mm)	ASTM D624 Type T	50mm/min	8.4**
Flexural Modulus (kPa)	DTS052	-	-
Shrinkage (at 150°C)	-	-	0.8%
Abrasion Resistance (mg/100 cycles)	ISO 5470-1	H18, 9.8N	4.5**
Transparency (%)	DTS086	-	81.0
Plant-based content (%)	-	-	45.0
Suitable for opaque coloured products	-	-	✓
Suitable for translucent products	-	-	✓
Suitable for clear products	-	-	✓

Injection Moulding Conditions

Drying Conditions	Temperature (°C)	70
	Time (h)	4
	Equipment	Dehumidified drying oven (vacuum)
Moulding Conditions	Screw Speed	Medium
	Injection Speed	Medium - Low
	Injection Pressure	Medium - Low
	Holding Pressure	High
	Back Pressure	Medium - Low
	Feeder (°C)	190 - 230
	Zone 1 (°C)	180 - 220
	Zone 2 (°C)	180 - 215
	Nozzle (°C)	170 - 180
	Mould (°C)	50

- Water cooling recommended on bottom of the hopper
- Cycle times dependant on section thickness and temperature
- Parts must be sufficiently cooled (20-40s) before demoulding to prevent distortion
- Part must be removed carefully to prevent deformation
- The shelf life of the TPE granules is 12 months from delivery if storage instructions are observed and the product is stored in the unopened original D30 TPE packaging.
- Store in dry conditions at room temperature (15-30 °C) away from heat sources and direct sunlight.
- This material is plant based, which may cause visual irregularities in the products

*Values shown represent typical product characteristics
 **Estimated

