

IM

Impact Protection Material

Mitigate Fear. Prevent Injury.

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

- World-leading impact protection
- Soft & flexible, rate-sensitive material
- Suitable for use in flexible designs and complex geometries
- Suited to a diverse range of applications (sports, moto, outdoor, electronics)
- Supplied in pellet form for injection moulding (20kg bags)
- Neutral light colour allowing for easy pigmentation

	Material	Units	Test Condition	Test Standard
Appearance	White pellet	N/A	N/A	N/A
Hardness	40	Shore A	3s	ASTM D2240 - 05 (2010)
Density	0.92	g/cm3	N/A	ISO 845:2009
Tensile Strength at Break	11	MPa	500 mm/min	ISO 37:2017 Type 1
Elongation at Break	673	%	500 mm/min	ISO 37:2017 Type 1
Tear Strength	9.4	N/mm	50 mm/min	ASTM D624 Type T
Flexural Modulus	4.78	MPa	N/A	DTS052
Abrasion Resistance	5	mg/100 cycles	H18, 9.8N	ISO 5470-1
MFR	6.27	g/10 min	190°C, 3.2 kg	ISO 1133
Application	Injection Moulding			

Drying Conditions (only required if surface moisture forms)	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 Temperature (°C)	180
	Zone 1 Temperature (°C)	190
	Zone 2 Temperature (°C)	200
	Nozzle Temperature (°C)	210
Mould Temperature (°C)	40-60	

