

# ADAPT

## Protection

Adapt is a next-generation material engineered for dynamic protection. Designed to absorb the energy of varying levels of force, Adapt remains soft and flexible in normal conditions, yet instantly absorbs and dissipates impacts, vibrations and shocks.

### Material Features

- Versatile rate-sensitive D3O material that’s soft and pliable under normal conditions and absorbs and dissipates force providing targeted protection
- Soft, lightweight and flexible
- Durable and optimised for repeat use
- Injection mouldable to fit a variety of applications and designs





# ADAPT

## Protection

### Material Properties

	Material	Units	Test Condition	Test Standard
Appearance	White pellet	N/A	N/A	N/A
Hardness	40	Shore A	3s	ASTM D2240 - 05
Density	0.92	g/cm3	N/A	ISO 845:2009
Tensile Strength at	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	9.57	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
Shrinkage	0.25	%	60°C, 5°C/min	-
Application	Injection Moulding			

### Injection Moulding Conditions

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

