

Polyurethane base material

Polyurethane Physical Properties

Property	Test Method	Clear	Coloured
Hardness (shore A)	ASTN D-2240	66-70	66-70
Tensile Strength (Mpa)	BS903	3.7	3.7
Elongation (%)	BS903	199	150
Tear Strength (KN/m)	BS903	14.4	13.8
Abrasion Resistance (MG loss)	BS EN 5470-1:1999	150	160
Load Tolerance 21°C to 60°C		Min 3 Mpa	Min 3 Mpa
Flame Retardency	UL94HB	Pass	Pass
Kinetic Coefficient of friction	ASTM D-1894-78		
	A Stainless Steel	2.52	5.69
	B Glass	2.7	2.9
	D High impact polystyrene	2.37	2.53

Shelf Life - 12 months when stored in original packaging at room temperature

Exposure to the Environment Bumperstops are intended for interior applications where physical properties will remain unchanged. When used externally for extended periods, some discolouration as well as loss of adhesion may occur.

Load Tolerance Information

In the event of using Bumperstops for applications involving the support of heavy plate glass, laboratory tests have shown that cylindrical shapes perform better than hemispherical.

A heavy load supported by the wrong style of BumperStop could result in fracturing or "crumbling" of the urethane material. Please refer to the chart for weight loading guidance.

Compression tests were carried out at ambient temperature (24°C)

Product	Colour	Profile	Kg per BumperStop	Product	Colour	Profile	Kg per BumperStop
PD.2010C	Clear	Hemispherical	3	PD.2191C	Clear	Cylindrical	26
PD.2115C	Clear	Hemispherical	5	PD.2019C	Clear	Cylindrical	24
PD.2150C	Clear	Hemispherical	10	PD.2100C	Clear	Square	10
PD.2120C	Clear	Cylindrical	10	PD.2127C	Clear	Square	12
PD.2125C	Clear	Cylindrical	15	PD.2205C	Clear	Square	24

Adhesive Data

6001 Rubber Adhesive

The 6001 adhesive is an aggressive high tack rubber based adhesive system which displays good instant tack, high peel and shear properties. 6001 works particularly well on slightly irregular surfaces and some low surface energy plastics. Unless otherwise requested, this adhesive is standard on all Black, White or Brown BumperFlex tapes

4001 Acrylic Adhesive

The 4001 adhesive is a medium tack adhesive with good shear strength and a higher end use temperature. Usually preferred for applications where good ageing properties are a required feature. Unless otherwise requested the 4001 is the standard adhesive for all Clear BumperFlex tapes because of its superior ageing properties.

	Properties	6001	4001
Adhesive Characteristics	System Thickness Backing Liner Adhesive Feature	Solvent Rubber 0.002 160gms High initial tack	Solvent Acrylic 0.002 160gms Good ageing
Adhesive Performance	Shear Strength @ 21°C Shear Strength @ 49°C	Extremely good Extremely good	Good Good
Application Temperature		15°C to 65°C	10°C to 80°C
Service Temperature		-10°C to 70°C	-20°C to 80°C
Storage Temperature		Room temperature	Room temperature

Substrate adhesion performance

Surface Material	6001 20 minute @ 23°C	6001 24 hours @ 23°C	4001 20 minute @ 23°C	4001 24 hours @ 23°C
Stainless Steel <u>Peel FINAT 1</u> <u>Shear FINAT 8</u>	24.4 N/25mm	44.7 N/25mm	16.3 N/25mm	18.4 N/25mm
Aluminium <u>Peel FINAT 1</u>	33.8 N/25mm	44.1 N/25mm	14.3 N/25mm	20 N/25mm
Glass <u>Peel FINAT 1</u>	40.5 N/25mm	39.5 N/25mm	15.9 N/25mm	17.9 N/25mm
HPDE <u>Peel FINAT 1</u>	16.8 N/25mm	27.2 N/25mm	1.0 N/25mm	2.4 N/25mm
PS <u>Peel FINAT 1</u>	21.8 N/25mm	31.8 N/25mm	11.8 N/25mm	18.2 N/25mm
ABS <u>Peel FINAT 1</u>	31.4 N/25mm	33.9 N/25mm	15.6 N/25mm	17.6 N/25mm

Adhesive Considerations

Please refer to the chart which illustrates the relative adhesion Properties of the adhesive systems used in production of BumperStops.

In general terms allow time (dwell) to increase the surface contact and therefore the adhesion. Please note that acrylic adhesives generally require longer dwell times than the rubber based systems

