

BumperStop Protectors are strong, flexible & highly resilient. Among their many features is the ability to withstand shock and vibration, whilst being both non-slip and non-marking.

BumperStop protectors are supplied kiss-cut on a sheet to allow ease of removal and aid application. Manufacturing so many different shapes, colours and styles, the standard quantity on a sheet will always vary depending on the size of the part. Information on this and the number of sheets and pieces in our cartons can be found in the product pages on our website or corporate brochure. This information will not apply to customers who require custom sheet sizes.

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 (in house)	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 Bumperstop protectors are used for applications involving the support of heavy plate glass or similar, 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 polyurethane 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 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 coloured BumperStop protectors.

4001 Acrylic Adhesive

The 4001 adhesive is a medium tack adhesive with good shear strength, higher end use temperature and good clarity. Usually preferred for applications where good ageing properties are a benefit. Unless otherwise requested this adhesive is standard on all Clear BumperStop protectors because of its superior ageing properties.

	Properties	6001	4001
Adhesive Characteristics	System Thickness Backing Liner Adhesive Feature (key)	Solvent Rubber 0.002 160gms paper High tack & high shear	Solvent Acrylic 0.002 160gms paper High tack/ good ageing & clarity
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

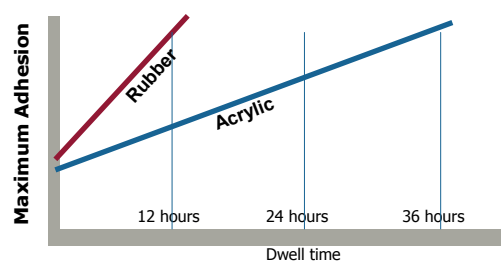
Substrate adhesion performance

Surface Material	6001	6001	4001	4001
	20 minute @ 23°C	24 hours @ 23°C	20 minute @ 23°C	24 hours @ 23°C
Stainless Steel <u>Peel FINAT 1</u> <u>Shear FINAT 8</u>	24.4 N/25mm /	44.7 N/25mm 93h	16.3 N/25mm /	18.4 N/25mm >100h
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 the production of BumperStop protectors.

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. We recommend customers carry out their own tests because application conditions will vary.



APPLYING BumperStop protectors

It is important to remember, that as with any self adhesive product, the surface to which they are being applied must be clean, dry and free from dust and dirt. Therefore, to gain maximum adhesion, clean the surface with low strength solvent and allow to dry thoroughly before use. Please follow solvent manufacturers' instructions for safety.

DISCLAIMER: To the best of our knowledge the information in this Technical Data Sheet is believed to be correct as of the date issued. However, neither BumperStops Ltd nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of the suitability of any material is the sole responsibility of the user. All BumperStop protectors are RoHS and Wee compliant.