



PVC/P Polyvinyl Chloride Flexible

Description

One of the most versatile compounds available in a wide range of formulations from semi rigid highly filled to soft touch clear grades. Grades can easily be formulated to suite specific applications within the softness range BSS 01 -150.

A new range of DOP and phthalate free grades are now available which meet current REACH requirements also we have anti-microbial grades available.

Typical Applications

Medical face masks, ladder feet, tubes, window gaskets, automotive pedals & trim, floor tiles, foot ware, cable covering, calendared sheet.

Types of grade available

Crystal clear injection moulding and extrusion.
 Filled cable grades for extrusion
 Filled grades for injection moulding
 Nitrile blends for moulding and extrusion
 Flame retardant grades
 High temperature and low temperature grades
 Low marring grades
 Gamma stable grades
 Food contact grades

Transmission/Crystal Grades

75 – 85%

General Processing

Drying Time	N/A
Drying Temperature	N/A
Type of Drier	N/A
Purging	DYNAPURGE V or K
Moisture Absorption	20 – 40 MG
Other Considerations	Process control required

Processing Injection Moulding

Barrel Settings	150C to 185C (do not exceed 200C)
Injection speed	Low to Medium
Injection Pressure	Low to Medium

Back Pressure	Low to Medium
Screw Speed	In line with cooling
Tool Temperature	20C to 40C
Melt Temperature	160C to 185C
Processing Stability	Residence time to be kept to a minimum
Gate Considerations	Large gates preferred such as tab gate
Sprue & Runner Considerations	Full round runners preferred. Runners to be streamlined with sharp corners to be avoided.
Processing Extrusion	
Barrel Settings	130C to 180C
Screw Speed	As fast as possible to maintain a homogenous melt
Screen Packs	Widely used
Haul-off / Cooling	Important to cool as quickly as possible
Calibration	Vacuum calibration and sizing plates
Purge	DYNAPURGE X or FREEZE
Mechanical Properties	
Shrinkages	0.5% to 3% depending on softness and density
Tensile Modulus	0.0002 – 0.0019 GPa
Tensile strength at Yield	4 -7 MPa
Physical Properties	
Density	1.18 to 1.65
Cold Bend	-20C
Cold Flex	-40C
Elongation at Break	50 -460%
General Impact Strength	Flexible
Material Finish	Good clarity and gloss with crystal grades, matt for filled
Thermal Properties	
Vicat Softening Temperature	N/A
Heat Deflection Temperature	N/A
Flammability	
Flammability Rating	Harder grades of PVC are self extinguishing. FR grades are available, mainly harder grades- VO – V2
Weatherability	
Suitability for outdoor use	PVC is very good for outdoor use. Grades can be formulated with UV stabiliser upon request.
Fillers & Additives	
	Calcium carbonate used as filler, nitrile blends available

Chemical Resistance	
Resistant to	Mineral acids, alkalis, oil & grease
Not resistant to	Solvents
Food Contact Status	Lead stabilised grades not suitable for food contact but calcium and barium stabilised grades are suitable
Colouring	Masterbatch, compounded
WEEE & ROHS Compliance	Some grades contain lead but all are available lead free which will comply
REACH	DOP plasticiser is used in many grades and is listed on the SVHC list. We have DOP free grades available.
Bonding	Flexible PVC can be bonded using solvents based adhesives there are many weld adhesives on the market suitable for bonding flexible PVC to other materials and polymers.
Welding	High frequency, hot plate and hot air welding

This information has been provided as a general guide and we suggest that you carry out your own specific tests to be sure that this material is suitable for your application.