



EVA Ethylene Vinyl Acetate

Description

Made when vinyl acetate is blended with LDPE. The result is a softer more flexible compound. By varying the VA content polymers with significantly different properties are produced. As the percentage of VA is increased the transparency and flexibility increases making it feel softer and more rubber like.

Typical Applications

Suckers, Gum shields, Barrel Bungs, Ice Cube Trays carrier bag handles flexible tubing

Types of grade available

Injection moulding

Extrusion

VA – 2% up to 50%

Cross linked and expanded grades are available for cellular moulding applications

General Processing

Drying Time	N/A
Drying Temperature	N/A
Type of Drier	N/A
Purging	DYNAPURGE K
Moisture Absorption	0.2% in 24 hours at room temperature
Other Considerations	Very sticky when processing the higher VA content as crystallinity reduces

Processing Injection Moulding

Barrel Settings	120C to 220C
Injection speed	Low
Injection Pressure	High
Back Pressure	Low
Screw Speed	Low
Tool Temperature	10C
Melt Temperature	120c
Processing Stability	Maximum barrel residence time is 5 to 6 minutes
Gate Considerations	Fan, flash and tab gates appear more suitable to reduce jetting and other surface blemishes
Sprue & Runner Considerations	Ideally suited for runner-less type moulds due to ease of processing and good thermal stability

Processing Extrusion	
Barrel Settings	90c increasing to 200c
Screw	Screw, 25 - 30 L/D
Screen Packs	2 x 80 and 1 x 40 mesh
Haul-off / Cooling	Cooling within the die may be required
Calibration	Calibration plates material shows good melt strengths Dependant on VA content
Mechanical Properties	
Shrinkages	0.7% to 2% Dependant on VA
Flexural Strength	0.06 GPa
Tensile strength at Yield	5.52 Mpa
Physical Properties	
Density	0.95%
Cold Bend	-65
Cold Flex	N/A
Elongation at Break	450% to 500%
Modulus of Elasticity	750%
General Impact Strength	Excellent
Material Finish	Base colour ranges from milky white to colourless
Thermal Properties	
Vicat Softening Temperature	65C
Working Temperature	Softens at low temp 50c An example is Gum Shields that can be reformed when placed in hot water.
Flammability	
Flammability Rating	N/A
Weatherability	
Suitability for outdoor use	Similar to LDPE, it can be significantly improved by the addition of 2 to 3% carbon black
Fillers & Additives	
	High carbon and graphite can be added to improve conductive properties.
Chemical Resistance	
Resistant to	Flex cracking at low temperatures, disinfectants
Not resistant to	Steam sterilization, aromatic and chlorinated solvents
Food Contact Status	
	Suitable for food contact
Colouring	
	A wide colour range is possible, this includes both transparent and opaque colours

WEEE & ROHS Compliance	Contains no hazardous substances
Bonding	Loctite adhesives Primer may be needed
Welding	Can be welded using hot plate, radio frequency and ultrasonic techniques

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.