



Acetal Polyoxymethylene (POM)

Description	
Material is hard, tough and resilient with good creep resistance and dimensional stability. Good temperature properties.	
Typical Applications	
Gears, bearings, conveyor components, valve & pump housings	
Types of grade available	
Glass fibre filled Glass bead filled UV Stabilised Extrusion Grade	
General Processing	
Drying Time	2 to 3 hours
Drying Temperature	85 C
Type of Drier	Hot Air
Purging	DYNAPURGE D2
Moisture Absorption	0.22%
Other Considerations	Copolymers have better processing characteristics than homo-polymers. DO NOT PUT IN CONTACT WITH PVC
Processing Injection Moulding	
Barrel Settings	180 C to 220 C
Injection speed	Moderate to Fast
Injection Pressure	
Back Pressure	5 to 10 Bar
Screw Speed	In line with cooling
Tool Temperature	90 C
Melt Temperature	200C to 220C
Processing Stability	Good
Gate Considerations	Round gates should have diameter of at least 50 – 60% of the wall thickness
Sprue & Runner Considerations	Land line to be kept to a minimum

Processing Extrusion	
Barrel Settings	180-205c
Screw Speed	LD ratio 20-1 – 35 rpm
Screen Packs	20 40 80 40 20 mesh
Haul-off / Cooling	Air cooling recommended
Calibration	Vacuum sizing for high speed. Sizing plates
Mechanical Properties	
Shrinkages	2% to 3%
Flexural Strength	90 MPA
Tensile strength at Yield	37 -69 MPa
Physical Properties	
Density	1.41
Cold Bend	N/A
Cold Flex	N/A
Elongation at Break	110%
Tensile Modulus	1400 – 3200 MPa
General Impact Strength	Good
Material Finish	Mat
Thermal Properties	
Vicat Softening Temperature	150C
Heat Deflection Temperature	118C
Flammability	
Flammability Rating	Horizontal Burn
Weatherability	
Suitability for outdoor use	A UV stabilised grade must be used for outdoor use
Fillers & Additives	
	Glass bead & fibre, UV stabilisers, silicone oil
Chemical Resistance	
Resistant to	Stress cracking, biological attack and solvents
Not resistant to	Dilute mineral acids, fairly strong organic acids
Food Contact Status	
	Suitable grade dependant

Colouring	As the natural colour of the material is translucent white then a wide colour range is available. Dry colouring and masterbatching are readily performed but care must be taken as some colourants may cause degradation.
REACH & ROHS Compliance	Yes
Bonding	Material is difficult to join using adhesives
Welding	Commonly welded using techniques such as ultrasonic, hot plate, induction, friction and solvents. Hot plate welding using temperatures of between 230C and 290C to obtain effective joints although the actual temperature is dependant upon the thickness and area of components to be welded

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.