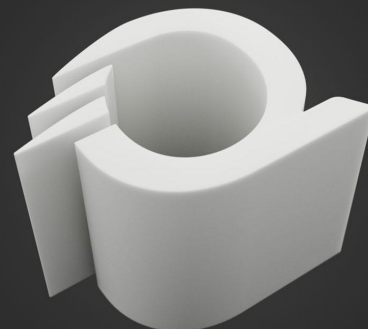




Celcon® M90

Celcon® acetal copolymer grade M90 is a medium viscosity polymer providing optimum performance in general purpose injection molding and extrusion of thin walled tubing and thin gauge film. This grade provides over-all excellent performance in many applications. Chemical abbreviation according to ISO 1043-1: POM Please also see Hostaform® C 9021.

Physical Properties

MEASUREMENT	CONDITION	Value
Density (73°F)	ISO 1183	1.41g/cm ³
Melt Volume-Flow Rate (MVR) (260°C/5.0 kg)	ISO 1133	8.0cm ³ /10min
Molding Shrinkage ³ Across Flow Flow	ISO 2577	1.9% 2.0%
Water Absorption Saturation, 73°F Equilibrium, 73°F, 50% RH	ISO 62	0.75% 0.20%

Mechanical Properties

MEASUREMENT	CONDITION	Value
Tensile Modulus	ISO 527-1	400000 psi
Tensile Stress, Yield	ISO 527-2/50	9430 ps
Tensile Strain, Yield	ISO 527-2/50	10%
Tensile Creep Modulus 1 hr 1000 hr	ISO 899-1	355000 psi 196000 psi
Flexural Modulus (73°F)	ISO 178	370000 psi
Flexural Stress (3.5% Strain)	ISO 178	10600 psi
Compressive Stress 1% Strain 6% Strain	ISO 604	3770 psi 12800 psi
Poisson's Ratio	ISO 527	0.40

Features

- General purpose,
- Good optimization of properties

Colors

- Off-white
- Black

Processing Method

- Blow Molding
- Calendering
- Extrusion
- Film Extrusion
- Injection Molding
- Profile Extrusion
- Sheet Extrusion

Applications

- Automotive Applications
- Blow Molding Applications
- Film
- Lighting Applications
- Profiles
- Sheet

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Impact Properties

MEASUREMENT	CONDITION	Value
Charpy Notched Impact Strength -22°F 73°F	ISO 179/1eA	2.9 ft·lb/in ² 2.9 ft·lb/in ²
Charpy Unnotched Impact Strength -22°F 73°F	ISO 179/1eU	86 ft·lb/in ² 89 ft·lb/in ²
Notched Izod Impact Strength -22°F 73°F	ISO 180/1A	2.6 ft·lb/in ² 2.7 ft·lb/in ²

Thermal Properties

MEASUREMENT	CONDITION	Value
Deflection Temperature Under Load 66 psi, Unannealed 264 psi, Unannealed	ISO 75-2/B ISO 75-2/A	316°F 214°F
Ball Pressure Test (302°F)	IEC 60695-10-2	Pass
Melting Temperature ³	ISO 11357-3	331 °F
CLTE Flow Transverse	ISO 11359-2	6.7E-5 in/in/°F 6.7E-5 in/in/°F
Effective Thermal Diffusivity	Internal Method	7.52E-5 in ² /s

Electrical Properties

MEASUREMENT	CONDITION	Value
Surface Resistivity	IEC 62631-3-2	3.0E+16 ohms
Volume Resistivity (73°F)	IEC 62631-3-1	8.0E+12 ohms·m

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Fill Analysis

MEASUREMENT	CONDITION	Value
Melt Density	Internal Method	1.20 g/cm ³
Melt Specific Heat	Internal Method	0.528 Btu/lb/°F
Melt Thermal Conductivity	Internal Method	1.1 Btu-in/hr/ft ² /°F
Ejection Temperature		284 °F

Injection Properties

MEASUREMENT	Value
Drying Temperature	212 to 248°F
Drying Time	3.0 to 4.0 hr
Rear Temperature	338 to 356 °F
Middle Temperature	356 to 374°F
Front Temperature	356 to 374°F
Injection Zone 4 Temperature	374 to 392 °F
Nozzle Temperature	374 to 392°F
Processing (Melt) Temp	356 to 374°F
Mold Temperature (Optimum)	345°F
Mold Temperature	176 to 248°F
Injection Rate	Slow-Moderate
Back Pressure	< 580 psi
Hot Runner	356 to 392 °F

³10°C/min

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