MEXPRENE HD 8 GF30 H NC

Description	High density polyethylene with 30% glass fiber reinforced, heat stabilized		
Color	Natural Color	**Additional formulations**	
Applications	Packaging, General purpose	Fluidity form 1 to 50 gr/10'	EL - High impact
Norm	-	UV - Light stabilized	IB - Hybrid Mineral+GF
Processing	Injection	UL94 - Flame retardant	AB - Anti bacterial

Mechanical Properties		**Values**	**Unit**	**ISO**
Density		1,14	g/cm³	1183
Filler Content		30	%	3451
Melt Flow Index 190° C/2.16 kg		6	g/10min	1133
Melting Point (DSC)		138	° C	3146
Mechanical Properties		**Values**	**Unit**	**ISO**
Tensile strength at yield		65	MPa	527-1
Tensile strength at break		-	MPa	178
Flexural Modulus		4300	MPa	178
IZOD Impact strength, notched	(23° C)	-	lb-ft/in2	-
IZOD Impact strength, notched	(23° C)	8,0	KJ/m²	180 1eA
Thermal Properties		**Values**	**Unit**	**ISO**
HDT method A (1.820 MPa)		121	° C	75-1
HDT method B (0.450 MPa)		-	° C	75-1
Flammability		**Values**		
Flame rating at 3.2 mm		HB		UL94

Processing Conditions			**Values**	
Drying	-	Suggeste max moisture	0.15	%
Hopper	210° C	Min temperture	200	° C
1st Zone	210° C	Max temperture	240	° C
2nd Zone	215° C	Injection rate	Medium/High	
3rd Zone	220° C	Injection pressure	40 ÷ 80	MPa
Nozzle	225° C	Injection time	3 ÷ 15	Sec.
Moulds	20 - 40° C	Cooling time	20 ÷ 60	Sec.

Melt Temperature: A critical parameter, generally between 200-300° C for PP, with the recommendation to avoid exceeding 220° C for flame-retardant (FR) grades to prevent degradation.

Mold Temperature: Higher mold temperatures can improve part brilliance and appearance. A typical mold temperature for PP GF is around 20 ÷ 50° C.

Injection Speed: Use high injection speeds to ensure good surface finish and prevent weld lines.

Injection Pressure: Pressure should be high enough to fill the part effectively but not excessive, which can cause flashing or burning.

Mold Venting: Essential for preventing burn marks by allowing trapped gases to escape.

Fiber Length Control: The shear forces within the injection molding barrel can significantly reduce fiber length. Processing conditions need to be managed to control this.

After annealing treatment, PP products can eliminate residual internal stresses and improve impact resistance.

To reduce internal stress and deformation, high-speed injection should be chosen, but some PP grades and molds are not applicable.