



CYCOLAC™ Resin GX3800F

Americas: COMMERCIAL

High impact ABS for sheet extrusion and blow molding applications. FDA food contact compliant.

TYPICAL PROPERTIES ¹	TYPICAL VALUE	Unit	Standard
MECHANICAL			
Tensile Stress, yld, Type I, 5 mm/min	400	kgf/cm ²	ASTM D 638
Tensile Stress, brk, Type I, 5 mm/min	300	kgf/cm ²	ASTM D 638
Tensile Strain, yld, Type I, 5 mm/min	3.1	%	ASTM D 638
Tensile Strain, brk, Type I, 5 mm/min	31.6	%	ASTM D 638
Tensile Modulus, 5 mm/min	21200	kgf/cm ²	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	680	kgf/cm ²	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	22000	kgf/cm ²	ASTM D 790
IMPACT			
Izod Impact, notched, 23°C	44	cm-kgf/cm	ASTM D 256
Izod Impact, notched, -30°C	30	cm-kgf/cm	ASTM D 256
Instrumented Impact Total Energy, 23°C	518	cm-kgf	ASTM D 3763
THERMAL			
Vicat Softening Temp, Rate B/50	106	°C	ASTM D 1525
HDT, 0.45 MPa, 3.2 mm, unannealed	93	°C	ASTM D 648
HDT, 1.82 MPa, 3.2mm, unannealed	80	°C	ASTM D 648
CTE, -40°C to 40°C, flow	1.01E-04	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	1.04E-04	1/°C	ASTM E 831
PHYSICAL			
Specific Gravity	1.03	-	ASTM D 792
Mold Shrinkage, flow, 3.2 mm (5)	0.6 - 0.8	%	SABIC Method
Melt Viscosity, 240°C, 100 sec-1	14000	poise	ASTM D 3825
Melt Volume Rate, MVR at 220°C/10.0 kg	4	cm ³ /10 min	ISO 1133





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- Recommend initial lower temperatures settings to avoid material degradation/hang-up in die.
- Maintain melt temperature within processing range.

PROCESSING PARAMETERS	TYPICAL VALUE	Unit
Extrusion Blow Molding		
Drying Temperature	80 - 90	°C
Drying Time	4 - 5	hrs
Drying Time (Cumulative)	24	hrs
Maximum Moisture Content	0.02	%
Melt Temperature (Parison)	215 - 230	°C
Barrel - Zone 1 Temperature	205 - 225	°C
Barrel - Zone 2 Temperature	205 - 225	°C
Barrel - Zone 3 Temperature	205 - 225	°C
Barrel - Zone 4 Temperature	205 - 225	°C
Adapter - Zone 5 Temperature	210 - 230	°C
Head - Zone 6 - Top Temperature	215 - 230	°C
Head - Zone 7 - Bottom Temperature	215 - 230	°C
Screw Speed	20 - 60	rpm
Extruder Feed Zone Temperature	60 - 75	°C
Mold Temperature	40 - 80	°C
Die Temperature	215 - 235	°C
Sheet Extrusion		
Drying Temperature	80 - 95	°C
Drying Time	4	hrs
Maximum Moisture Content	0.02	%
Melt Temperature	215 - 260	°C
Barrel - Zone 1 Temperature	170 - 200	°C
Barrel - Zone 2 Temperature	180 - 220	°C
Barrel - Zone 3 Temperature	190 - 225	°C
Barrel - Zone 4 Temperature	200 - 240	°C
Adapter Temperature	205 - 250	°C
Die Temperature	205 - 250	°C
Roll Stack Temp - Top	90 - 95	°C

- Purge material from extruder prior to shutdown.
- For extended downtime, lower barrel, head and die temperatures to 95°C (200°F).





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PROCESSING PARAMETERS	TYPICAL VALUE	Unit
Sheet Extrusion		
Roll Stack Temp - Middle	95 - 105	°C
Roll Stack Temp - Bottom	100 - 105	°C

- Purge material from extruder prior to shutdown.
- For extended downtime, lower barrel, head and die temperatures to 95°C (200°F).

