# Flexathene® TP4120BK

### Polyolefin

## LyondellBasell Industries

#### Message:

FLEXATHENE TP 4120-BK is a high flow injection molding grade thermoplastic olefin (TPO) formulated for thin wall paintable automotive applications. TP 4120-BK has an excellent balance of stiffness, impact resistance, dimensional stability and processability and has been specially formulated to meet GMP.E/P.133. This resin is pre-colored black, but is available in other colors as well as weatherable and UV paintable versions to meet GMP.E/P.134.

General Information			
Features	Good Dimensional Stability		
	Good Processability		
	High Flow		
	High Impact Resistance		
	High Stiffness		
	Paintable		
Uses	Automotive Applications		
	Thin-walled Parts		
Appearance	Black		
Forms	Pellets		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Density	0.959	g/cm³	ISO 1183/A, ASTM D1505
Melt Mass-Flow Rate (MFR)			
230°C/2.16 kg	26	g/10 min	ASTM D1238
230°C/2.16 kg <sup>1</sup>	26	g/10 min	ISO 1133
Molding Shrinkage			ISO 294-4
121°C, 1 hr	0.73 to 0.88	%	
48 hr	0.53 to 0.68	%	
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	1380	MPa	ISO 527-2
Tensile Strength			
Yield <sup>2</sup>	18.9	MPa	ASTM D638
Yield	18.9	MPa	ISO 527-2
Tensile Elongation (Yield)	8.2	%	ASTM D638
Flexural Modulus - Tangent			
3	1050	MPa	ASTM D790B
	1050	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact			ASTM D256

-18°C	53	J/m	
23°C	No Break		
Unnotched Izod Impact (-18°C)	No Break		ASTM D256
Instrumented Dart Impact <sup>4</sup>			ASTM D3763
-30°C, Energy to Peak Load	24.0	J	
23°C, Energy to Peak Load	18.0	J	
Thermal	Nominal Value	Unit	Test Method
CLTE - Flow	5.4E-5	cm/cm/°C	ASTM E831
Injection	Nominal Value	Unit	
Processing (Melt) Temp	204 to 232	°C	
NOTE			
1.	Procedure A		
2.	13 mm/min		
3.	1.3 mm/min		
CLTE - Flow Injection Processing (Melt) Temp NOTE	5.4E-5 Nominal Value 204 to 232	cm/cm/°C Unit	

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