

Technical Data Sheet
IPETHENE® 4140
Low Density Polyethylene



Product Description

IPETHENE® 4140 is a low-density polyethylene film grade, produced by high-pressure autoclave technology.

The grade is being in development status. This is a preliminary data sheet and subjected to changes.

Features:	<ul style="list-style-type: none">No additivesGood environmental stress cracking resistance	<ul style="list-style-type: none">Excellent bubble stabilityGood mechanical properties
Uses:	<ul style="list-style-type: none">Large diameter agricultural filmsConstruction films	<ul style="list-style-type: none">Shrink filmsPipesHeavy duty bags
Processing Methods:	<ul style="list-style-type: none">Blown film extrusionBlow molding	<ul style="list-style-type: none">Pipe extrusion

Properties		Method	Typical Value*	Unit
Physical				
Melt Flow Rate	(190°C/2.16 kg)	ISO 1133	0.13	g/10 min
Density		ISO 1183-A	0.920	g/cm ³
Thermal				
Peak Melting Temperature	By DSC	ISO 11357-3	109	°C
Vicat Softening Temperature	(10 N)	ISO 306	97	°C
Mechanical**				
Dart Drop Impact	(F ₅₀)	ISO 7765-A	500	g
Tensile Stress at Break	(MD/TD)	ISO 527-3	24/27	MPa
Tensile Strain at Break	(MD/TD)	ISO 527-3	650/700	%
Elmendorf Tear Strength	(MD/TD)	ISO 6383-2	250/450	g

*Typical values; not to be construed as specifications.

** Measured on 100 µm blown film, Blow-up ratio 2.5:1, output 10 kg/h, melt temperature ~210°C.

Processing Recommendations

IPETHENE® 4140 can be easily processed on conventional extruders at melt temperature range 180-230°C. Due to differences in screw and die head designs, processing conditions should be optimized for each production line. With suitable equipment, it can be drawn down to 70 µm films.

Health, Quality, Regulations and Safety

This product is not classified as dangerous substance. Material safety data sheets, international standards certificates (e.g. ISO 9001) and other regulatory documents are available on our website. This product is not intended for use in medical or pharmaceutical applications and we do not support its use for such applications.

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