

Product Data and Technical Information

POLYMER TYPE: POLYPROPYLENE HOMOPOLYMER

GRADE NAME : RG 1101 N

PACKING : PP bags of 25 kgs, 50 bags on a pallet shrunk by PE

APPLICATION : Fine denier staple fibers, continuous filaments, automotive applications

PRODUCT FEATURES : Homopolymer with antigasfading stabilization and inherent UV stability

PROCESSING METHOD : Extrusion

Property	Test Method	Unit	Value
MFR (230° C/ 2.16 Kg)	ASTM D1238/L	gr/10min	11
Tensile Modulus of Elasticity (1mm/min)	ASTM D638	MPa	1550
Tensile Strength at Yield (50 mm/min)	ASTM D638	MPa	35
Elongation at Yield(50 mm/min)	ASTM D638	%	8
Notched Charpy Impact at 23°	ISO 179/ 1eA	KJ/m2	3
Notched Charpy Impact at - 30°	ISO 179/ 1eA	KJ/m2	1.5
Vicat Softening Point, 10N	ASTM D1525	°C	154
Ball indentation hardness	ISO 2039-1	MPa	78
HDT (0.46 N/mm2)	ASTM D648	°C	85
Melting Point , DSC	ASTM D3417	°C	163
Density	ASTM D792	gr/cm3	0.91

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Product Data and Technical Information

POLYMER TYPE: POLYPROPYLENE HOMOPOLYMER

GRADE NAME : RG 1101 P

PACKING : PP bags of 25 kgs, 50 bags on a pallet shrunk by PE

APPLICATION : Bulk continuous filaments(BCF) and continuous filaments(CF) with higher resilience

PRODUCT FEATURES : Homopolymer with resistance to gasfading

PROCESSING METHOD : Extrusion

Property	Test Method	Unit	Value
MFR (230° C/ 2.16 Kg)	ASTM D1238/L	gr/10min	15.5
Tensile Modulus of Elasticity (1mm/min)	ASTM D638	MPa	1500
Tensile Strength at Yield (50 mm/min)	ASTM D638	MPa	35
Elongation at Yield(50 mm/min)	ASTM D638	%	10
Notched Charpy Impact at 23°	ISO 179/ 1eA	KJ/m2	2.5
Notched Charpy Impact at - 30°	ISO 179/ 1eA	KJ/m2	1.5
Vicat Softening Point, 10N	ASTM D1525	°C	154
Ball indentation hardness	ISO 2039-1	MPa	70
HDT (0.46 N/mm2)	ASTM D648	°C	85
Melting Point , DSC	ASTM D3417	°C	163

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Product Data and Technical Information

POLYMER TYPE: POLYPROPYLENE HOMOPOLYMER

GRADE NAME : RG 1101 S

PACKING : PP bags of 25 kgs, 50 bags on a pallet shrunk by PE

APPLICATION : Preferred grade for BCF/CF, carpet yarns, POY/DTY, extrusion laminating

PRODUCT FEATURES : Homopolymer with antigasfading stabilization and inherent UV stability

PROCESSING METHOD : Extrusion

Property	Test Method	Unit	Value
MFR (230° C/ 2.16 Kg)	ASTM D1238/L	gr/10min	24
Tensile Modulus of Elasticity (1mm/min)	ASTM D638	MPa	1500
Tensile Strength at Yield (50 mm/min)	ASTM D638	MPa	35
Elongation at Yield(50 mm/min)	ASTM D638	%	8
Notched Charpy Impact at 23°	ISO 179/ 1eA	KJ/m2	2.5
Notched Charpy Impact at - 30°	ISO 179/ 1eA	KJ/m2	1.5
Vicat Softening Point, 10N	ASTM D1525	°C	154
Ball indentation hardness	ISO 2039-1	MPa	78
HDT (0.46 N/mm2)	ASTM D648	°C	85
Melting Point , DSC	ASTM D3417	°C	163
Density	ASTM D792	gr/cm3	0.91

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Product Data and Technical Information

POLYMER TYPE: POLYPROPYLENE HOMOPOLYMER

GRADE NAME : RG 1101 XN

PACKING : PP bags of 25 kgs, 50 bags on a pallet shrunk by PE

APPLICATION : Fine denier staple fibers, continuous filaments, automotive applications

PRODUCT FEATURES : Homopolymer with antigasfading stabilization and inherent UV stability

PROCESSING METHOD : Extrusion

Property	Test Method	Unit	Value
MFR (230° C/ 2.16 Kg)	ASTM D1238/L	gr/10min	13.5
Tensile Modulus of Elasticity (1mm/min)	ASTM D638	MPa	1550
Tensile Strength at Yield (50 mm/min)	ASTM D638	MPa	35
Elongation at Yield(50 mm/min)	ASTM D638	%	8
Notched Charpy Impact at 23°	ISO 179/ 1eA	KJ/m2	3
Notched Charpy Impact at -30°	ISO 179/ 1eA	KJ/m2	1.5
Vicat Softening Point, 10N	ASTM D1525	°C	154
Ball indentation hardness	ISO 2039-1	MPa	78
HDT (0.46 N/mm2)	ASTM D648	°C	85
Melting Point , DSC	ASTM D3417	°C	163
Density	ASTM D792	gr/cm3	0.91

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Product Data and Technical Information

POLYMER TYPE: POLYPROPYLENE HOMOPOLYMER

GRADE NAME : RG 1101 XP

PACKING : PP bags of 25 kgs, 50 bags on a pallet shrunk by PE

APPLICATION : Bulk continuous filaments(BCF) and continuous filaments(CF) with higher resilience

PRODUCT FEATURES : Homopolymer with resistance to gasfading

PROCESSING METHOD : Extrusion

Property	Test Method	Unit	Value
MFR (230° C/ 2.16 Kg)	ASTM D1238/L	gr/10min	17
Tensile Modulus of Elasticity (1mm/min)	ASTM D638	MPa	1500
Tensile Strength at Yield (50 mm/min)	ASTM D638	MPa	35
Elongation at Yield(50 mm/min)	ASTM D638	%	10
Notched Charpy Impact at 23°	ISO 179/ 1eA	KJ/m2	2.5
Notched Charpy Impact at - 30°	ISO 179/ 1eA	KJ/m2	1.5
Vicat Softening Point, 10N	ASTM D1525	°C	154
Ball indentation hardness	ISO 2039-1	MPa	70
HDT (0.46 N/mm2)	ASTM D648	°C	85
Melting Point , DSC	ASTM D3417	°C	163
Density	ASTM D792	gr/cm3	0.91

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Product Data and Technical Information

POLYMER TYPE: POLYPROPYLENE HOMOPOLYMER

GRADE NAME : RG 1101 XS

PACKING : PP bags of 25 kgs, 50 bags on a pallet shrunk by PE

APPLICATION : POY/DTY, CF, laminating

PRODUCT FEATURES : Homopolymer with antigasfading stabilization and inherent UV stability

PROCESSING METHOD : Extrusion

Property	Test Method	Unit	Value
MFR (230° C/ 2.16 Kg)	ASTM D1238/L	gr/10min	28
Tensile Modulus of Elasticity (1mm/min)	ASTM D638	MPa	1500
Tensile Strength at Yield (50 mm/min)	ASTM D638	MPa	35
Elongation at Yield(50 mm/min)	ASTM D638	%	8
Notched Charpy Impact at 23°	ISO 179/ 1eA	KJ/m2	2.5
Notched Charpy Impact at - 30°	ISO 179/ 1eA	KJ/m2	1.5
Vicat Softening Point, 10N	ASTM D1525	°C	154
Ball indentation hardness	ISO 2039-1	MPa	78
HDT (0.46 N/mm2)	ASTM D648	°C	85
Melting Point , DSC	ASTM D3417	°C	163
Density	ASTM D792	gr/cm3	0.91

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Product Data and Technical Information

POLYMER TYPE: POLYPROPYLENE HOMOPOLYMER

GRADE NAME : RG 1101 XXS

PACKING : PP bags of 25 kgs, 50 bags on a pallet shrunk by PE

APPLICATION : Injection moulding articles

PRODUCT FEATURES : Homopolymer with antigasfading stabilization and inherent UV stability

PROCESSING METHOD : Injection moulding

Property	Test Method	Unit	Value
MFR (230° C/ 2.16 Kg)	ASTM D1238/L	gr/10min	35
Tensile Modulus of Elasticity (1mm/min)	ASTM D638	MPa	1500
Tensile Strength at Yield (50 mm/min)	ASTM D638	MPa	35
Elongation at Yield(50 mm/min)	ASTM D638	%	8
Notched Charpy Impact at 23°	ISO 179/ 1eA	KJ/m2	2.5
Notched Charpy Impact at - 30°	ISO 179/ 1eA	KJ/m2	1.5
Vicat Softening Point, 10N	ASTM D1525	°C	154
Ball indentation hardness	ISO 2039-1	MPa	78
HDT (0.46 N/mm2)	ASTM D648	°C	85
Melting Point , DSC	ASTM D3417	°C	163
Density	ASTM D792	gr/cm3	0.91

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Product Data and Technical Information

POLYMER TYPE: POLYPROPYLENE HOMOPOLYMER

GRADE NAME : RG 1102 H

PACKING : PP bags of 25 kgs, 50 bags on a pallet shrunked by PE

APPLICATION : Thermoformed parts, containers and lids for dairy/food products, desserts, tape yarns, monofilaments

PRODUCT FEATURES : Homopolymer with low water carry over and high tenacity

PROCESSING METHOD : Extrusion

Property	Test Method	Unit	Value
MFR (230° C/ 2.16 Kg)	ASTM D1238/L	gr/10min	1.6-2.2
Tensile Modulus of Elasticity (1mm/min)	ASTM D638	MPa	1450
Tensile Strength at Yield (50 mm/min)	ASTM D638	MPa	34
Elongation at Yield(50 mm/min)	ASTM D638	%	9
Notched Charpy Impact at 23°	ISO 179/ 1eA	KJ/m2	5
Notched Charpy Impact at -30°	ISO 179/ 1eA	KJ/m2	1.9
Vicat Softening Point, 10N	ASTM D1525	°C	154
Ball indentation hardness	ISO 2039-1	MPa	72
HDT (0.46 N/mm2)	ASTM D648	°C	85
Melting Point , DSC	ASTM D3417	°C	163
Density	ASTM D792	gr/cm3	0.91

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ANALYSIS CERTIFICATE

Data Sheet RG 1102K

RG 1102K is a Polypropylene homo polymer for extrusion and thermoforming application . Extremely low water –carrying –over is a special advantage for the production of tapes.

Properties (typical values)

Properties	Unit	Test method	Value
Melt flow rate			
MFR 230/2.16	g/10min	ISO 1133	2.8~3.4
Mechanical properties			
Tensile modulus of elasticity (v=1 mm/min)	MPa	ISO 527-2	1500
Tensile yield stress (v=50mm/min)	MPa	ISO 527-2	34
Tensile yield strain (v=50mm/min)	%	ISO 527-2	9
Tensile strain at break (v=50mm/min)	%	ISO 527-2	>50
Charpy impact strength unnotched +23 °C	KJ/m ²	ISO 179/1eU	190
Charpy impact strength unnotched -20 °C	KJ/m ²	ISO 179/1eU	16.5
Charpy impact strength notched +23 °C	KJ/m ²	ISO 179/1eA	4.0
Charpy impact strength notched -30 °C	KJ/m ²	ISO 179/1eA	1.7
Ball indentation hardness (H 132/30 – H 358/30)	MPa	ISO 2039-1	74*
Thermal properties			
Melting point DSC	°C	ISO 3146	163
Heat deflection temperature			
- HDT/A (1.8 MPa)	°C	ISO 75-2	55
- HDT/B(0.45 MPa)	°C	ISO 75-2	85
Vicat softening temperature			
- VST/A50(10 N)	°C	ISO 306	154
- VST/B50 (50N)	°C	ISO 306	90
Other properties			
Density	g/cm ³	ISO 1183	0.91
Applications			
Thermoforemed parts,Tape Yarns, Monofilaments, Strapping			

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Product Data and Technical Information

POLYMER TYPE: POLYPROPYLENE HOMOPOLYMER

GRADE NAME : RG 1102 L

PACKING : PP bags of 25 kgs, 50 bags on a pallet shrunk by PE

APPLICATION : Extrusion and injection moulding applications, raffia, tapes, monofilaments, diaphragms

PRODUCT FEATURES : Homopolymer with general extrusion additivation

PROCESSING METHOD : Extrusion

Property	Test Method	Unit	Value
MFR (230° C/ 2.16 Kg)	ASTM D1238/L	gr/10min	6
Tensile Modulus of Elasticity (1mm/min)	ASTM D638	MPa	1500
Tensile Strength at Yield (50 mm/min)	ASTM D638	MPa	34
Elongation at Yield(50 mm/min)	ASTM D638	%	9
Notched Charpy Impact at 23°	ISO 179/ 1eA	KJ/m2	3.5
Notched Charpy Impact at -30°	ISO 179/ 1eA	KJ/m2	1.5
Vicat Softening Point, 10N	ASTM D1525	°C	154
Ball indentation hardness	ISO 2039-1	MPa	74
HDT (0.46 N/mm ²)	ASTM D648	°C	85
Melting Point , DSC	ASTM D3417	°C	163
Density	ASTM D792	gr/cm ³	0.91

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Product Data and Technical Information

POLYMER TYPE: POLYPROPYLENE HOMOPOLYMER

GRADE NAME : RG 1102 M

PACKING : PP bags of 25 kgs, 50 bags on a pallet shrunk by PE

APPLICATION : Cast films, OPP films(double bubble process), raffia, wrapping yarns, injection molding articles

PRODUCT FEATURES : Homopolymer for extrusion and thermoforming applications with good processing stability

PROCESSING METHOD : Extrusion

Property	Test Method	Unit	Value
MFR (230° C/ 2.16 Kg)	ASTM D1238/L	gr/10min	8
Tensile Modulus of Elasticity (1mm/min)	ASTM D638	MPa	1500
Tensile Strength at Yield (50 mm/min)	ASTM D638	MPa	35
Elongation at Yield(50 mm/min)	ASTM D638	%	9
Notched Charpy Impact at 23°	ISO 179/ 1eA	KJ/m2	3.5
Notched Charpy Impact at -30°	ISO 179/ 1eA	KJ/m2	1.6
Vicat Softening Point, 10N	ASTM D1525	°C	154
Ball indentation hardness	ISO 2039-1	MPa	77
HDT (0.46 N/mm ²)	ASTM D648	°C	85
Melting Point , DSC	ASTM D3417	°C	163
Density	ASTM D792	gr/cm ³	0.91

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Product Data and Technical Information

POLYMER TYPE: POLYPROPYLENE HOMOPOLYMER

GRADE NAME : RG 1102 XK

PACKING : PP bags of 25 kgs, 50 bags on a pallet shrunk by PE

APPLICATION : Raffia, tape yarn, technical textiles, carpet backing, diary products

PRODUCT FEATURES : Homopolymer with low water carry over and preferred grade for tapes

PROCESSING METHOD : Extrusion

Property	Test Method	Unit	Value
MFR (230° C/ 2.16 Kg)	ASTM D1238/L	gr/10min	4
Tensile Modulus of Elasticity (1mm/min)	ASTM D638	MPa	1500
Tensile Strength at Yield (50 mm/min)	ASTM D638	MPa	34
Elongation at Yield(50 mm/min)	ASTM D638	%	9
Notched Charpy Impact at 23°	ISO 179/ 1eA	KJ/m ²	4
Notched Charpy Impact at -30°	ISO 179/ 1eA	KJ/m ²	1.7
Vicat Softening Point, 10N	ASTM D1525	°C	154
Ball indentation hardness	ISO 2039-1	MPa	74
HDT (0.46 N/mm ²)	ASTM D648	°C	85
Melting Point , DSC	ASTM D3417	°C	163
Density	ASTM D792	gr/cm ³	0.91

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Product Data and Technical Information

POLYMER TYPE: POLYPROPYLENE HOMOPOLYMER

GRADE NAME : RG 1102 XL

PACKING : PP bags of 25 kgs, 50 bags on a pallet shrunk by PE

APPLICATION : Extrusion and injection moulding applications, raffia, tapes, monofilaments, diaphragms

PRODUCT FEATURES : Homopolymer with general extrusion additivations

PROCESSING METHOD : Extrusion

Property	Test Method	Unit	Value
MFR (230° C/ 2.16 Kg)	ASTM D1238/L	gr/10min	5.5
Tensile Modulus of Elasticity (1mm/min)	ASTM D638	MPa	1500
Tensile Strength at Yield (50 mm/min)	ASTM D638	MPa	34
Elongation at Yield(50 mm/min)	ASTM D638	%	9
Notched Charpy Impact at 23°	ISO 179/ 1eA	KJ/m2	3.5
Notched Charpy Impact at -30°	ISO 179/ 1eA	KJ/m2	1.5
Vicat Softening Point, 10N	ASTM D1525	°C	154
Ball indentation hardness	ISO 2039-1	MPa	74
HDT (0.46 N/mm ²)	ASTM D648	°C	85
Melting Point , DSC	ASTM D3417	°C	163
Density	ASTM D792	gr/cm ³	0.91

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Product Data and Technical Information

POLYMER TYPE: POLYPROPYLENE HOMOPOLYMER

GRADE NAME : RG 1104 K

PACKING : PP bags of 25 kgs, 50 bags on a pallet shrunk by PE

APPLICATION : OPP films-metallizable (Stenter Frame Process), general extrusion

PRODUCT FEATURES : Homopolymer with narrow MFR range and low taste & odour

PROCESSING METHOD : Extrusion

Property	Test Method	Unit	Value
MFR (230° C/ 2.16 Kg)	ASTM D1238/L	gr/10min	3.2
Tensile Modulus of Elasticity (1mm/min)	ASTM D638	MPa	1500
Tensile Strength at Yield (50 mm/min)	ASTM D638	MPa	34
Elongation at Yield(50 mm/min)	ASTM D638	%	9
Notched Charpy Impact at 23°	ISO 179/ 1eA	KJ/m ²	4
Notched Charpy Impact at -30°	ISO 179/ 1eA	KJ/m ²	1.7
Vicat Softening Point, 10N	ASTM D1525	°C	154
Ball indentation hardness	ISO 2039-1	MPa	74
HDT (0.46 N/mm ²)	ASTM D648	°C	85
Melting Point , DSC	ASTM D3417	°C	163
Density	ASTM D792	gr/cm ³	0.91

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Product Data and Technical Information

POLYMER TYPE: POLYPROPYLENE RANDOM COPOLYMER

GRADE NAME : RG 3212 E

PACKING : PP bags of 25 kgs, 50 bags on a pallet shrunk by PE

APPLICATION : Pressure pipes, hot & cold water system, drinking water pipes, pipes for electrical appliances

PRODUCT FEATURES : Random copolymer for extrusion applications with high melt stability

PROCESSING METHOD : Extrusion

Property	Test Method	Unit	Value
MFR (230° C/ 2.16 Kg)	ASTM D1238/L	gr/10min	0.25
Tensile Modulus of Elasticity (1mm/min)	ASTM D638	MPa	850
Tensile Strength at Yield (50 mm/min)	ASTM D638	MPa	25
Elongation at Yield(50 mm/min)	ASTM D638	%	10
Notched Charpy Impact at 23°	ISO 179/ 1eA	KJ/m2	20
Notched Charpy Impact at -30°	ISO 179/ 1eA	KJ/m2	2.5
Vicat Softening Point, 10N	ASTM D1525	°C	132
Ball indentation hardness	ISO 2039-1	MPa	45
HDT (0.46 N/mm ²)	ASTM D648	°C	75
Melting Point , DSC	ASTM D3417	°C	145
Density	ASTM D792	gr/cm ³	0.91

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