

# GatronoVa

Serving the world through innovation in PET





# Custom made solutions evolving with time

## Inspired by a Legacy

The story of success always starts with a vision, followed by passionate efforts. A renowned name in the Pakistan industry, the challenging and rewarding journey of the Gani & Tayub Group (G&T Group) started back in 1948.



Pioneers in synthetic textiles and the only producers of PET resin in Pakistan, manufacturing under the Gatronova brand name. The Group continues to strengthen its excellent reputation in the local and global market as a responsible and quality organization. Its clients enjoy 360 degree packaging solutions for their unique requirements, ranging from PET resin to preforms and bottle blowing.

The G&T Group believes in working together with its clients and follows the principles of premium service,

quality, sustainability and reliability. This has led the G&T Group to grow and expand tremendously with manpower of more than 10,000 professional employees.

## Gatronova: Adding Glory to success

Gatron Industries Limited formed in 1984 and continued its independent function whilst adhering to the same traditions and values belonging to its corporate roots and offering exemplary commitment to its clients.

Gatron Industries Limited is the top-most manufacturer of polyester filament yarn and polyester chips in Pakistan.

Quality management forms the basis of its services and business operations. No compromises are made on quality control. Further, it is ensured that all customers are delivered with nothing, but the best.

Novatex Limited is another prestigious name in the Gani & Tayub

Group. Novatex started its operations in 1997 and produces Gatronova PET resin and preforms for domestic and export market, having the capacity of 240,000 tons of PET resin and over 2 billion preforms per annum. Widely approved by major CSD and mineral water brands in the world, it is acknowledged and used by customers in more than 45 countries.



Krystalite Industries (Pvt.) Limited appeared on the group map in 1999, as the manufacturer of PET bottles for Water, CSD [carbonated soft drinks], Syrups and Pharmaceutical packaging. Krystalite is a supplier to the country's well known soft drink brands, such as Pepsi, Coke, Hamdard and many more. It also has APET sheet extrusion and thermoforming capabilities.







## Technology that's shaped around your needs

Since 1988, **Gatronova** has been the pioneer in manufacturing PET resin in Pakistan.

Gatronova PET resin is used worldwide in more than 45 countries. Major quantities are exported to regions like North America, Europe, Middle East, Africa and Asia.

Gatronova PET resin is approved and used by the Coke and Pepsi systems, globally. Its resin is also approved and used by major mineral water

companies like Danone and Nestle.

Gatronova PET resin is certified by FDA, EEC and fully complies with the REACH regulation.

**Gatronova PET resin has the advantage of utilizing the complete loop as it manufactures the full range – resin, preforms as well as bottle blowing**

- Novatex produces regular PET resin of I.V .74\*, .80\* and .85\*.
- Hot-Fill resin in I.V 0.80 and 0.84 primarily for juices, which can stand filling temperatures of up to 92 degrees.
- Fast-Reheat resin [A-8FR] in I.V 0.83 and 0.85. The advantage of Fast-Reheat resin is that it

requires less heat while blowing preforms into bottles, resulting in savings between 15% - 25% in energy costs.

- Resin used in production of BOPET films.

\* see technical sheet on reverse side.



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Polyester Bottle Grade Resin									
Properties	Unit	Test Method	Test Equipment	Novatex Specifications					
				A 74 / A 76	A 80	A 82	A 84	A 91	A 95
Intrinsic Viscosity (IV)	[dl/g]	PV-07040.5 <sup>a</sup>	Capillary Viscometer	0.76 ± 0.02 <sup>a</sup>	0.80 ± 0.02 <sup>a</sup>	0.82 ± 0.02 <sup>a</sup>	0.85 ± 0.02 <sup>a</sup>	0.91 ± 0.02 <sup>a</sup>	0.95 ± 0.02 <sup>a</sup>
DEG Content	%	PV-09040	Gas Chromatograph	≤ 1.5	≤ 1.5	≤ 1.5	≤ 1.5	≤ 1.5	≤ 1.5
Acetaldehyde (AA)	ppm	Cobarr 201/A <sup>1</sup>	Gas Chromatograph	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Moisture Content	%	PV-07109.5	MEECO	0.3 Max	0.3 Max	0.3 Max	0.3 Max	0.4 Max	0.3 Max
Melting Point (DSC)	[°C]	PV-07089.2	Mettler DSC	247 ± 2	247 ± 2	247 ± 2	247 ± 2	247 ± 2	247 ± 2
Color No. Hunter Lab	LH	PV-07136.1	Color View	≥ 83	≥ 83	≥ 83	≥ 83	≥ 83	≥ 83
Color No. Hunter Lab	*bH	PV-07136.1	Color View	0.0 ± 0.95	0.0 ± 0.95	0.0 ± 0.95	0.0 ± 0.95	+0.0 ± 1.0	0.0 ± 0.95
No. of Chips/gram	No.	Manual	-	61 ± 3	61 ± 3	61 ± 3	61 ± 3	61 ± 3	61 ± 3

Specifications as per Zimmer test methods. Details of method can be provided upon request.

<sup>1</sup> As per Sinco method

<sup>a</sup> IV is done according to PV-07040.5- Solvent is Phenol/Dicholobenzene using ubbelohde type 1(c) capillary viscometer at 25°C.

≤ read as less than or equal to

≥ read as greater than or equal to

The information and the data contained here is believed to be correct and there are FDA/EEC compliance certifications and other major food grade approvals available and can be provided upon request.

**\* Test Method for A-91 is ASTM D4603<sup>a</sup>**



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### Polyester Bottle Grade Resin (Fast Reheat)

Properties	Unit	Test Method	Test Equipment	Novatex Specifications		
				A-76 FR	A-80 FR	A-84 FR
Intrinsic Viscosity (IV)	[dl/g]	PV-07040.5 <sup>a</sup>	Capillary Viscometer	0.76 ± 0.02 <sup>a</sup>	0.80 ± 0.02 <sup>a</sup>	0.85 ± 0.02 <sup>a</sup>
DEG Content	%	PV-09040	Gas Chromatograph	≤ 1.5	≤ 1.5	≤ 1.5
Acetaldehyde (AA)	ppm	Cobarr 201/A <sup>1</sup>	Gas Chromatograph	< 1.0	< 1.0	< 1.0
Moisture Content	%	PV-07109.5	MEECO	0.4 Max	0.4 Max	0.4 Max
Melting Point (DSC)	[°C]	PV-07089.2	Mettler DSC	247 ± 2	247 ± 2	247 ± 2
Color No. Hunter Lab	LH	PV-07136.1	BYK Gardener	≥ 75	≥ 75	≥ 75
Color No. Hunter Lab	bH	PV-07136.1	BYK Gardener	0 ± 1.25	0 ± 1.25	0 ± 1.25
No. of Chips/gram	No.	Manual	-	61 ± 3	61 ± 3	61 ± 3

\* [Click here to view](#)

Specifications as per Zimmer test methods. Details of method can be provided upon request.

<sup>1</sup> As per Sinco method

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### Polyester Bottle Grade Resin (Hot Fill)

Properties	Unit	Test Method	Test Equipment	Novatex Specifications		
				A-76 HF	A-80 HF	A-84 HF
Intrinsic Viscosity (IV)	[dl/g]	PV-07040.5 <sup>a</sup>	Capillary Viscometer	0.76 ± 0.02 <sup>a</sup>	0.80 ± 0.02 <sup>a</sup>	0.85 ± 0.02 <sup>a</sup>
DEG Content	%	PV-09040	Gas Chromatograph	≤ 1.5	≤ 1.5	≤ 1.5
Acetaldehyde (AA)	ppm	Cobarr 201/A <sup>1</sup>	Gas Chromatograph	< 1.0	< 1.0	< 1.0
Moisture Content	%	PV-07109.5	MEECO	0.4 Max	0.4 Max	0.4 Max
Melting Point (DSC)	[°C]	PV-07089.2	Mettler DSC	252 ± 2	252 ± 2	252 ± 2
Color No. Hunter Lab	LH	PV-07136.1	BYK Gardener	≥ 83	≥ 83	≥ 83
Color No. Hunter Lab	bH	PV-07136.1	BYK Gardener	0 ± 1.25	0 ± 1.25	0 ± 1.25
No. of Chips/gram	No.	Manual	-	61 ± 3	61 ± 3	61 ± 3

Specifications as per Zimmer test methods. Details of method can be provided upon request.

<sup>1</sup> As per Sinco method

<sup>a</sup> IV is done according to PV-07040.5- Solvent is Phenol/Dicholobenzene using ubbelohde type 1(c) capillary viscometer at 25°C.

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# **GATRONOVA PET(PCR)**

## **Standard Specifications of Gatronova r-PET Resin Polyester Bottles Grade Chips (100% PCR)**

Description	Unit	Test Method	Test Equipment	RA-76 r-PET Resin (100%)	RA-80 r-PET Resin (100%)	RA-84 r-PET Resin (100%)
Intrinsic Viscosity (IV)	[dl/g]	PV-07040.5 <sup>a</sup>	Capillary Viscometer	0.76 ± 0.02	0.80 ± 0.02	0.85 ± 0.02
DEG Content	%	PV-09040	Gas Chromatograph	≤ 1.5	≤ 1.5	≤ 1.5
Acetaldehyde (AA)	ppm	Cobarr 201/A <sup>1</sup>	Gas Chromatograph	< 1.0	< 1.0	< 1.0
Moisture Content	%	PV-07109.5	MEECO	0.3 Max.	0.3 Max.	0.3 Max.
Melting Point (DSC)	°C	PV-07089.2	Mettler DSC	247 ± 2	247 ± 2	247 ± 2
Color No.CIE Lab	L*	PV-07136.1	BYK Gardener	≥67	≥67	≥67
Color No.CIE Lab	b*	PV-07136.1	BYK Gardener	0 ± 0.50	0 ± 0.50	0 ± 0.50
Number of Chips/gram	No.	Manual	-	61 ± 5	61 ± 5	61 ± 5

Specifications as per Zimmer test methods. Details of method can be provided upon request.

<sup>1</sup> As per Sinco method

<sup>a</sup> IV is done according to PV-07040.5- Solvent is Phenol/Dicholobenzene using ubbelohde type 1(c) capillary viscometer at 25°C.

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## Recycling for Sustainability



Being a pioneer in PET Resin Production in Pakistan, Novatex cares deeply about the protection of the environment. WE have initiated the first PET Recycling project in the country as part of our vision to adapt the most efficient and clean manufacturing processes, which will help mitigate the adverse affects of climate change in the years ahead.

At Novatex, WE remain committed to Sustainable Manufacturing Practices and will always strive to make positive contributions towards our community and the environment.

**WE PRODUCE R-PET RESIN ALONG WITH R-PET PREFORMS**



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## GATRONOVA PET

### Standard Specifications of Gatronova PET Film Grade Polyester Chips

Properties	Unit	Test Method	Test Equipment	Novatex Specifications
Intrinsic viscosity (IV)	[dl/g]	PV-07040.5 <sup>a</sup>	Capillary Viscometer	0.63 ± 0.02 <sup>a</sup>
DEG Content	%	PV-09040	Gas Chromatograph	≤ 1.2
Acet Aldehyde	ppm	Cobarr 201/A	Gas Chromatograph	90 max.
Moisture Content	%	PV-07109.5	MEECO	0.4 Max.
Melting Point (DSC)	[°C]	PV-07089.2	Mettler DSC	255 ± 2
Color No. Hunter Lab*	LH	PV-07136.1	Color view	≥ 75
Color No. Hunter Lab*	bH	PV-07136.1	Color view	+1.0 ± 1.0
Number of Chips/gram	No.	Manual	-	35 ± 3

Specifications as per Zimmer test methods. Details of method can be provided upon request.

<sup>a</sup> IV is done according to PV-07040.5- Solvent is Phenol/Dicholobenzene using ubbelohde type 1(c) capillary viscometer at 25°C.

\* Color values are done on chips after they were crystallized.

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## **GATRONOVA PET**

### **Standard Specifications of Gatronova Textile Grade Semidull Resin-Homopolymer**

<b>Description</b>	<b>Unit</b>	<b>Test Method</b>	<b>Test Equipment</b>	<b>Novatex Specifications</b>
<b>Intrinsic Viscosity (IV)</b>	[dl/g]	PV-7040.5 <sup>a</sup>	Capillary Viscometer	0.63 ± 0.02 <sup>a</sup>
<b>DEG Content</b>	%	PV-09040	Gas Chromatograph	1.0 Max
<b>Carboxylic End Groups</b>	m.mol/kg	PV-07090.6	Titranoplus	38 max.
<b>TiO2 Content</b>	%	PV-07061.4	spectrophotometer	0.35 ± 0.05
<b>Moisture Content</b>	%	PV-07109.5	MEECO	0.4 Max.
<b>Melting Point (DSC)</b>	[°C]	PV-07089.2	Mettler DSC	256 ± 2
<b>Color No. Hunter Lab</b>	LH	PV-07110.5	BYK Gardener	75 Min
<b>Color No. Hunter Lab</b>	bH	PV-07110.5	BYK Gardener	+5.0 Max
<b>Number of Chips/gram</b>	No.	Manual	-	35 ± 3

Specifications as per Zimmer test methods. Details of method can be provided upon request.

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## Convenience that goes beyond imagination

Gatronova is the largest manufacturer of PET preforms in Pakistan with a production capacity of over 2 billion preforms per annum.

Gatronova has Husky machines with grammages ranging from 12.5 gms to 54.5 gms with neck sizes of 28 mm PCO, 30/25 and 29/25.

Gatronova is an approved supplier of major CSD (carbonated soft drinks) and mineral water brands, such as Pepsi, Coke and Nestle. State of the art visual Preform Inspection Machines along with the facility of bottle blowing ensures in-house

testing of preforms prior being delivered to the customers. A complete loop advantage provides best quality supplies to valuable customers. Gatronova has specialized in preforms, which are:

### Hot Fill (HF) Preform with Crystallized Neck:

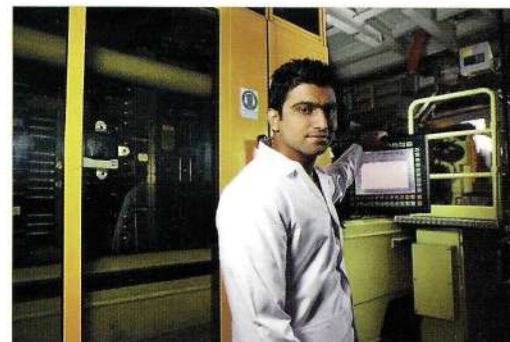
Hot Fill preform is available with a crystallized neck primarily for juices. These preforms can stand filling temperatures of up to 92 degrees.

### Fast Reheat Preform:

Fast Reheat preforms require less heat as compared to standard preforms. Savings between 15%-25% in energy costs can be achieved when blowing preforms into bottles.

### High Barrier Preform:

This type of PET preform contains high barrier properties to help retain carbonation for a product's extended shelf life.



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Technical Specifications of Preforms for CSD Bottles								
Preform Sdt. Wt	Range of Bottle	Neck Size	Preform in one Octabin Jumbo Box	Preform in 40' FCL in Octabin Jumbo Box	Export		Local	
					Preform in One Medium Box	Preform in 40' FCL	Preform in One Medium Box	Preform in 40' FCL
16.75	250 / 300 ml	28mm PCO-1816	22,000	968,000	2,050	820,000	2,200	880,000
18.6	250 / 300 ml	28mm PCO-1816	21,500	946,000	2,050	820,000	2,300	920,000
19	300 / 400 ml	28mm PCO-1816	18,000	792,000	1,750	700,000	1,900	760,000
25	500 ml	28mm PCO-1816	14,000	616,000	1,300	520,000	1,450	580,000
35	1000 ml	28mm PCO-1816	9,720/10,000	427,680/440,000	950	380,000	1,000/1,050	400,000/420,000
45	1500 ml	28mm PCO-1816	8,500	374,000	900	360,000	1,000	400,000
17.23	300 ml	28mm PCO-1881	23,000	1,012,000	2,150	860,000	2,350	940,000
22.3	500 ml	28mm PCO-1881	17,760/17,800	781,440/783,200	1,500/1,700	600,000/680,000	1,900/2,000	760,000/800,000
32.54	1000 ml	28mm PCO-1881	12,000	528,000	1,000	400,000	1,200	480,000
33.33	1000 ml	28mm PCO-1881	10,200	448,800	950	380,000	1,000	400,000
41.5	1500 ml	28mm PCO-1881	9,120	401,280	800	320,000	950	380,000
43.66	1500 ml	28mm PCO-1881	8,400/8,256	369,600/363,264	800	320,000	850/900	340,000/360,000
47	1750 ml	28mm PCO-1881	8,300	365,200	800	320,000	900	360,000
50.64	2000 / 2250 ml	28mm PCO-1881	7,200/7,400	316,800/325,600	800	320,000	900	360,000

**Also available in Fast Reheat**

Technical Specifications of Preforms for Water Bottles								
Preform Sdt. Wt	Range of Bottle	Neck Size	Preform in one Octabin Jumbo Box	Preform in 40' FCL in Octabin Jumbo Box	Export		Local	
					Preform in One Medium Box	Preform in 40' FCL	Preform in One Medium Box	Preform in 40' FCL
13.5	500 ml	28mm PCO-1881	23,040	1,013,760	2,000	800,000	2,350	940,000
17.23	500 ml	28mm PCO-1881	23,000	1,012,000	2,150	860,000	2,350	940,000
13.8	250 / 330 / 500 ml	30/25 – Multi Start	21,000	924,000	1,900	760,000	2,300	920,000
14	500 ml	30/25 – Multi Start	21,000	924,000	1,900	760,000	2,300	920,000
15.5	500 ml	30/25 – Multi Start	18,432	811,008	1,750	700,000	1,900	760,000
17	500 / 600 ml	30/25 – Multi Start	18,432	811,008	1,750	700,000	1,900	760,000
17.2	500 / 600 ml	30/25 – Multi Start	17,000	748,000	1,600	640,000	1,800	720,000
31.4	1500 ml	30/25 – Multi Start	9,700	426,800	900	360,000	1,000	400,000
16.95	500 ml	28mm PCO-1816	20,000	880,000	1,750	700,000	2,100	840,000
19	500 / 600 ml	28mm PCO-1816	18,000	792,000	1,750	700,000	1,900	760,000



19.2	500 / 600 ml	28mm PCO-1816	17,200	756,800	1,500	600,000	1,800	720,000
35	1500 ml	28mm PCO-1816	9720/ 10,000	427,680 440,000	950	380,000	1,000 1,050	400,000 420,000
32.54	1500 ml	28mm PCO-1881	12,000	528,000	1,000	400,000	1,200	480,000
33.33	1500 ml	28mm PCO-1881	10,200	448,800	950	380,000	1,000	400,000

Technical Specifications of Preforms for Syrup Bottles +								
Preform Sdt. Wt	Range of Bottle	Neck Size	Preform in one Octabin Jumbo Box	Preform in 40' FCL in Octabin Jumbo Box	Export		Local	
					Preform in One Medium Box	Preform in 40' FCL	Preform in One Medium Box	Preform in 40' FCL
44	700 - 1000 ml	30 mm Deep Seal neck	9,000	396,000	900	39,600	1,000	400,000

Technical Specifications of Preforms for Hot Fill Bottles for Juice (Crystalize Neck)								
Preform Sdt. Wt	Range of Bottle	Neck Size	Preform in one Octabin Jumbo Box	Preform in 40' FCL in Octabin Jumbo Box	Export		Local	
					Preform in One Medium Box	Preform in 40' FCL	Preform in One Medium Box	Preform in 40' FCL
27.8	500 ml	28mm PCO-1810 HR	13,500	594,000	1,300	520,000	1,400	560,000

Technical Specifications of Enhanced Barrier Preforms for CSD Bottles +								
Preform Sdt. Wt	Range of Bottle	Neck Size	Preform in one Octabin Jumbo Box	Preform in 40' FCL in Octabin Jumbo Box	Export		Local	
					Preform in One Medium Box	Preform in 40' FCL	Preform in One Medium Box	Preform in 40' FCL
17.23	330 ml	28mm PCO-1881	23,000	1,012,000	2,150	860,000	2,350	940,000
18.6	330 ml	28mm PCO-1816	21,500	946,000	2,050	820,000	2,300	940,000
19.25	345 ml	28mm PCO-1881	19,512	858,528	2,050	820,000	2,100	840,000
19.74	345 ml	28mm PCO-1881 Multi Layer	19,512	858,528	1700	680,000	2,000	800,000

Technical Specifications of 29/25 Neck Preforms for Water								
Preform Sdt. Wt	Range of Bottle	Neck Size	Preform in one Octabin Jumbo Box	Preform in 40' FCL in Octabin Jumbo Box	Export		Local	
					Preform in One Medium Box	Preform in 40' FCL	Preform in One Medium Box	Preform in 40' FCL
11.56	500 ml	29/25 – Multi Start	26,000	1,144,000	2,300	920,000	2,800	1,120,000
12.4	500 ml	29/25 – Multi Start	26,000	1,144,000	2,300	920,000	2,800	1,120,000
26.5	1500 ml	29/25 – Multi Start	11,000	484,000	900	360,000	1200	480,000

Technical Specifications of Reinforced Neck Preforms								
Preform Sdt. Wt	Range of Bottle	Neck Size	Preform in one Octabin Jumbo Box	Preform in 40' FCL in Octabin Jumbo Box	Export		Local	
					Preform in One Medium Box	Preform in 40' FCL	Preform in One Medium Box	Preform in 40' FCL
22	350 ml	28mm PCO	18,200	800,800	1,700	680,000	1,900	760,000
44	1250 ml	28mm PCO	8,500/9,000	374,000/396,000	800	320,000	850	340,000

Technical Specifications of Pharma Bottles								
Preform Sdt. Wt	Range of Bottle	Neck Size	Preform in One Jumbo Box For Export	Preform in 40' FCL For Export	Export		Local	
					Preform in One Medium Box	Preform in 40' FCL	Preform in One Medium Box	Preform in 40' FCL
9.8	60 ml	24 mm	TBA	TBA	TBA	TBA	1,110	264,000
10.5	120 ml	24 mm	TBA	TBA	TBA	TBA	600	144,000
12.5	175 ml	ROPP	TBA	TBA	TBA	TBA	424	101,760

**LOADING OF PREFORM BOXES PER 20' & 40' CONTAINER**

NO. OF BOXES IN 20' = 20 NORMAL JUMBO OR 200 MEDIUM BOXES

NO. OF BOXES IN 40' = 44 NORMAL & EXTENDED JUMBO OR 400 MEDIUM BOXES

Total 240 Medium Cartons are loaded into 40'fcl of Pharma Bottles.



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**Website** [www.gatronova.com](http://www.gatronova.com)





## Leading edge of innovation and advancement

Novatex Limited is a G&T Group company. Novatex is the only PET resin manufacturer in Pakistan and sells its PET resin under the brand name 'Gatronova'.

Gatronova PET resin is approved by FDA, EEC, Danone, Coke, Nestle and Pepsi, and is not only used in Pakistan, but also in the USA, Europe, Africa and the Middle East. Novatex, along with its other group company Gatron, is the largest manufacturer of PET preforms in Pakistan.

The G&T group is also a market leader in the manufacturing of fashion garments (BONANZA), Home

Textiles and Polyester Filament Yarn.

There has been a dramatic global rise in PET packaging consumption, especially in the past decade.

For many years, BOPET films has been an increasing part of our everyday life. Extremely versatile, it has excellent physical properties and a vast range of applications. Its high tensile strength, good barrier properties, thermal and chemical stability makes it suitable for multiple applications.

The main reason for PET films' popularity is its stiffness, excellent temperature and tear resistance.

Novatex has installed the latest and most modern Dornier equipment of

30,000 TPA for the production of Polyester films under the brand name of Krystofilms which will be the biggest plant for the production of PET films in Pakistan. The product range will be from 8 microns to 150 microns including all types of clear





film for packaging and textile applications. Major packaging applications in which PET films will be used include Tea, Milk Powder, Tomato Ketchups, Instant Drinks, Biscuits, Spices, Detergents and Hosiery. It will mainly be used in manufacturing yarn, sequins and glitters in textile applications.

**BOPET films is commonly known as PET films. Extremely versatile, it has excellent physical properties and a vast range of applications.**

A most modern vacuum metallizer and online coating machine is installed on the plant. This will enhance barrier properties of the films and make it versatile and flexible. It contains properties such as high strength, easy machineability, dimensional stability, surface treatability, clarity, tear resistance, moisture resistance, etc.

Due to the latest technology acquired, Novatex will be able to produce films which will be more suited to high demand applications, such as solar panel arrays and medical applications along with food packaging and textile usages.

Novatex has plans to market Krystofilms on a consistent basis,

both locally and internationally. The Company has developed a full R&D department which focuses on the development of new products and also continuously improves the quality of its existing product range. The objective is to introduce a vast range of applications which aim to bring a dynamic rise in the PET packaging consumption in future.



## Krystofilms PRODUCT LIST

Sr. No.	Main Features	Thickness Micron	Treatment	Main Applications
<b>PACKAGING FILMS</b>				
1	Transparent Film	8,10,12,23,36	Non Treated	Printing, Lamination, Metallizing
2	Good Wettability & Excellent Machineability	8,10,12,23,36	One Side Corona Treated	Printing, Lamination, Metallizing
3	Twist Film	15,18,20,23	Outside Treated or Non Treated	For Candy Wrapping
<b>CHEMICALS COATED FILMS</b>				
4	Better Metallization, Ink Adhesion improved Bond Strength	10,12,23,36	One Side Copolymer Coated other side Corona treated	Printing, Lamination, Metallizing
<b>TEXTILE GRADE FILMS</b>				
5	Yarn Grade Film	12,15,23,36	None	Metallic and Synthetic Yarn
<b>THICK FILMS</b>				
6	Optical Clear Films	135, 140, 150	None	For Sequins Applications
<b>METALLIZED FILMS</b>				
7	Metallized Twist Film	15,18,20,23	One Side Corona Treated Metallized	For Candy Wrapping and Printing
8	Metallized Film Corona Treated	10,12	Both Side Corona Treated	Lamination, Flexible Packaging
9	Metallized Film Chemically Treated	10,12	One Side Chemically Treated	Lamination, Flexible Packaging

# Gatronova

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