

Vietnam Polystyrene (VNPS) Polystyrene Characteristics

Typical Properties	ASTM Test	Units	GENERAL PURPOSE POLYSTYRENE (GPPS)						HIGH IMPACT POLYSTYRENE (HIPS)							
			GP-525N	GP-525	GP-550P GP-550	GP-550N	GP-560	GP-500	HI-850	HI-851	HI-860	HI-861	HI-800	HI-850 H. G.	HI-851 H. G.	HI-800 H. G.
Tensile Strength	D-638	Kg/cm ²	415	415	450	440	380	400	220	230	170	165	240	240	250	230
Tensile Elongation		%	2	2	2	2	1	1.2	40	50	55	60	60	50	60	50
Flexural Strength	D-790	Kg/cm ²	700	700	900	750	650	710	325	400	300	320	400	400	400	400
Izod Impact strength	D-256	Kg-cm/cm	1.6	1.6	1.6	1.6	1.6	1.6	12	11	15	15	14	11	14	10
Gardner Falling Dart		Cm-Kg							115	100	110	110	156	136	156	156
Vicat Softening Temp.	D-1525	°C	95	95	100	98	90	97	98	100	100	100	89	87	90	87
Heat Distortion Temp.	D-648	°C	90	90	95	92	85	85	92	94	90	90	97	97	100	96
Specific Gravity	D-792	23/23 °C	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Melt Flow Index	D-1238	G/10 min	7.0	7.0	3.0	5.0	14.0	9.5	6.0	3.0	5.0	3.0	9.0	6.0	3.0	9.0
Product Description			Injection Grade	Injection Grade	Extrusion/ Injection	Injection Grade	Injection Grade	Injection Grade	Injection Grade	Extrusion Grade	Injection Grade	Extrusion Grade	Injection Grade	Injection Grade	Extrusion Grade	Injection Grade

EXPANDABLE POLYSTYRENE (EPS)							
Grade	Appearance	Bead Sizes in mm					
		M	MS	S	SS	SSS	SSSS
		1.8 - 2.4	1.19 - 2.0	0.84 - 1.26	0.6 - 1.00	0.4 - 0.71	0.25-0.50
VNPS-PEARL (EPS)	Spheres Like Pearl	Bulk Density			Moisture Content/Absorption		
		Expandable		Expanded	Expandable		Expanded
		Kg/Ltr.		Gm/Ltr.	%		%
		0.6		14-25	2.0		0.3

Remarks: The data intended as a general guide only and do not necessarily represent results that may be obtained elsewhere.

Grades	Characteristics	Applications
GP-525N	Natural tinted, Excellent clarity, Good flow, Low volatility (Below 1000 ppm)	House ware, Containers, Plastic refrigerator parts, Toys and Lamp-shield, Drinking cups, Audio & Video cassette, Stationery items, CD casing, Plastic hangers and Cosmetic casing
GP-525	Blue tinted, Excellent clarity, Good flow, Low volatility (Below 1000 ppm)	House ware, Containers, Plastic refrigerator parts, Toys and Lamp-shield, Drinking cups, Audio & Video cassette, Stationery items, CD casing, Plastic hangers and Cosmetic casing
GP-550N	Blue tinted, Excellent clarity, Good flow, Low volatility (Below 750 ppm)	House ware, Containers, Toys, Ball point pens, Drinking cups and thin wall applications
GP-550, 550P	Blue tinted, Excellent clarity, Good flow, Low volatility (Below 750 ppm)	Appliance parts, Toys, Lamp-shield, Drinking cups, Audio Cassette and Ballpoints pens
GP-560	Blue tinted, Excellent clarity, Good flow, Low volatility (Below 1000 ppm)	Appliance parts, Toys, Lamp-shield, Drinking cups, & PSP products.
GP-500	Blue tinted, Excellent flow, Superior mold capability, Good strength, Low volatility (Below 1000 ppm) and Brilliant process ability properties during molding.	House ware, Containers, Toys, Drinking cups, Table ware, Optical parts, Plastic bangles, Plastic time pieces parts, Cosmetic packing parts, Plastic refrigerator components, Stationery products, and material are very useful for thin wall molding
HI-850	High impact, Standard flow, Good gloss, Low volatility & Injection molding grade	House ware, TV, Audio equipment parts, Drinking cups, Washing machines plastic parts, Air conditioners grills, Plastic refrigerator components, Toys, Stationery products, Sanitary products, Plastic Hangers, Injection molded
HI-851	High impact, Good gloss, Low volatility & Extrusion grade	Drinking cups, Refrigerator components, Cotton buds, Extrusion & Blow molding grade
HI-860	High impact, Standard flow, Good gloss, Low volatility, Stress cracking resistant, Injection molding grade.	Molded parts of Freezers and Deep freezers
HI-861	High Impact, Good gloss, Low volatility, Stress cracking resistant (Freon resistant) Extrusion grade	Sheets and Lamination of Freezers and Deep freezers
HI-800	High flow, Superior heat characteristics, Better mold capability, Good strength, Good practical toughness, Excellent mold release behavior & Brilliant process ability properties during molding	Air conditioners grills, TV cabinets, Cosmetic packing parts, Stationery products and thin wall molding.
HI-850 H. G.	Excellent Impact strength, Superior mold ability, Good stiffness, Easy flow, Low volatility and Brilliant gloss properties.	TV & Audio equipments, Drinking cups, Washing machine parts, Air conditioners grills, Plastic refrigerator components, Plastic hangers, Cutlery, Household products, Toys, Plastic wall clock parts, Novelties, Medical appliances, Stationery products, Sanitary products, Plastic fans parts & etc.
HI-851 H. G.	High impact, Good gloss, Low volatility & Extrusion grade & brilliant properties.	Drinking cups, Refrigerator components, Cotton buds, Extrusion & Blow molding grade
HI-800 H. G.	High flow, Superior heat characteristics, Better mold capability, Good strength, Good practical toughness, Excellent mold release behavior & Brilliant process ability properties during molding	Air conditioners grills, TV cabinets, Cosmetic packing parts, Stationery products and thin wall molding.
VNPS-PEARL	Sphere like pearl, Low volatility, No hard core, Antistatic, Good fusion & preform grade.	Insulation blocks, Large articles, Blocks and Fish boxes