

SELENIS SELEKT XP 311

Selenis Selekt XP 311 is a copolyester that is suitable for injection moulding applications. From thin wall and intricate parts to thicker cross-sections where toughness is required.

Injection moulded parts made from **Selenis Selekt XP 311** are water-clear and glossy, whilst virtually unbreakable. **Selenis Selekt XP 311** features excellent impact strength and outstanding chemical resistance. Fast injection cycles are possible due to high flowability.

Thanks to **Selenis Selekt XP 311** high dimensional stability, multiple parts products may be assembled with snap-fit connectors, maintaining the strength required to sustain daily wear and tear.

Moulded parts maybe sterilized by Gamma-radiation or EtO sterilization process

Selenis Selekt XP 311 is a ready-to-use product supplied with a demoulding agent to ease your process.

Specifications

This table contains **Selenis Selekt XP 311** characteristics and their methods of analysis. Some properties are subject to limits; others are presented with their typical values. Small variations of the typical values do not affect the application performance of the polymer.

All properties are measured under laboratory conditions by the analytical method shown. Limits in these specifications are applicable only to data obtained by the referenced test methods. Different methods or conditions of analysis may give rise to different values. A Certificate of Analysis, with representative average values of certain properties, can be sent to the customer when requested.

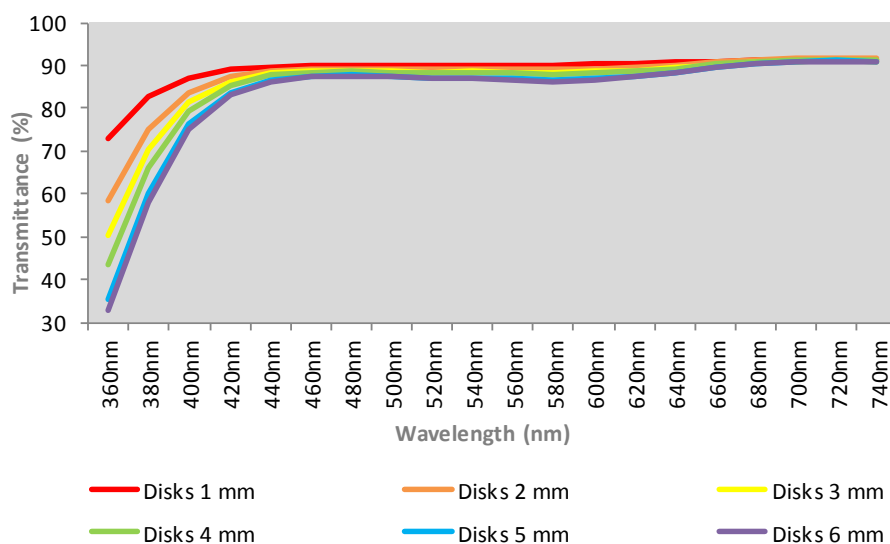
Typical Properties

Properties ^a	Test Methods	Units	Values
General Properties			
Intrinsic Viscosity	ISO 1628-5	dl/g	0.78 ± 0.02
Color b* L*	ASTM D6290		≤ 1 ≥ 64
Bulk Density		g/cm ³	0.79
Specific Density	ASTM D -792	g/cm ³	1.26
Water Absorption	ASTM D570	%	≤ 0.13
Mould Shrinkage	ASTM D 955	%	0.2 – 0.5
Particle size		mg/20 chips	320 ± 50
Pellet Shape			Cylindrical
Mechanical Properties			
Hardness (Shore D)	ASTM D2240		78
Tensile Properties	ISO 527 -1/- 2		
Yield Stress (σ_y)		MPa	44.9
Elongation at Yield (ε_y)		%	4.5
Strength (σ_m)		MPa	44.9
Elongation at Strength (ε_m)		%	4.3
Nominal elongation at Break (ε_{tb})		%	319
Tensile Modulus	ISO 527 -1/- 2	MPa	1930
Flexural Properties	ISO 178		
Flexural Modulus		MPa	1776
Flexural Strength		MPa	56.4
Izod Impact Resistance			
Notched	ISO 180/A		
23°C; 50 %RH		KJ/m ²	7.5
0°C		KJ/m ²	6.5
-30°C		KJ/m ²	5.7
Unnotched	ISO 180/U		
23°C; 50 %RH		KJ/m ²	Not Break
0°C		KJ/m ²	Not Break
-30°C		KJ/m ²	Not Break
Charpy Impact Resistance			
Notched	ISO 179-1/1eA		
23°C; 50 %RH		KJ/m ²	7.5
0°C		KJ/m ²	6.5
-30°C		KJ/m ²	5.7
Unnotched	ISO 179-1/1eU		
23°C; 50 %RH		KJ/m ²	Not Break
0°C		KJ/m ²	Not Break
-30°C		KJ/m ²	Not Break
Puncture Impact Behavior, Energy Maximum Load	ISO 6603-2/3.3 m/s		
23°C		J	44.2

Properties	Test Methods	Units	Values
Thermal Properties			
Glass Transition Temperature	ASTM D3418	°C	88
Heat Deflection Temperature 0.45 MPa 1.80 MPa	ISO 75-1/-2	°C	67.6
		°C	60
Vicat Softening Temperature	ISO 306/A50	°C	81.9
Optical Properties			
Gloss (GU)	ASTM D2457/60°		167
Haze, 2mm	ASTM D1003	%	<1
Yellowness Index, 2mm	ASTM (E313-73)	%	<1
^a The properties reported are obtained into the polymer without demoulding agent			

Optical Properties - Transmittance

Transmittance of Selekt XP 311 along Wavelength in discs with 1 to 6mm of thickness



Storage and Handling Conditions

Selenis Selekt XP 311 is an inert material in storage and no hazards are likely to arise; however, the polymer should be stored in an area properly protected from risk of fire.

Selenis Selekt XP 311 should be stored in the original container, tightly closed in a dry, cool and well-ventilated place. Avoid direct light contact if the container is stored indoors.

Processing

In order to obtain maximum product performance, **Selenis Selekt XP 311** should be dried to achieve a moisture level below 0.004 % (40 ppm) before processing. Typical drying requirements include a dehumidifying air hopper dryer with regenerative desiccant beds, -40°C dew point air, and 70°C drying temperature for at least 6 – 8 hours. During drying it is important that the temperature of the processed air does not exceed 74 °C in order to avoid chips sticking together in the hopper of the dryer.

Typical processing temperatures are between 180°C to 250°C and should be chosen in function of the needs of the transformation technology.

Warranty

The seller only warrants that the product complies with the specifications and is free from defects. Clients should perform their own assessment to determine if the product is suitable for a particular purpose.

Health and Safety Consideration

Read and follow all information presented in the Safety Data Sheet (SDS) for this product.

Recycling

Polyethylene Terephthalate Products are 100% recycled and carries the recycle code of "1". Production rejections, and/or conversion waste should be recycled if possible.

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