



Selenis

Specialty Polyesters Solutions

SELENIS GENIUS 251

Selenis Genius 251 copolyester has been specifically developed for extrusion blow moulding process of bottles of any shape. **Selenis Genius 251** offers exceptional clarity, neutral colour and high gloss, granting enhanced shelf appeal whilst protecting product ingredients.

Selenis Genius 251 grade offers excellent impact resistance; therefore it is recommended for the production of bottles with a volume up to 1000-ml.

Selenis Genius 251 grade may be easily processed on standard extrusion blow moulding machines, provided appropriate drying equipment is used.

Selenis Genius 251 offers good chemical resistance to most common additives used in the cosmetics and personal care industries; it is up to the end user to determine the fitness for use.

Specifications

This table contains **Selenis Genius 251** 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.



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Typical Properties

Properties	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	0.73
Specific Density	ASTM D -792	g/cm ³	1.27
Particle size		mg/20 chips	320 ± 50
Pellet Shape			Cylindrical
Mechanical Properties			
Rockwell R Hardness	ASTM D785-08		111
Tensile Modulus	ISO 527 -1/- 2	MPa	2175
Izod Impact Resistance			
Notched 23°C; 50 %RH 0°C -30°C	ISO 180/A	kJ/m ² KJ/m ² KJ/m ²	5.2 5.2 5.2
Unnotched 23°C; 50 %RH 0°C -30°C	ISO 180/U	KJ/m ² KJ/m ² KJ/m ²	Not Break Not Break Not Break
Puncture Impact Behavior, Energy Maximum Load 23°C	ISO 6603-2/3.3 m/s	J	43
Thermal Properties			
Heat Deflection Temperature 0.45 MPa 1.80 MPa	ISO 75-1/-2	°C °C	71 61
Optical Properties			
Gloss (GU)	ASTM D2457/60°		166



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Storage and Handling Conditions

Selenis Genius 251 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 Genius 251 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 Genius 251** 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 60 - 65°C drying temperature for at least 6 – 8 hours. During drying it is important that the temperature of the processed air does not exceed 70°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% recyclable. Production rejections, and/or conversion waste should be recycled if possible.

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