

POLYMERS

SABIC[®] PET BC111

Crystalline Polyethylene Terephthalate (PET)

PRODUCT DESCRIPTION:

BC111 is a crystalline, high molecular weight thermoplastic polymer made by continuous melt-phase polymerization process followed by solid-state polymerization

CHARACTERISTICS

BC111 is specially formulated bottle grade PET that is characterized by low I.V., and low acetaldehyde generation on melting.

TYPICAL APPLICATIONS:

BC111 is especially suitable for the production of bottles for water. It can also be used for noncarbonated and other packaging applications.

TYPICAL DATA:

PROPERTIES	Unit	Value ⁽¹⁾	Test Method
Intrinsic Viscosity	DL/g	0.76 ± 0.02	SABIC (IRC0041)
Acetaldehyde	PPM	<1	SABIC (IRC00057)
Color (L)	-	89 ± 4.0	SABIC (IRC0051)
Color (b)	-	-1.5 ± 2.0	SABIC (IRC0051)
Melting Range	°C	246 - 256	SABIC (IRC0053)
DEG Content	% w/w	< 1.5	SABIC (IRC0055)
Crystalline Density	Kg/m ³	< 1390	SABIC (IRC0032)
Dust Content	% w/w	< 0.01	SABIC (IRC0060)
Bulk Density	Kg/m ³	838 ± 10	ASTM D 1895
Moisture Content ⁽²⁾	% w/w	< 0.35	SABIC (IRC0050)

(1) Typical values; not to be construed as specification limits.

(2) At Equilibrium

PROCESSING CONDITIONS:

The PET (BC111) has to be dried to moisture content below about 30-40 ppm. The drying conditions typically used are 180 °C for 5 hours; the dew point of the drying air should be at least -40 °C. The injection temperature should be as low as possible in order to minimize acetaldehyde in the preforms. Due to the low melt viscosity of this grade, typically injection temperatures of 275 °C may be used to get clear preforms with low acetaldehyde. Even lower injection temperatures can be tried, but if the preforms become haze, the temperature should be raised. Low screw back pressures should be used.

FOOD REGULATION:

BC111 is suitable for food contact application. Detailed information is provided in relevant Material Safety Datasheet and for additional specific information please contact SABIC local representative for certificate.

STORAGE AND HANDLING:

PET resin should be stored in a manner to prevent a direct exposure to sunlight and/or heat. The storage area should also be dry with relative humidity below 50% and temperatures preferably don't exceed 50 °C. SABIC would not give warranty to bad storage conditions which may lead to quality deterioration such as color change, bad smell and inadequate product performance. It is advisable to process PET within 6 months after delivery.

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