



## ANBIO JOINT STOCK COMPANY

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### BG8800 - TECHNICAL DATA SHEET

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Version & language 1/AP006 - EN

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#### PRODUCT DESCRIPTION

BG8800 is a biodegradable Compound, composed primarily from PLA and PBAT- 2 kind of Biodegradable resin with 85% of product formulation. This compound for film blowing applications.

#### APPLICATION

BG8800 is designed for blown film processing. With low MI, BG8800 can produce very thin film (Minimum : 13 microns). BG8800 can be processed on conventional blown film equipment. The material is stable in the molten state, provided that proper drying procedures are followed.

**Main application:** Rollbag, Compost bag, Heavey weight shopping bag etc and more

#### STRENGTH OF ANBIO BG8800

- ① BG8800 is printable, weldable and can be mechanically recycled
- ② When incinerated, BG8800 does not generate any noxious side-products and hazardous gases.
- ③ BG8800 is competitively priced
- ④ BG8800 is easy to make an extrusion on conventional blow machine
- ⑤ Excellent down-gauging potential (low film thickness possible)
- ⑥ High wet- resistance when used for organic waste collection
- ⑦ Good tensile strength and therefore carrying capacity
- ⑧ Balanced combination of puncture and tear resistance
- ⑨ We can supply to a customer grade that satisfies the individual customer's need

#### PROCESSING INFORMATION

In-line drying is recommended for BG8800 resins. A moisture content of less than 0.25% (25 ppm) is recommended to prevent viscosity degradation. Polymer is supplied in foil lined boxes or bags dried to <0.25% when packaged. The resin should not be exposed to atmospheric conditions after drying. Keep the package sealed until ready to use and promptly dry and reseal any unused material. The drying curves for both amorphous and crystalline resins are shown to the right. It is important to consider accurate initial moisture, when calculating necessary drying time.

Item	Unit	Value
Cylinder Zone 1	°C	140~145
Cylinder Zone 2	°C	145~150
Mesh screen	°C	150~160
Die	°C	150~160

Film's physical property is the best at BUR (Blow-Up Ratio): 3-4.



**AVERAGE PHYSICAL AND MECHANICAL PROPERTIES**

Item	Conditions	Method	Unit	Value
Density	-	ASTM D792	g/ml	1.29~1.32
MFI	190°C/2.16kg	ASTM D1238	g/10min	2~5
Melt Temperature	-	ASTM 3418	°C	110~130, 150~180
Tensile Strength (MD)	-	ASTM D638	kgf/cm <sup>2</sup>	>350
Tensile Strength (TD)	-	ASTM D638	kgf/cm <sup>2</sup>	>320
Elongation (MD)	-	ASTM D638	%	>450
Elongation (TD)	-	ASTM D638	%	>500
Tear Strength (MD)	-	ASTM D1004	kgf/cm	>110

\* Thickness 20 μm

**FOOD PACKAGING STATUS**

**US status:** On 2020 August 07, BG8800 is passed US FDA CFR 175.300 (Resinous and Polymeric Coatings) – Determination of Amount of Extractives

SGS Test report No: VNHL2004006038HG

Extractants	Test Condition	Result (mg/inch <sup>2</sup> )	Reporting Limit (mg/inch <sup>2</sup> )	Permissible Limit (mg/inch <sup>2</sup> )
		1		
Distilled Water	150°F for 2 hours	ND	0.1	0.5
8% Alcohol	150°F for 2 hours	ND	0.1	0.5
n-Heptane	100°F for 30 minutes	ND	0.1	0.5
<b>Comment</b>	--	<b>PASS</b>	--	--

Figure 1: US FDA CFR 175.300

BG8800 is safely used as the food-contact surface of articles intended for use in producing, manufacturing, packing, processing, preparing, treating, packaging, transporting, or holding food

**European Status:** On 2020 August 07, BG8800 is passed Eu food contact standard:

Commission Regulation (EU) No 10/2011

- a) Plastic- Overall Migration
- b) Plastic- Specific Migration of Heavy Metals

And European Regulation (EC) No. 1907/2006 (REACH) Annex XVII and its amendments:

Polycyclic Aromatic Hydrocarbons (PAHs) content

European Directive 94/62/EC (Pb, Cd, Hg, Cr VI)

Test report No: VNHL2004006032HG



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No SML's for the above referenced grade exist in Plastics Regulation 10/2011 as amended. Anbio would like to draw your attention to the fact that the EU- Plastics Regulation 10/2011, which applies to all EU-Member States, includes a limit of 10 mg/dm<sup>2</sup> of the overall migration from finished plastic articles into food. In accordance with Plastics Regulation 10/2011 the migration should be measured on finished articles placed into contact with the foodstuff or appropriate food simulants for a period and at a temperature which are chosen by reference to the contact conditions in actual use, according to the rules laid down in Plastics Regulation 10/2011.

### **COMPOSTIBILITY STATUS**

BG8800 fulfills the requirements of the European standard DIN EN 13432, the US standard ASTM D 6400 for compostable and biodegradable polymers, because it can be degraded by micro-organisms. The biodegradation process in soil depends on the specific environment (climate, soil quality, population of micro-organisms)

### **BULK STORAGE RECOMMENDATIONS**

The resin silos recommended and used by Anbio are designed to maintain dry air in the silo and to be isolated from the outside air. This design would be in contrast to an open, vented to atmosphere system that we understand to be a typical polystyrene resin silo. Key features that are added to a typical (example: polystyrene) resin silo to achieve this objective include a cyclone and rotary valve loading system and pressure vessel relief valves. The dry air put to the system is sized to the resin flow rate out of the silo. Not too much dry air would be needed and there may be excess instrument air (-30°F dew point) available in the plant to meet the needs for dry air. Our estimate is 10 scfm for a 20,000 lb/hr rate resin usage. Typically, resin manufacturers specify aluminum or stainless steel silos for their own use and avoid epoxy-lined steel.