

ANBIO CTR-02 - TECHNICAL DATA SHEET

Revision date: November 05, 2020

Version & language 1/AP006 - EN

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PRODUCT DESCRIPTION

AnBio CTR02 is a biodegradable Compound, composed primarily from PLA and PBAT- 2 kind of Biodegradable resin with 95% of product formulation. This Compound for translucent film blowing applications.

APPLICATION

AnBio CTR02 is designed for blown film processing. With low MI, CTR02 can produce very thin film (Minimum : 11 microns). CTR02 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: Shopping bags, Garbage bags, T-shirt bags, Roll bags, Die-cut bags and more



STRENGTH OF ANBIO CTR02

- | | |
|---|---|
| <ul style="list-style-type: none"> ① Anbio CTR02 is printable, weldable and can be mechanically recycled ② When incinerated, Anbio CTR02 does not generate any noxious side-products and hazardous gases. ③ Anbio CTR02 is competitively priced ④ Anbio CTR02 is easy to make an extrusion on conventional blow machine ⑤ Excellent down-gauging potential (low film thickness possible) | <ul style="list-style-type: none"> 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 AnBio CTR02 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

AVERAGE PHYSICAL AND MECHANICAL PROPERTIES

Property	Unit	Test Method	Test Condition	Value
Density	g/cm ³	ISO 1183	25°C	1.25
Melting point	°C	DSC	-	> 165
Melt Flow Rate	g/10min	ASTM 1238	190°C, 2.16kg	1.96
Tensile strain (MD/TD)	%	ISO 527-3 1995	15 Micron	86/517
Tensile stress (MD/TD)	MPa	ISO 527-3 1995	15 Micron	41/17
Inorganic Content	%	Ash tester	700°C , 5h	< 4%
Moisture content	%		80°C, 15min	<0,25
Particle size	mm		°C	0,5
Appearance	-		°C	White

FOOD PACKAGING STATUS

US status: On 2020 August 07, AnBio CTR02 is passed US FDA CFR 175.300 (Resinous and Polymeric Coatings) – Determination of Amount of Extractives

SGS Test report No: VNHL2007015117HG

Extractants	Test Condition	Result (mg/inch ²)	Reporting Limit (mg/inch ²)	Permissible Limit (mg/inch ²)
		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
Comment	--	PASS	--	--

AnBio CTR02 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

Figure 1: US FDA CFR 175.300

European Status: On 2020 August 07, AnBio CTR02 is food contact grade, comply to EU10/2011:

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: VNHL2007015118HG



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/dm² 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

Anbio CTR02 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.