

TECHNICAL DATA SHEET

PHACT™ CB0400A

This product is designed for extrusion (drinking straws) and sheet/thermoforming applications. It is based on PHA (PHACT™ S1000P and A1000P) and calcium carbonate. All ingredients used in this product are certified (TÜV AUSTRIA and BPI, where applicable) to be industrially compostable, home compostable, soil biodegradable, and marine biodegradable. Please consult your sales/technical representatives for details.

PROPERTIES OF PHACT™ CB0400A

Properties	Units	ASTM No	CB0400A
Forms	-		Pellet
Specific Gravity	-	D792	1.52
Hardness - Max	Shore D	D2240	50
Secant Modulus (1mm)	MPa	D638	1700
Elongation at Break ¹	%	D638	5
Ultimate Tensile Strength ¹	MPa	D638	30
Heat Deflection Temperature /0.455 MPa	°C	D648	140
Melting Point ²	°C	D3418	165
Glass Transition Temperature ²	°C	D3418	-5
Melt Flow Rate (175 °C, 2.16 kg)	g/10 min	D1238	3

- 1) Injection specimens conform to ASTM D638. Crosshead speed 50 mm/min for tensile strength.
- 2) Differential Scanning Calorimeter (DSC), peak of endotherm. Heating rate 10 °C/min.

PROCESSING CONDITION FOR EXTRUSION

Dry Temperature	75 °C x 4 hours	Compression/Melting	165 ~ 175 °C
Feed Temperature	25~40 °C	Metering	165 °C
Solid Conveying	165 ~ 175 °C	All Die Zones	160 ~ 165 °C

The water bath must be set to 70-75 °C to enable fast crystallization of the product

Drying & Moisture Management

PHA CB0400A will be supplied in pellet form in aluminum foil-lined packaging with a moisture content of 400 ppm or less when packed. A moisture content of less than 0.04% (400ppm) is highly recommended to prevent viscosity degradation during processing. Typical drying conditions are 4 hours at 75 °C (167 °F) with a dew point of -40 °C (-40 °F). The resin should not be exposed to atmospheric conditions after drying. Keep the package sealed until ready to use and promptly reseal any unused material.

Processing Guidelines

A. Purging:

- Utilize a purging compound specifically designed for the current material. If unavailable, purge with LDPE until the extrudate is clear of any residual material.
- Subsequently, introduce CB0400A into the extrusion process after the barrel is empty.

B. Initial Processing:

- Fill the barrel with CB0400A.
- Initiate operation at a lower screw rpms first until the material forms a consistent extrudate.
- Gradually increase the motor speed while synchronizing the cutting and pulling speeds to maintain optimal processing conditions.

Safety Precautions

PHA CB0400A must be handled and processed with adequate ventilation and proper personal protective equipment. Temperatures above 190°C (374°F) can result in considerable polymer degradation. Therefore, adequate ventilation should be provided where hot polymer may reside for long periods such as when multiple shots are being held in the barrel.

NOTICE

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