BioPBS™ FZ79AC Technical Data Sheet

Extrusion Coating

Product Description

BioPBS™ is bio-based polybutylene succinate (PBS) produced from polymerization of bio-based succinic acid and 1,4-butanediol. Alike LDPE, BioPBS™ is soft and flexible semi-crystalline polyester with excellent properties suitable for cast extrusion and extrusion coating such as compostable paper cups.

Features:

- Similar processability as LDPE
- Processable in LDPE extrusion coating machine
- Excellent adhesion to paper
- Superior heat sealability
- Excellent printability without pre-treatment
- Low coating thickness
- Food contact approved by FDA (FCN No.1817) and JHOSPA, and comply to EU10/2011
- OK COMPOST certified by TUV in EU, BPI in USA, and ABA in Australia
- Renewable content certified by DIN CERTCO and JBPA
- Pulp in BioPBS™-coated paper is recyclable as certified by WMU in USA and PTS in EU
- Suitable for use with hot food and beverages up to 100°C

Properties	Test Method	Unit	FZ79AC
Density	ISO 1183	g/cm^3	1.26
MFR (190°C, 2.16 kg)	ISO 1133	g/10 min	15
Melting Point	ISO 3146	°C	115
Seal Initiation Temperature[1]		°C	120
WVTR[2] – Film	ASTM E96/E96m-10	g/m^2/day	520
WVTR[2] – Paper 250gsm/BioPBS 25 gsm	ASTM E96/E96m-10	g/m^2/day	167
Neck-in at 25 gsm, 150 m/min		mm/side	50

1. Tested on film 20 µm thick, 5 mm width, pressure 0.2 MPa, time 1 second. Seal initiation temperature is the temperature which given seal strength at 4N/15mm.
2. Tested on film 20 µm thick per ASTM E96/E96m-10 at 38 °C and 90% RH

Process Information

BioPBS™ is dried and packed in aluminum-lined packaging before delivering to customers. Pre-dry of the unopened BioPBS™ is not necessary. It is recommended to keep packages sealed until ready to process and using up the whole 25-kg bag. Unused material should be tightly sealed, kept away from open air, and pre-dried (Temperature 80°C for over 5 hours) to moisture content of less than 1,000 ppm (preferable less than 700 ppm) prior to using next time

Recommended Processing Parameters	
Melt Temperature	260°C
Feed Throat	160°C
Barrel Temperature	160-265°C
Adapter Temperature	265°C
Die Temperature	265°C
Chill Roll Temperature	20°C
Maximum Line Speed	300 m/min
Minimum Coating Thickness	16 µm
Minimum Coating Weight	20 g/m^2
Corona Treatment	≥4 kW