

## Typical Properties for ECOZEN® YF 300

### ECOZEN YF series : Food & Beverage

#### Product Description

ECOZEN YF 300 is eco-friendly bio copolyester which is created using natural materials based on the extract from plant or vegetable materials therefore it does not include environmental hormone bisphenol A (BPA) is a controversial never-ending human hazards. Also it is one of the excellent resins which have chemical resistance and food-stain resistance among the transparent resin used in food contact applications and its low oxygen permeability is useful for food storage container such as the airtight container.

ECOZEN YF 300 has various food contact related use of certification such as FDA (Food Contact Notification (FCN) No. 1075), NSF (the United States), EFSA (EU), JHOSPA (Japan), NHFPC (China) and KFDA (South Korea) and it has also the certification of bioplastics such as BETA certification.

ECOZEN YF 300 is obtained the GOLD Level for Cradle to Cradle (C2C) certification (the United States) and certified by the external environment-friendly products. SK Chemicals Company has obtained the GOLD Level as the world's first and only chemical resin supplier.

#### Key Attributes

- BPA / Phthalate free
- Excellent Heat Resistance
- Excellent Chemical & Stain Resistance
- Excellent Impact Strength
- High Flexural Strength
- High Transparency and Gloss
- Low Processing Temperature
- Less Residual Stress

#### Applications / Uses

- Food Container
- Airtight Container
- Baby Food Container
- Food Bowl
- Mixer & Blender
- Sports Bottle, Water Bottle, Juice Bottle etc.

#### ※ Approvals

FDA : Food and Drug Administration

NSF : National Sanitation Foundation

EFSA : European Food Safety Authority

JHOSPA : Japan Hygienic Olefin and Styrene Plastics Association

NHFPC : National Health and Family Planning Commission

BEAT Analytic Inc. : ISO/IEC 17025:2005 Accredited Radiocarbon Dating Laboratory

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The information in this data sheet is, to the best of our knowledge, true and accurate. The representations about the product are based upon test results achieved under laboratory practices supervised and controlled by SK chemicals corporation.

Property	Test Method	Unit	Typical Values
Specific Gravity	ASTM D792	-	1.27
Mold Shrinkage (Parallel to Flow)	ASTM D955	%	0.2~0.5
Rockwell Hardness	ASTM D785	R-scale	119
<b>Mechanical</b>			
Tensile Strength @ Yield 50mm/min (2 inch/min)	ASTM D638	MPa (kgf/cm <sup>2</sup> )	51 (520)
Tensile Strength @ Break 50mm/min (2 inch/min)	ASTM D638	MPa (kgf/cm <sup>2</sup> )	44 (450)
Elongation @ Yield 50mm/min (2 inch/min)	ASTM D638	%	6.8
Elongation @ Break 50mm/min (2 inch/min)	ASTM D638	%	150
Flexural Strength 1.27mm/min (0.05 inch/min)	ASTM D790	MPa (kgf/cm <sup>2</sup> )	87 (890)
Flexural Modulus 1.27mm/min (0.05 inch/min)	ASTM D790	MPa (kgf/cm <sup>2</sup> )	2,180 (22,200)
Izod Impact Strength, Notched @ 23 °C(73 °F)	ASTM D256	J/m	No Break
<b>Thermal</b>			
Heat Distortion Temperature @ 0.455 MPa(66 psi)	ASTM D648	°C (°F)	100 (212)
<b>Optical</b>			
Haze	ASTM D1003	%	< 1.0
Transmittance	ASTM D1003	%	88
<b>Flammability</b>			
UL Flammability Classification @ 3.2mm thickness	UL94		V-2

The data listed here is preliminary data sheet of product. Therefore this sheet should not be used to establish specification limits or used alone as a basis for design. This information is not intended as a warranty of any kind. Customers must make their own representative test and assume all risks of use, whether used alone or in combination with other products. SK Chemicals assumes no obligation or liability of any advice furnished by it or results obtained with respect to these products. All warranties of merchantability for a particular purpose or use are excluded and disclaimed.

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