

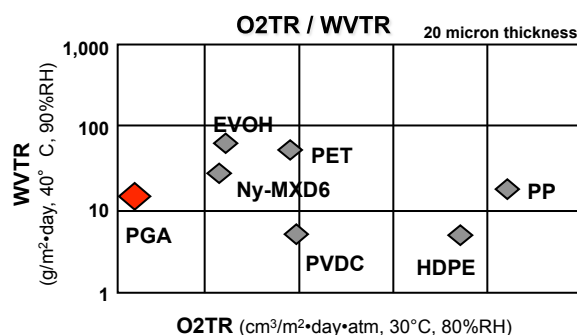
KUREDEX™

Polyglycolic Acid (PGA) Resin

A unique new polymer...high-performance attributes...important benefits for packaging and industrial products applications

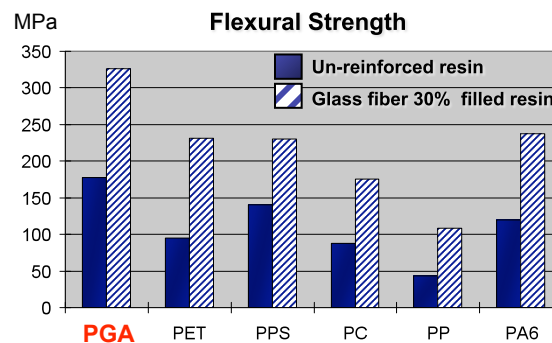
► Superior barrier performance

Kuredex has very low permeability to O₂ and CO₂ -- one hundredth that of polyethylene terephthalate (PET). Additionally, Kuredex barrier properties are largely insensitive to humidity conditions, making it ideally suited for a variety of beverage and perishable food packaging applications. Utilizing a very small amount of Kuredex can significantly improve barrier performance to protect your package contents.



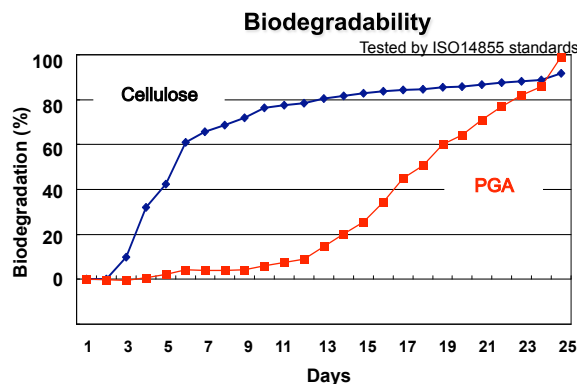
► High mechanical strength

Kuredex is a polyester resin with high mechanical strength and toughness. Yet Kuredex demonstrates excellent processability. It can be easily extruded and injection molded in combination with a variety of other polymers -- making Kuredex suitable for use in a wide range of packaging and industrial applications, product enhancements and new developments.



► Biodegradability (hydrolysis)

Kuredex shows similar biodegradation to cellulose and it degrades into CO₂ and water in compost within one month. Resultant compost has been proven safe, and Kuredex has been certified as a biodegradable plastic in the US, Europe and Japan. Also Kuredex, when used in PET bottles, is fully compatible with widely practiced industrial PET recycling processes, ensuring the quality of recycled PET.



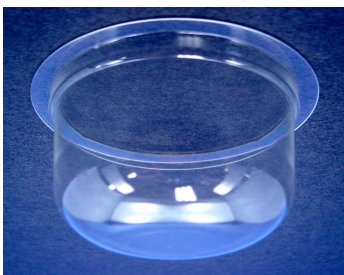
Kuredux™ PGA Data Sheet

Properties		UNIT	VALUE	TEST METHOD
Melt index		g/10min	22~6	ISO 1133 Load:2.16kgf Temperature:250°C
Melt Viscosity		Pa·s	360~950	270° C, 122sec ⁻¹
Density		g/cm ³	1.5-1.6	Density Gradient Column Method
Thermal properties	Melt Temperature	° C	225	DSC:Initial Temperature:0° C Final Temperature:250° C Heating rate:10° C/min Purge Gas:N2 50ml/min
	Crystallization Temperature	° C	95	
	Glass Transition Temperature	° C	40	
	Thermal Expansion	1/K	5.40E-05	ASTM D696
	Thermal Conductivity	W/m·K	0.35	ASTM C177
	Combustion Heat	KJ/g	12	JIS-M 8814-1996
	Specific Heat	J/g·° C	1.12	JIS-K 7123
Optical properties	Refractive index		1.45-1.51	ASTM D542
	Haze	%	<1.0	JIS-K 6714
Physical properties*	Tensile Strength	Mpa	220	ASTM D882, 23° C-50%RH
	Elongation	%	25	ASTM D882, 23° C-50%RH
	Young's Modulus	GPa	6.5	ASTM D882, 23° C-50%RH
Barrier properties*	20° C-0%RH	cc/m ² ·day·atm	0.9	ISO 14663-2
	20° C-80%RH		0.9	
	20° C-90%RH		1.1	
Water Vapor Transmission Rate	40° C-90%RH	g/m ² ·day	11	JIS-Z 0208

*Biaxial-oriented film(400%×400%), 15um thick

The figures above are the result of lab measurements and are not secured values

Kuredux™ PGA packaging applications



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