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U-polymer

U series resins (Transparent chemical-resistant grade)

U series resins are polymer alloys that are improved in resistance to oils and chemicals, the shortcoming of amorphous resins. They are transparent and have a greater moisture-blocking property than other resins having similar structures. They are also suitable for blow molding.

Characteristics

- Transparent, resistant to chemicals, especially to oils, alcohols and others
- Weather Resistance
- Blended into PET resins for improvement in heat resistance.

Properties

Print Table on A4 Paper

	Item	ASTM	Unit: SI (conventional)	U-8000	U-8400H
Mechanical Properties	Density	D-792	-	1.26	1.28
	Water absorption (1/8", 24hrs)	D-570	%	0.15	0.12
	Light transmittance (Thickness: 3mm)	D-1003	%	87	88
	Tensile strength	D-638	MPa {kg/cm ² }	71 {720}	63 {640}
	Elongation at break	D-638	%	105	170
	Bending strength	D-790	MPa {kg/cm ² }	103 {1,050}	95 {970}
	Bending modulus	D-790	GPa {kg/cm ² }	2.7 {28,000}	2.5 {26,000}
	Compressive strength (Yield)	D-695	MPa {kg/cm ² }	86 {880}	80 {820}
	Izod impact strength (1/8", with notch)	D-256	J/m {kg-Ecm/cm}	108 {11}	69 {7}
	Rockwell hardness	D-785	R	125	120
Thermal properties	Deflection temperature under load 1.8MPa {18.6kg/cm ² }	D-648	°C	110	95
	Linear expansion coefficient	D-696	10 ⁻⁵ /K {10 ⁻⁵ cm/cm/°C}	6.2	6.4
	Dielectric breakdown strength	D-149	MV/m {kv/mm}	44	30
Electrical Properties	Specific volume resistivity	D-257	Ωm {Ωcm}	2x10 ¹⁴ {2x10 ¹⁶ }	2x10 ¹⁴ {2x10 ¹⁶ }
	Dielectric constant (10 ⁶ Hz)	D-150	PF/m	27 {3.0}	27 {3.0}
	Dielectric dissipation factor(10 ⁶ Hz)	D-150	-	0.015	0.01
	Ark resistance	D-495	s	120	120
	Tracking resistance	IEC	V	232	-
Other properties	Molding shrinkage (Thickness: 3mm)	-	%	0.8	0.8
	Flow direction, orthogonal direction				

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