

General properties of DELPET™ High Heat-resistant grades

AsahiKASEI

Asahi Kasei Corporation

Item	ISO Method	Unit	SK Series (High Heat-resistant & Good optical properties)			(General)
			SK420N	SK430N	SK540N	80N
1. Rheological Properties						
Melt mass-flow rate (230℃, 37.3N)	1133	g/10min	2. 1	1. 8	1. 3	2. 0
Spiral flow length Thickness : 2 mm Cylinder Temp : 250 ° C Mold Temp : 60 ° C Pressure : 75 MPa	ASAHI KASEI PMMA method	c m	2 7	2 6	2 6	2 7
2. Mechanical Properties						
Tensile modulus	527-2/1A/1	MPa	3 4 0 0	3 4 0 0	3 5 0 0	3 3 0 0
Tensile strength at break	527-2/1A/5	MPa	7 4	7 8	7 7	7 7
Tensile strain at break	527-2/1A/5	%	4	4	4	6
Flexural modulus	178	MPa	3 2 0 0	3 2 0 0	3 2 0 0	3 3 0 0
Flexural strength	178	MPa	1 0 3	1 1 0	1 1 0	1 3 0
Charpy impact strength (Unnotched)	179/1eU	kJ/m ²	1 7	1 7	1 6	2 2
Charpy impact strength (Notched)	179/1eA	kJ/m ²	1. 0	1. 0	0. 9	1. 4
3. Thermal Properties						
Temperature of deflection under load (1.8 MPa)	75-1 75-2	°C	1 0 9	1 1 0	1 1 8	1 0 0
VICAT softening temperature	306 B 50	°C	1 1 7	1 1 8	1 2 3	1 0 9
4. Optical Properties						
Refractive index	489	-	1. 4 9	1. 4 9	1. 5 0	1. 4 9
Total luminous transmittance	13468-1	%	9 2	9 2	9 1	9 2
Visible Light Transmittance Y (220 mm)	ASAHI KASEI PMMA method	%	8 5	8 1	6 0	8 5
Yello Index YI	3 mm	-	0. 8	0. 8	3. 0	0. 0
	220 mm	-	1 7	2 4	9 0	1. 0
Birefringence (t=4mm)	In-plane (Re)	nm	7. 5	7. 0	4. 0	5 0
	Thickness-directional (Rth)	nm	- 3 0	- 2 5	- 1 0	- 6 0
5. Other Properties						
Water absorption (23 ° C, 24 hr)	62 method 1	%	0. 3	0. 3	0. 3	0. 3
Density	1183	g/cm ³	1. 1 9	1. 1 9	1. 1 9	1. 1 9
Rockwell hardness M scale	2039-2	-	1 0 0	1 0 0	1 0 0	1 0 0
Mold shrinkage	ASAHI KASEI PMMA method	%	0.3~0.8	0.3~0.8	0.3~0.8	0.2~0.6

NOT: The above values are representative values of natural colors and are not standard values or guaranteed.

The test piece preparation conditions, annealing conditions, and test conditions in accordance with the conditions specified or recommended by the PMMA resin standard of ISO8257-2. Please use these values as a reference when selecting the most suitable grade for each respective use. In addition, these values may change due to the improvement of properties.

General properties of DELPET™ High Heat-resistant grades

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Item	ISO Method	Unit	980N	981J	982J	PM120N	PM130N
1. Rheological Properties							
Melt mass-flow rate (230℃、37.3N)	1133	g/10min	1.6	1.8	2.0	1.2	1.8
Spiral flow length Thickness : 2 mm Cylinder Temp : 250 ° C Mold Temp : 60 ° C Pressure : 75 MPa	ASAHI KASEI PMMA method	cm	30	28	28	28	27
2. Mechanical Properties							
Tensile modulus	527-2/1A/1	MPa	3600	3400	3300	3500	3300
Tensile strength at break	527-2/1A/5	MPa	77	77	77	77	77
Tensile strain at break	527-2/1A/5	%	4	5	5	5	5
Flexural modulus	178	MPa	3600	3400	3300	3500	3300
Flexural strength	178	MPa	130	130	130	120	130
Charpy impact strength (unnotched)	179/1eU	KJ/m ²	17	17	20	16	16
Charpy impact strength (Notched)	179/1eA	KJ/m ²	1.2	1.2	1.3	1.2	1.2
3. Thermal properties							
Temperature of deflection under load (1.8 MPa)	75-1 75-2	°C	118	110	103	118	110
VICAT softening temperature	306 B 50	°C	123	116	110	123	116
4. Other properties							
Water absorption (23 ° C, 24 hr)	62 method 1	%	0.3	0.3	0.3	0.3	0.3
Density	1183	g/cm ³	1.20	1.20	1.19	1.19	1.19
Refractive index	489	-	1.51	1.50	1.50	1.51	1.50
Total luminous transmittance	13468-1	%	92	92	92	91	92
Rockwell hardness M scale	2039-2	-	103	103	101	103	99
Mold shrinkage	ASAHI KASEI PMMA method	%	0.2~0.6	0.2~0.6	0.2~0.6	0.2~0.6	0.3~0.8

NOTE The above values are representative values of natural colors and are not standard values or guaranteed.

The test piece preparation conditions, annealing conditions, and test conditions in accordance with the conditions specified or recommended by the PMMA resin standard of ISO8257-2. Please use these values as a reference when