Properties of DELPET™ Standard grades

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Property	Method	Units	720V	70FR	560F	560FM	70NH	60N	80NH	80HDF	80N	80NR	80NR-S	80HD	LP-1	80NB
1. Rheological Properties																
Melt mass-flow rate (230℃、3.8kg)	1133 cond 13	g/10min	25.0	21.0	13.0	13.0	10.5	8.0	5.5	2.3	2.0	2.1	2.2	1.8	1.1	0.5
Spiral flow length Thickness:2mm Cylinder Temp:250℃ Mold Temp:60℃ Pressure:75MPa	ASAHIKASEI method	cm	51	44	42	42	40	38	34	−−	27	27	28	26	24	22
2. Mechanical Properties																
Tensile modulus	527-2/1A/1	MPa	3200	3200	3300	3300	3300	3300	3300	3300	3300	3300	3300	3300	3300	3300
Tensile strength at break	527-2/1A/5	MPa	48	54	70	70	67	72	75	77	77	77	77	77	77	77
Tensile strain at break	527-2/1A/5	%	3	4	5	5	5	5	5	6	6	6	6	6	8	8
Charpy impact strength (Unnotched)	179/1eU	KJ/m^2	15	17	20	20	19	20	20	22	22	22	22	22	22	24
Charpy impact strength (Notched)	179/1eA	KJ/m^2	1.2	1.2	1.3	1.3	1.2	1.3	1.3	1.4	1.4	1.4	1.4	1.4	1.4	1.4
3. Thermal properties																
Temperature of deflection under load	75-1 75-2	℃	95	94	88	88	97	91	100	98	100	100	100	98	97	96
VICAT softening temperature	306 B 50	℃	105	102	94	94	105	98	109	108	109	108	108	108	104	104
4. Physical properties																
Water absorption at 23℃	62 method 1	%	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Density	1183	g/cm3	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19
5. Specific properties (not in ISO 10350)																
Refractive index	489	—	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49
Total luminous transmittance	13468-1	%	92	92	92	92	92	92	92	92	92	92	92	92	92	92
Flexural modulus	178	MPa	3200	3200	3200	3200	3200	3300	3300	3300	3300	3300	3300	3300	3300	3300
Flexural strength	178	MPa	87	86	120	120	120	120	120	130	130	130	130	130	130	130
Rockwell hardness	2039-2	M scale	95	95	92	92	95	95	98	98	100	100	100	98	95	95
		R scale														
Mold shrinkage	ASAHIKASEI method	cm/cm	0.002～0.006	0.002～0.006	0.002～0.006	0.002～0.006	0.002～0.006	0.002～0.006	0.002～0.006	0.002～0.006	0.002～0.006	0.002～0.006	0.002～0.006	0.002～0.006	0.002～0.006	0.002～0.006

NOTE: The values in the above Table are representative values obtained using the noted test methods. 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. □

Properties of DELPET™ Bimodal grades

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Property	Method	Units	80N	BIMODAL 80NE	80NB	BIMODAL 80EB
1. Rheological Properties						
Melt mass-flow rate (230℃、3.8kg)	1133 cond 13	g/10min	2.0	1.8	0.5	0.6
Spiral flow length Thickness:2mm Cylinder Temp:250℃ Mold Temp:60℃ Pressure:75MPa	ASAHIKASEI method	cm	27	33	22	27
2. Mechanical Properties						
Tensile modulus	527-2/1A/1	MPa	3300	3300	3300	3300
Tensile strength at break	527-2/1A/5	MPa	77	77	77	77
Tensile strain at break	527-2/1A/5	%	6	6	8	8
Charpy impact strength (Unnotched)	179/1eU	KJ/m^2	22	22	24	24
Charpy impact strength (Notched)	179/1eA	KJ/m^2	1.4	1.4	1.4	1.4
3. Thermal properties						
Temperature of deflection under load	75-1 75-2	℃	100	100	96	98
VICAT softening temperature	306 B 50	℃	109	109	104	107
4. Physical properties						
Water absorption at 23℃	62 method 1	%	0.3	0.3	0.3	0.3
Density	1183	g/cm3	1.19	1.19	1.19	1.19
5. Specific properties (not in ISO 10350)						
Refractive index	489	—	1.49	1.49	1.49	1.49
Total luminous transmittance	13468-1	%	92	92	92	92
Flexural modulus	178	MPa	3300	3300	3300	3300
Flexural strength	178	MPa	130	130	130	130
Rockwell hardness	2039-2	M scale	100	100	95	95
		R scale				
Mold shrinkage	ASAHIKASEI method	cm/cm	0.002～0.006	0.002～0.006	0.002～0.006	0.002～0.006

NOTE: The values in the above Table are representative values obtained using the noted test methods.
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In addition, these values may change due to the improvement of properties. □

Properties of DELPET™ Special grades for light guiding plates

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Property	Method	Units	70FR	70NH	80NH
1. Rheological Properties					
Melt mass-flow rate (230℃、3.8kg)	1133 cond 13	g/10min	21.0	10.5	5.5
Spiral flow length Thickness:2mm Cylinder Temp:250℃ Mold Temp:60℃ Pressure:75MPa	ASAHIKASEI method	cm	44	40	34
2. Mechanical Properties					
Tensile modulus	527-2/1A/1	MPa	3200	3300	3300
Tensile strength at break	527-2/1A/5	MPa	54	67	75
Tensile strain at break	527-2/1A/5	%	4	5	5
Charpy impact strength (Unnotched)	179/1eU	KJ/m^2	17	19	20
Charpy impact strength (Notched)	179/1eA	KJ/m^2	1.2	1.2	1.3
3. Thermal properties					
Temperature of deflection under load	75-1 75-2	℃	94	97	100
VICAT softening temperature	306 B 50	℃	102	105	109
4. Physical properties					
Water absorption at 23℃	62 method 1	%	0.3	0.3	0.3
Density	1183	g/cm3	1.19	1.19	1.19
5. Specific properties (not in ISO 10350)					
Refractive index	489	—	1.49	1.49	1.49
Total luminous transmittance	13468-1	%	92	92	92
Flexural modulus	178	MPa	3200	3200	3300
Flexural strength	178	MPa	86	120	120
Rockwell hardness	2039-2	M scale	95	95	98
		R scale			
Mold shrinkage	ASAHIKASEI method	cm/cm	0.002～0.006	0.002～0.006	0.002～0.006

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Properties of DELPET™ High impact grades

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Property	Method	Units	SR6200	SR6350	SR6500	SR8200	SR8350	SR8500	SRB100	SRG095	SRG097	SRB215	SRB235	SRE255	SRJ259
1. Rheological Properties															
Melt mass-flow rate (230℃、3.8kg)	1133 cond 13	g/10min	4.5	2.2	0.7	1.3	0.7	0.3	4.6	2.2	1.9	3.3	1.6	0.8	5.3
Spiral flow length Thickness:2mm Cylinder Temp:250℃ Mold Temp:60℃ Pressure:75MPa	ASAHIKASEI method	cm	34	30	27	25	24	22	36	28	27	32	26	25	36
2. Mechanical Properties															
Tensile modulus	527-2/1A/1	MPa	2400	1800	1300	2400	1800	1300	2900	2900	2900	2450	2400	2300	2300
Tensile strength at break	527-2/1A/5	MPa	50	40	30	60	40	30	67	60	60	57	55	54	53
Tensile strain at break	527-2/1A/5	%	25	50	70	20	40	55	24	23	23	30	35	40	42
Charpy impact strength (Unnotched)	179/1eU	KJ/m^2	25	60	120	25	75	120	23	30	30	60	65	50	48
Charpy impact strength (Notched)	179/1eA	KJ/m^2	2	3	8	2	3	8	1.2	1.7	1.6	3.3	3.6	3.5	2.5
3. Thermal properties															
Temperature of deflection under load	75-1 75-2	℃	86	82	78	94	89	84	97	99	99	96	97	95	95
VICAT softening temperature	306 B 50	℃	94	87	78	102	94	84	104	106	106	101	102	102	100
4. Physical properties															
Water absorption at 23℃	62 method 1	%	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Density	1183	g/cm3	1.17	1.16	1.14	1.17	1.16	1.14	1.18	1.18	1.18	1.17	1.17	1.17	1.17
5. Specific properties (not in ISO 10350)															
Refractive index	489	—	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49
Total luminous transmittance	13468-1	%	92	92	92	92	92	92	92	92	92	92	92	91	91
Flexural modulus	178	MPa	2400	1800	1300	2400	1800	1300	2900	2900	2900	2450	2400	2300	2300
Flexural strength	178	MPa	100	70	50	100	70	50	113	105	105	98	95	94	85
Rockwell hardness	2039-2	M scale							82	87	87	76	74	72	72
		R scale	116	104	90	118	106	92	0	0	0	0	0	0	0
Mold shrinkage	ASAHIKASEI method	cm/cm	0.003～0.007	0.003～0.008	0.004～0.008	0.003～0.007	0.003～0.008	0.004～0.008	0.003～0.007	0.003～0.007	0.003～0.007	0.003～0.008	0.003～0.008	0.003～0.009	0.003～0.008

NOTE: The values in the above Table are representative values obtained using the noted test methods. 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.

Properties of DELPET™ Heat-resistant grades

AsahiKASEI
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Property	Method	Units	980N	981J	982J	PM120N	PM130N
1. Rheological Properties							
Melt mass-flow rate (230℃、3.8kg)	1133 cond 13	g/10min	1.6	1.8	2.0	1.2	1.8
Spiral flow length Thickness:2mm Cylinder Temp:250℃ Mold Temp:60℃ Pressure:75MPa	ASAHIKASEI 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
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	75-1 75-2	℃	118	110	103	118	110
VICAT softening temperature	306 B 50	℃	123	116	110	123	116
4. Physical properties							
Water absorption at 23℃	62 method 1	%	0.3	0.3	0.3	0.3	0.3
Density	1183	g/cm3	1.20	1.20	1.19	1.19	1.19
5. Specific properties (not in ISO 10350)							
Refractive index	489	—	1.51	1.50	1.50	1.51	1.50
Total luminous transmittance	13468-1	%	92	92	92	91	92
Flexural modulus	178	MPa	3600	3400	3300	3500	3300
Flexural strength	178	MPa	130	130	130	120	1300
Rockwell hardness	2039-2	M scale	103	103	101	103	99
		R scale					
Mold shrinkage	ASAHIKASEI method	cm/cm	0.002～0.006	0.002～0.006	0.002～0.006	0.002～0.006	0.002～0.006

NOTE: The values in the above Table are representative values obtained using the noted test methods. Please use these values as a reference when selecting the most suitable grade for each respective use.
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Properties of DELPET™ Filter grades

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Property	Method	Units	FILA72、FILA82	FILB72・FILB82
1. Rheological Properties				
Melt mass-flow rate (230℃、3.8kg)	1133 cond 13	g/10min	8.0	2.0
Spiral flow length Thickness:2mm Cylinder Temp:250℃ Mold Temp:60℃ Pressure:75MPa	ASAHIKASEI method	cm	38	27
2. Mechanical Properties				
Tensile modulus	527-2/1A/1	MPa	3300	3300
Tensile strength at break	527-2/1A/5	MPa	72	77
Tensile strain at break	527-2/1A/5	%	5	6
Charpy impact strength (Unnotched)	179/1eU	KJ/m^2	20	22
Charpy impact strength (Notched)	179/1eA	KJ/m^2	1.3	1.4
3. Thermal properties				
Temperature of deflection under load	75-1 75-2	℃	91	100
VICAT softening temperature	306 B 50	℃	98	109
4. Physical properties				
Water absorption at 23℃	62 method 1	%	0.3	0.3
Density	1183	g/cm3	1.19	1.19
5. Specific properties (not in ISO 10350)				
Refractive index	489	—	—	—
Total luminous transmittance	13468-1	%	—	—
Flexural modulus	178	MPa	3300	3300
Flexural strength	178	MPa	120	130
Rockwell hardness	2039-2	M scale	95	100
		R scale		
Mold shrinkage	ASAHIKASEI method	cm/cm	0.002～0.006	0.002～0.006

NOTE: The values in the above Table are representative values obtained using the noted test methods.
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. ☐

Properties of DELPET™ High jet black (PIANO BLACK) "PB Series"

AsahiKASEI
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Property	Method	Units	PB01	BIMODAL PB21	BIMODAL PB22
1. Rheological Properties					
Melt mass-flow rate (230℃、37.3N)	1133	g/10min	2.0	1.8	0.6
Spiral flow length Thickness:2mm Cylinder Temp:250℃ Mold Temp:60℃ Pressure:75MPa	ASAHIKASEI method	cm	27	33	27
2. Mechanical Properties					
Tensile modulus	527-2/1A/1	MPa	3300	3300	3300
Tensile strength at break	527-2/1A/5	MPa	77	77	77
Tensile strain at break	527-2/1A/5	%	6	6	8
Charpy impact strength (Unnotched)	179/1eU	KJ/m^2	22	22	24
Charpy impact strength (Notched)	179/1eA	KJ/m^2	1.4	1.4	1.4
3. Thermal properties					
Temperature of deflection under load	75-1 75-2	℃	100	100	98
VICAT softening temperature	306 B 50	℃	108	108	106
4. Physical properties					
Water absorption at 23℃	62 method 1	%	0.3	0.3	0.3
Density	1183	g/cm3	1.19	1.19	1.19
5. Specific properties not specified in ISO 10350					
Refractive index	489	—	—	—	—
Total luminous transmittance	13468-1	%	—	—	—
Flexural modulus	178	MPa	3300	3300	3300
Flexural strength	178	MPa	130	130	130
Rockwell hardness	2039-2	M scale	100	100	100
		R scale			
Mold shrinkage percent	ASAHIKASEI method	cm/cm	0.002～0.006	0.002～0.006	0.002～0.006

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Please use these values as a reference whene selecting the most suitable grade for each respactive use.
In addition, these values may change due to the improvement of properties.