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DESIGNER GLASS

LIST OF PHYSICAL PROPERTY  
OF SUBLISTYLE MEDIA

List of Physical Property of Sublistyle Media

Test Item		Test Conditions		Backlit			Trans			Remarks
				Glossy Type	Matt Type	--	Glossy Type	Matt Type	Matt Type	
				Back-adhesive (low adhesive)		Front-adhesive (low adhesive)	Back-adhesive (Perm. adhesive)	Back-adhesive (Perm. adhesive)	Non-adhesive	
Thickness (μ)		Film		180	150	150	220	Dial Gauge		
		Adhesive		33	33	33	--			
Adhesive Strength (N/inch)	72 Hours after application on substrate	Stainless Steel Panel		10 ± 2			20 ± 3		--	Pulling Speed 200mm/min Peeling angle:180° Sample width: 25mm Condition after application on substrate 20±2°C 65±5%RH
		Aluminum Panel		7 ± 2			20 ± 3		--	
		ABS Panel		9 ± 2			11 ± 2		--	
		Acrylic Panel		8 ± 2			20 ± 3		--	
		Polycarbonate Panel		9 ± 2			17 ± 2		--	
Dimensional Stability	Shrinkage when image transferred (%)	160°C x 7 min	MD	Below +0.7	Below +0.7	Below +0.7	Below +0.7	Below +0.7	Substrate: Aluminium Panel Sample Size: 100x100mm	
			TD	Below +0.2	Below +0.2	Below +0.2	Below +0.2	Below +0.2		
	Shrinkage when meda image transferred applied to substrate (%)	80°C x 48 hours	MD	0	0	0	0	0		
			TD	0	0	0	0	0		
Water Resistance		23°C x 168 Hours		No effect	No effect	No effect	No effect	No effect	Substrate: Aluminium Panel	
Chemical Resistance	Salt Water	5 Hours		No effect	No effect	No effect	No effect	No effect	Immersion method  Observation of surface when each chemical 0.5cc dropped on and reoved after 5 hours	
	0.1N HCl	5 Hours		No effect	No effect	No effect	No effect	No effect		
	0.1N NH <sub>4</sub> OH	5 Hours		No effect	No effect	No effect	No effect	No effect		
	Ethanol	5 Hours		No effect	No effect	No effect	No effect	No effect		
	Kerosene	5 Hours		No effect	No effect	No effect	No effect	No effect		
	Gasoline	5 Hours		No effect	No effect	No effect	No effect	No effect		
	Engine Oil	5 Hours		No effect	No effect	No effect	No effect	No effect		
Resistance to Accelerated Weathering	Sunshine 1000 Hours	≡	Cyan	Below 10	Below 10	Below 10	Below 10	Below 10	Black panel: 63 ± 3°C Water spray: 18min/120min Ink: Sublistlye Ink	
			Yellow	Below 5	Below 5	Below 5	Below 5	Below 5		
			Magenta	Below 10	Below 10	Below 10	Below 10	Below 10		
			Black	Below 10	Below 10	Below 10	Below 10	Below 10		
		Specular Gloss retention (%)	Over 90	Over 90	Over 90	Over 90	Over 90	JIS Z 8741 60° Specular Gloss		
Resistance to Outdoor Exposure	Exposure to South at 45°  1 year	≡	Cyan	Below 10	Below 10	Below 10	Below 10	Below 10	North Latitude: 34° 13' 28" East Latitude: 135° 19' 18"	
			Yellow	Below 5	Below 5	Below 5	Below 5	Below 5		
			Magenta	Below 15	Below 15	Below 15	Below 15	Below 15		
			Black	Below 10	Below 10	Below 10	Below 10	Below 10		
		Specular Gloss retention (%)	Over 90	Over 90	Over 90	Over 90	Over 90	JIS Z 8741 60° Specular Gloss		



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Test Item		Test Conditions		Reflective	White		Blackthrough	Remarks
				Glossy Type	Matt Type	Matt Type	--	
				Back-adhesive (Low adhesive)	Back-adhesive (Low adhesive)	Back-adhesive (Perm. adhesive)	Back-adhesive (Perm. adhesive)	
Thickness (μ)		Film		160	150		105	Dial Gauge
		Adhesive		43	33		20	
Adhesive Strength (N/inch)	72 Hours after application on substrate	Stainless Steel Panel		10 ± 2		20 ± 3	7 ± 1	Pulling Speed 200mm/min Peeling angle: 180° Sample width: 25mm Condition after application on substrate 20±2°C 65±5%RH
		Aluminum Panel		7 ± 2		20 ± 3	9 ± 1	
		ABS Panel		9 ± 2		11 ± 2	7 ± 1	
		Acrylic Panel		8 ± 3		20 ± 3	6 ± 1	
		Polycarbonate Panel		9 ± 2		17 ± 2	6 ± 1	
Dimensional Stability	Shrinkage when image transferred (%)	160°C x 7 min	MD	Below +0.7	Below +0.7	Below +0.7	Below +0.7	Substrate: Aluminium Panel Sample Size: 100x100mm
			TD	Below +0.2	Below +0.2	Below +0.2	Below +0.2	
	Shrinkage when media image transferred applied to substrate (%)	80°C x 48 hours	MD	0	0	0	0	
			TD	0	0	0	0	
Water Resistance		23°C x 168 Hours		No effect	No effect	No effect	No effect	Substrate: Aluminium Panel
Chemical Resistance	Salt Water	5 Hours		No effect	No effect	No effect	No effect	Immersion method  Observation of surface when each chemical 0.5cc dropped on and reoved after 5 hours
	0.1N HCl	5 Hours		No effect	No effect	No effect	No effect	
	0.1N NH <sub>4</sub> OH	5 Hours		No effect	No effect	No effect	No effect	
	Ethanol	5 Hours		No effect	No effect	No effect	No effect	
	Kerosene	5 Hours		No effect	No effect	No effect	No effect	
	Gasoline	5 Hours		No effect	No effect	No effect	No effect	
	Engine Oil	5 Hours		No effect	No effect	No effect	No effect	
Resistance to Accelerated Weathering	Sunshine 1000 Hours	☼	Cyan	Below 10	Below 10	Below 10	Below 10	Black panel: 63 ± 3°C Water spray: 18min/120min Ink: Sublistyle Ink
			Yellow	Below 5	Below 5	Below 5	Below 5	
			Magenta	Below 10	Below 10	Below 10	Below 10	
			Black	Below 10	Below 10	Below 10	Below 10	
		Specular Gloss retention (%)		Over 90	Over 90	Over 90	Over 90	JIS Z 8741 60° Specular Gloss
Resistance to Outdoor Exposure	Exposure to South at 45°  1 year	☼	Cyan	Below 10	Below 10	Below 10	Below 10	North Latitude: 34° 13' 28" East Latitude: 135° 19' 18"
			Yellow	Below 5	Below 5	Below 5	Below 5	
			Magenta	Below 15	Below 15	Below 15	Below 15	
			Black	Below 10	Below 10	Below 10	Below 10	
		Specular Gloss retention (%)		Over 90	Over 90	Over 90	Over 90	JIS Z 8741 60° Specular Gloss

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Pencil Hardness	JIS K 5400	2H	2H	2H	2H	Judged by torn coating
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