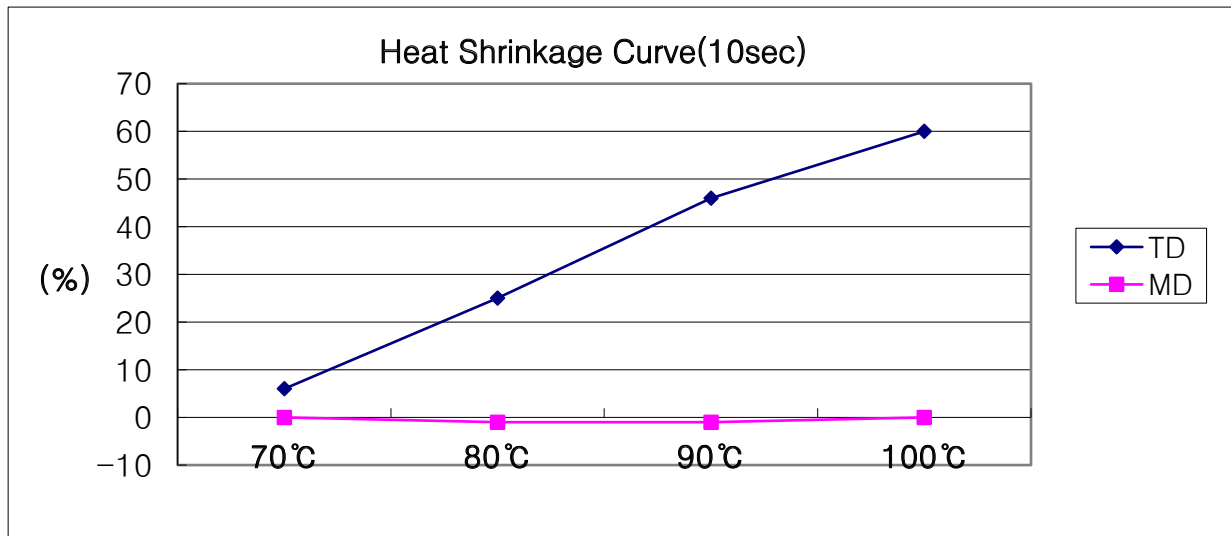


Technical Data Sheet

ECO PP – NS

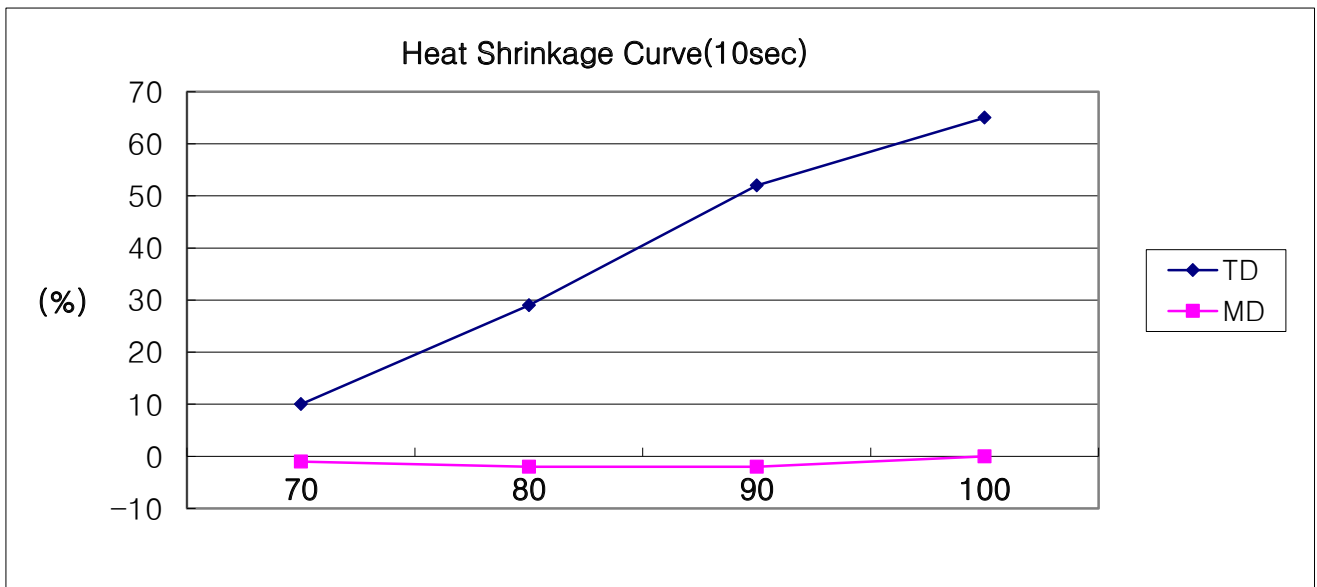
Physical Properties		Unit	TD	MD	Test Method
Thickness		μm	45 micron (±3 micron)		Digimatic Micrometer
Density		g/cm ³	0.93		
Tensile Strength		kgf/cm ²	911.5	155.2	ASTM D 882
Elongation		%	39.1	270.9	
Tear Resistance		kgf/cm	1290.1	217.6	ASTM D 1938
Surface Resistance		Ω	10 ¹³		JIS 61340
Stiffness		gf	4.9		–
Haze		%	2.6		ASTM D 1003
Dyne±		dyne	34		–
Coefficient of Friction	In-side	–	0.26		ASTM D1894
	Out-side		0.28		
Heat Shrinkage (10 sec in water Tolerance : ± 3%)	70°C	%	6	0	Soaking into Hotwater 10sec
	80°C		25	-1	
	90°C		46	-1	
	100°C		60	0	



* This information is based on currently available technical materials and data and is subject to change due to new experience and knowledge.

* This information is made to provide information only and does not guarantee anything.

Physical Properties		Unit	Tolerance	TD	MD	Test Method	
Thickness		μ m	($\pm 3 \mu$ m)	50		Digimatic Micrometer	
Density		g/cm ³	-	0.93			
Tensile Strength		kgf/cm ²	TD : 650< MD : 140<	716.4	151.8	ASTM D 882	
Elongation		%	TD : 25< MD : 200<	38.3	242.3		
Tear Resistance		kgf/cm	TD : 900< MD : 170<	1002.6	192.2	ASTM D 1938	
Surface Resistance		Ω	10 ¹²⁻¹³	10 ¹³		JIS 61340	
Stiffness		gf	5.8<	6.2		-	
HAZE		%	<3.5	2.8		ASTM D 1003	
Coefficient of Friction	In-side	-	<0.32	0.28		ASTM D 1894	
	Out-side			0.30			
Heat Shrinkage (10 sec in water Tolerance : $\pm 3\%$)	70 $^{\circ}$ C	%	7~13	-2~0	10	-1	Soaking into Hotwater 10sec
	80 $^{\circ}$ C		28~35	-3~-2	29	-2	
	90 $^{\circ}$ C		51~55	-2~-1	52	-2	
	100 $^{\circ}$ C		64~66	-1~0	65	0	

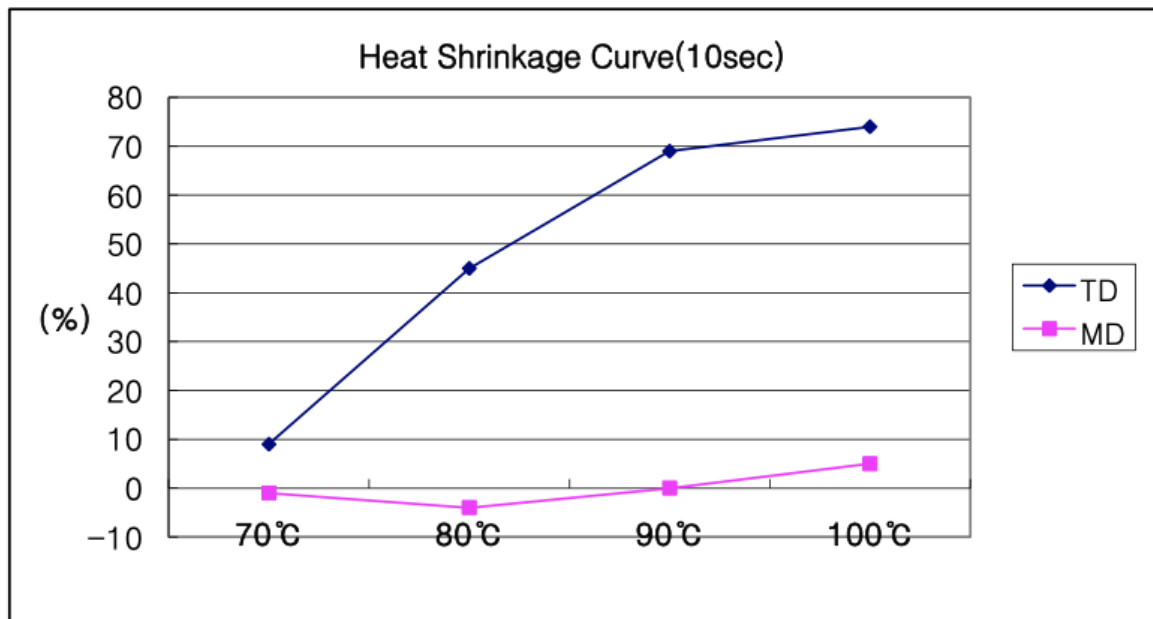


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Technical Data Sheet OPS – NS

Physical Properties		Unit	TD	MD	Test Method
Thickness		μm	40~50 micron (±3 micron)		Digimatic Micrometer
Density		g/cm ³	1.05		
Tensile Strength		kgf/cm ²	650~900	200~300	ASTM D 882
Elongation		%	30~80	100~400	
Tear Resistance		kgf/cm	950~1400	200~400	ASTM D 1938
Surface Resistance		Ω	10 ^{12~15}		JIS 61340
Coefficient of Friction	In-side	-	0.23~0.3		ASTM D 1894
	Out-side		0.23~0.3		
Heat Shrinkage (10 sec in water Tolerance : ± 3%)	70°C	%	5~15	-2~-1	Soaking into Hotwater 10sec
	80°C		36~45	-5~-3	
	90°C		65~70	-2~0	
	100°C		71~74	~5	



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