



## Clear Shrink Sleeve OPS Stock #2188

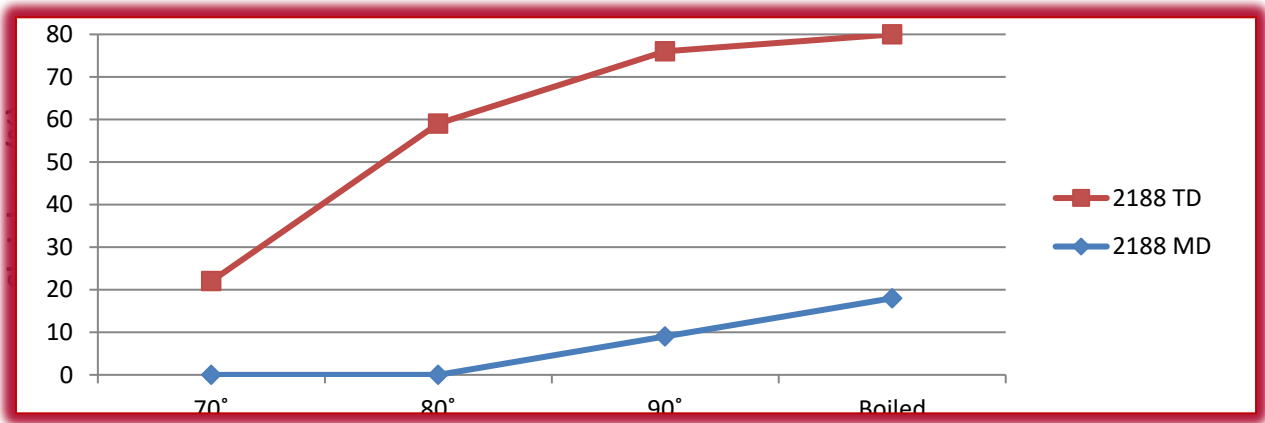
OPS film has prominent features such as high shrinkage and low-temperature shrinkability, which is specialized for great shrinkable properties. OPS film is suitable for various types of bottle/container shapes. OPS is the most popular material for shrink sleeves in Japanese market, great for squeezable containers.

- Easy to peel off the labels by good perforation
- No smiling curve with less shrink force
- No wrinkles and strains with moderate shrink curve
- Low-temperature shrinkability can save your energy cost and avoid looseness between the bottles and the sleeves.

50 Micron shrinks at low temperature with high shrinkage. Great performance as full-shrink labels, for cosmetic and everyday products.

Physical Properties		Unit	2188 Type 50 µm		Test Method
Optical Brightening			No		-
Tensile Strength		MPa	38	95	JIS K-6732
Elongation		%	350	65	
Impact Strength		J	0.80		Impact Tester (Small)
Haze		%	3.4		ASTM D-1003
Gloss		%	175		JIS Z-8741
Surface Resistance	Out-side	Ω	10 <sup>12</sup>		JIS K-6911
	In-side		10 <sup>14</sup>		
Dynamic Friction Coefficient	Out-side	-	0.30		ASTM D-1894
	In-side		0.50		
Shrinkage	70°C	%	-2	23	WATER BATH, 10 SEC
	80°C		-2	57	
	90°C		6	73	
	Boiled		16	78	
Natural Shrinkage		%	-0.1	0.5	30°C X 7 DAYS
			-0.4	4.0	40°C X 7 DAYS
Shrink Stress		N/10mm	1.6		80°C

### Heat Shrinkage Curve (10 sec)



Temperature (C°)