

LEAD TAB FILM



Characteristics of Tab Film

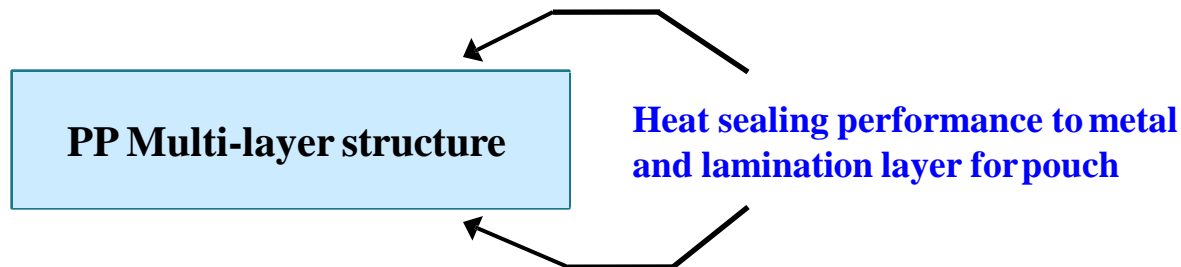
❑ Dimension

- Films with different thickness and width are available.
- Typical film thickness is 0.08 and 0.1mm.



❑ Film characteristics

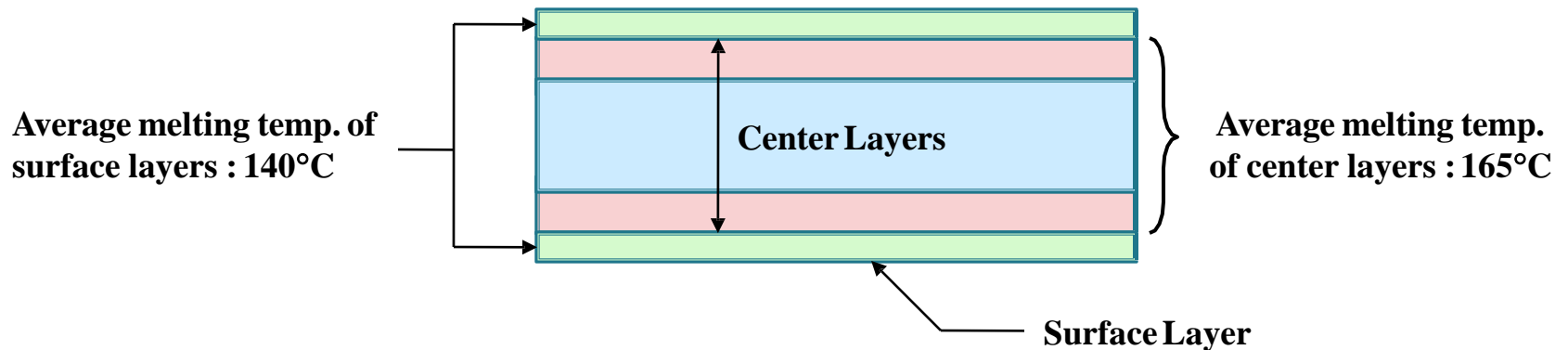
- Since both sides of film have same characteristics, they can be used interchangeably as metal adhesive and lamination layer for Al pouch.
- Balanced material design gives excellent insulation properties as well as superior heat sealing performance to metal and lamination layer for pouch.



Characteristics of Tab Film

□ Thermal Behavior of Tab Film

- Thermal properties of tab film have been designed to achieve perfect sealing and accommodate high speed process of modern automatic tab machine.
- Different multi-layer structures have been developed to the demand of various types of lithium ion battery.
- The standard tab film has a following thermal behavior. However, the highly experienced material engineers can provide tab films having different thermal behaviors tailored to meet the needs of our customers.

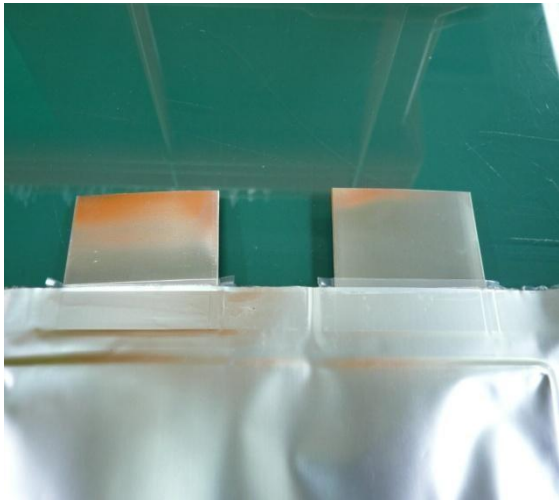


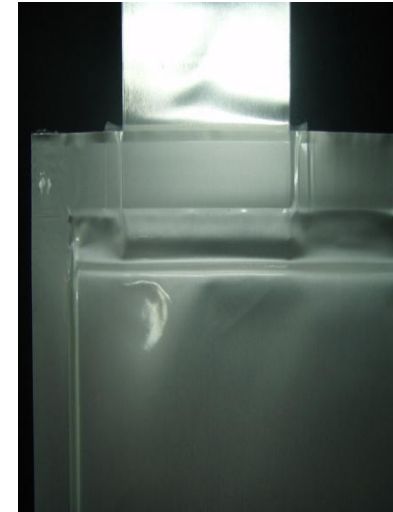
Basic Properties of Tab Film

Film Characteristics		Unit	
Film thickness		μm	100
Tensile modulus		MPa	395
Yield stress		MPa	17.4
Elongation at break		%	850
Peel strength of heat-laminated film (Al/film)	Before electrolyte immersion test*	N/10mm	> 40
	After electrolyte immersion test	N/10mm	> 40
Recommended film temperature for metal/film adhesion		°C	140~150

*85°C and 24 hr electrolyte immersion test (electrolyte composition: EC : DEC : EMC = 1:1:1 and 1MLiPF₆)

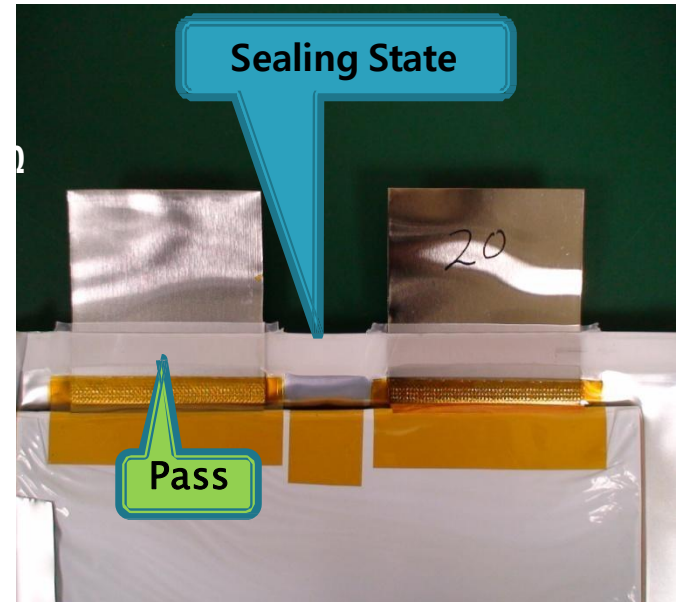
Tab(Top) Sealing of Tab Film

Tab sealing									
photograph									
Setting Temp	200°C								
Measured Temp	<table border="1"> <tbody> <tr> <td></td> <td>184</td> <td>191</td> <td>191</td> </tr> <tr> <td></td> <td>181</td> <td>191</td> <td>191</td> </tr> </tbody> </table>		184	191	191		181	191	191
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Pressure	0.3 MPa								
time	3 sec								
Thickness (um)	250±20 / 360±20 / 640±20								



Insulation Test of Tab Film

- ① Model : 150*202 [Al TAB 45mm(w) 300 μ m(t) _ Ni/Cu 45mm(w) 200 μ m(t)]
- ② Condition : Top Sealer (Temp: 210°C / TIME: 5 sec / pressure: 3.5 bar) INSULATION TEST (50V 200M Ω)
- ③ Test Quantity: 20 Cell



Vacuum Test of Tab Film

- ① Model : 150*202 [Al Tab 45mm (w) 300 μ m(t) _ Ni/Cu Tab 45mm (w) 200 μ m(t)]
- ② Condition: Dry Oven Vacuum Chamber (85°C, 30 minute)
- ③ Test Quantity: 10 Cell

