Neutek International HK Ltd.

PET
Micropore Membrane
Battery Separator

Discover the magic now!

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Thermal shrinkage performance

- It was found by thermal shrinkage experiment that at 120℃, conventional PP/PE separator already appeared significant contraction; at 170℃, it was fully shrank and deformed. Whereas the longitudinal thermal shrinkage rate of PET separator at 200℃ was only 1.17%.
- PET separator has the characteristics of high melting point with minor shrinkage and deformation; the safety factor is relatively high when using the battery.

TEST ITEM			PET	UBE
Material			PET	PP/PE/PP
Thickness (μm)			12	40
Thermal Shrinkage (%)	100℃	Lateral	---	---
		Longitudinal	---	3.00
	120℃	Lateral	---	---
		Longitudinal	---	21.25
	150℃	Lateral	1.00	30.71
		Longitudinal	---	29.00
	170℃	Lateral	2.25	×
		Longitudinal	---	×
	200℃	Lateral	0.89	×
		Longitudinal	1.17	×

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Stretch resistant strength

- The transverse strength of stretching separator is poor, whereas PET has very strong transverse stretching strength.

	Thickness	Transverse stretching strength Mpa
PET Membrane	10μ	106
stretching separator	25μ	18

Infiltration

- PET separator is quick in suction and even distribution of electrolyte.
- Stretching separator is slow in infiltration, it requires vacuum standing for the separator to absorb and fill up with electrolyte.
- By comparing the volume of absorbed fluid, although the thickness of PET separator is one-half of the stretching separator; the absorbed volume are same.

Electrochemical performance

- For the batteries made with PET separator, due to the separator is good for infiltration of electrolyte, which let the electrode fully exert the power hence the total capacity of charge and discharge is much greater than the batteries made with stretching separator.

- The remaining capacity of the battery made with PET separator after 1000 cycles of 2C charge-discharge is around 70%. While the capacity of the battery made with stretching separator during 2C charge-discharge is comparatively low.

PET Separator vs. PP/PE Separators

Advantage of PET Micropore Membrane Lithium Battery Separator :

- Excellent electrolyte infiltration
- High melting point
- High capacity
- High stretch resistance
- Fast Charge / Discharge
- High safety factors

PET Micropore Membrane Battery Separator

Neutek tailor-made the
PET Micropore Membrane Battery Separator
for the specific needs of each customer

Talk to us now and you know the difference!

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