

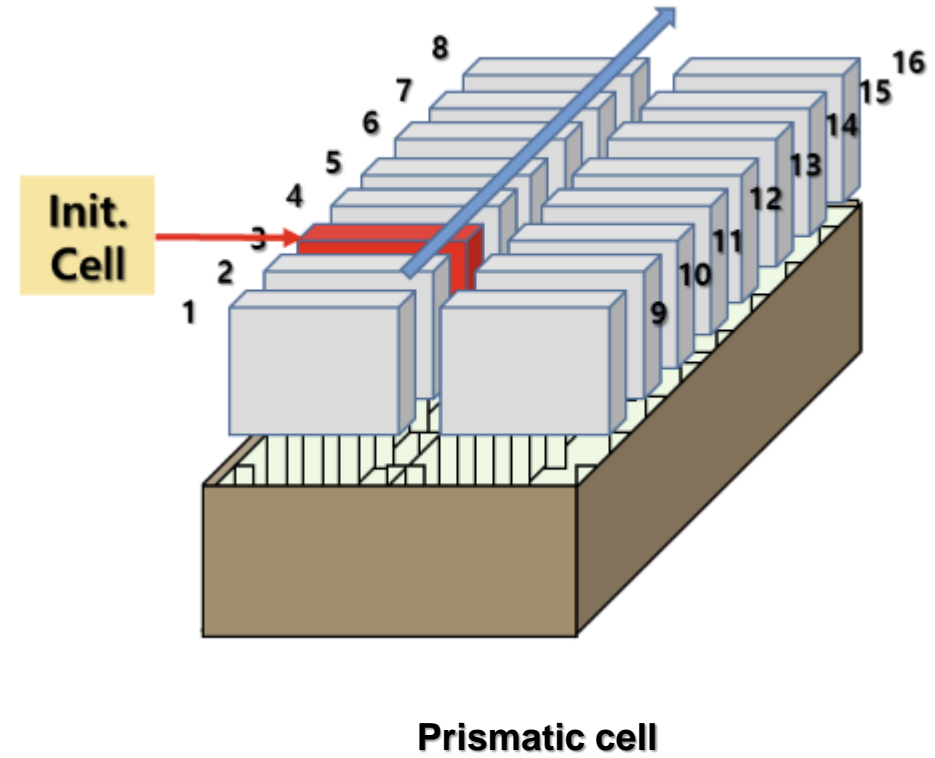
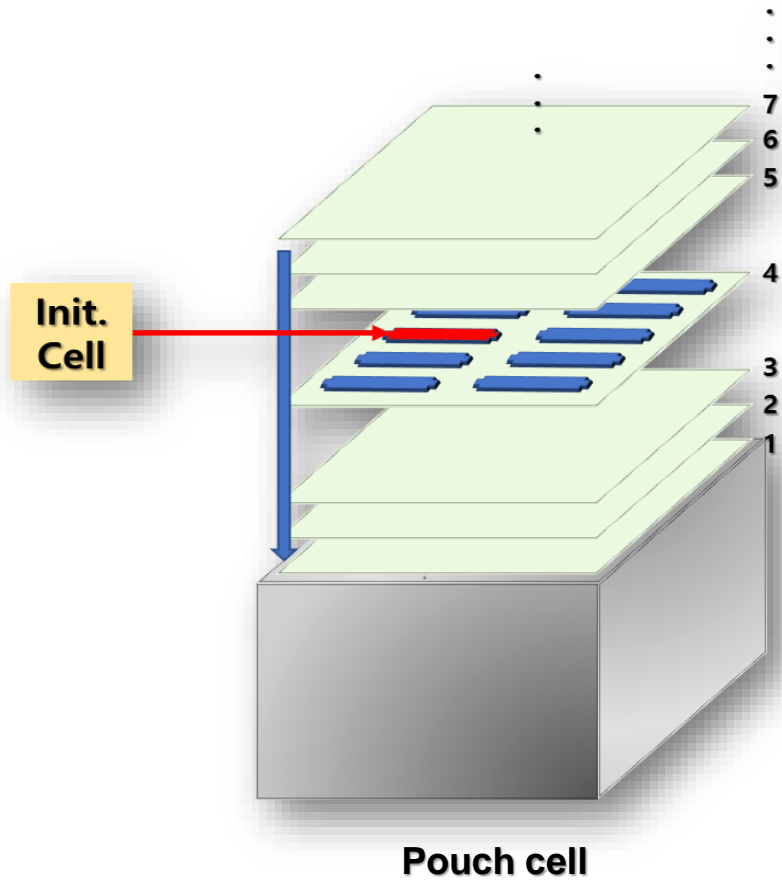
# **Classification test results with packaging**

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**2023. 12.**

**KOREA**

# Example of test set-up



❖ The arrangement of cells within the packaging may vary depending on the type of cell.

# Test results

	Cell Type	Package specification (Material)	Cell quantity/ 1 package	TR (Target cell)	TP (Adjacent cells)	External Fire	External Smoke	Max. Temperature (°C, Package)	Classification
1	Pouch (3.65 V 75 Ah)	Outside: Aluminum	40 EA	O	O (TR : 4 Cells)	X	X	26.5 °C (No increase)	7
		Inside: ABS+PP							
2	Pouch (3.65 V 55.6 Ah)	Outside: Aluminum	500 EA	O	X	X	O	22 °C	3
		Inside: ABS+PP							
3	Pouch (3.65 V 55.6 Ah)	Outside: Aluminum	500 EA	O	X	X	O	22 °C	3
		Inside: ABS+PP							
4	Pouch (3.65 V 55.6 Ah)	Outside: Paper Box	18 EA	O	O (TR : 18 Cells)	O	O	660 °C	8
		Inside: PET							
5	Prismatic (3.65 V 112 Ah)	Outside: Paper Box	16 EA (full)	O	X	X	O	N.A.	3
		Inside: PET							
6	Cylindrical (3.65 V 5 Ah)	Outside: Paper Box	9 EA (part, 9/130)	O	O (TR : 1 Cells)	O	O	N.A.	8
		Inside: PP							



Before

No TP(smoke only)



Before

No TP(smoke only)

# Conclusion

1. After conducting the TP test on the battery cells in the packaging, it was demonstrated that there is feasibility in establishing the classification level.
2. TP hazard depend on the separation distance between cells, packaging material, cell type and arrangement in the package, such as laying down, upright, vertical or horizontal arrangement.
3. There was no external fire and TP when packaging materials were non-combustible(#2, #3 test) or distance between cells was maintained(#5 test).