

File MH48131
Project 10CA59371

April 08, 2011

REPORT

On

UNLISTED COMPONENT - Lithium Batteries

for use only in
Rechargeable Lithium cells

Globtek (Hong Kong) Ltd
Kowloon, HK

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DESCRIPTION

PRODUCT COVERED:

Component - Battery separators:

Part Nos.
2325

PARAMETERS SPECIFICATIONS:

See Table IA and IB for parameters specifications

GENERAL MATERIAL COMPOSITION:

Part No.	Generic material(s) specification
2325	PP + PE

TECHNICAL CONSIDERATIONS (NOT FOR FIELD REPRESENTATIVE'S USE):

The products are lithium ion battery separators which are essentially a porous membrane of insulating material(s) intended to provide electrical insulation between the electrodes of a lithium ion battery while also allowing for ion transport between the electrodes. The separators have various parameter specifications related to the material and structural properties of the material and that are determined through testing.

Use - For use only in products where the acceptability of the combination is determined by Underwriters Laboratories Inc.

Conditions of Acceptability - The following are among the considerations to be made in judging the use of this material in an end-use product.

1. The separators have been evaluated for the parameters outlined in Tables IA and IB. These parameters identify the general characteristics of the separator. However, the overall suitability of the separator and lithium ion cell combination shall be determined in the lithium ion cell evaluation.

2. The separator must be sized appropriately in the cell so that it can maintain isolation between the electrodes during the life of the cell. Therefore, the overall dimensions of the separator and the amount the separator overlaps the electrodes shall be documented in the cell construction evaluation.

MARKINGS

The separator is marked either on the material, wrapper or, roll or smallest shipping container with the following information:
Manufacturer's name, part number

INSTRUCTIONS

The separator is provided with instructions containing its parameter specifications and intended chemistry as well as instructions on the proper storage, handling and installation of the separator for lithium ion battery manufacturing.

TABLE IA
SEPARATOR PARAMETERS

Part No.	Permeability (secs/25/ml)	Thickness, μm	Tensile Strength kg-f/cm^2	
			Machine	Transverse
2325	19-29	25 \pm 2	≥ 1700	≥ 150

TABLE IB
SEPARATOR PARAMETERS

Part No.	Puncture Strength (g-f/mm)	Dimensional Stability* (g-f/mm)		Shutdown Temp, °C	Melt Temp, °C
		MD	TD		
2325	380	= \pm 5%	= \pm 1%	130 \pm 5	155
* - During the dimensional stability test, the puncture strength test is repeated on samples subjected to conditioning for 1 hour at 130 \pm 2°C.					

TEST RECORD NO. 1

GENERAL:

This test record covers the addition of Unlisted Component cell separators description, type 2325 by USA Celgard, for compliance according to the Standard for Lithium Batteries, UL 1642, Fourth Edition dated September 19, 2005 with revised date November 25, 2009.

No testing was considered necessary.

Test Record Summary:

The results of this investigation, including construction review and testing, indicate that the products evaluated comply with the applicable requirements in Standard for Lithium Batteries, UL 1642, Fourth Edition dated September 19, 2005 with revised date November 25, 2009 and, therefore, such products are judged eligible to bear UL's Mark as described on the Conclusion Page of this Report. Any information and documentation involving UL Mark services are provided on behalf of Underwriters Laboratories Inc. (UL) or any authorized licensee of UL.

CONCLUSION

Samples of the components covered by this Report have been found to comply with the requirements covering the category and the components are found to comply with UL's applicable requirements covering the category for factory installed components for this Applicant's Listed, Classified or Recognized basic equipment. The description and test result in this Report are only applicable to the sample(s) investigated by UL and does not signify the product(s) described as being covered under UL's Follow-Up Service Program. When covered under UL's Follow-Up Service Program, the manufacturer is authorized to use the specific identification marking described in the Follow-Up Service Procedure on such products which comply with said Procedure and any other applicable requirements of Underwriters Laboratories Inc. The specified marking on the product or on the smallest unit container in which the product is packaged, is the only method to identify products investigated by UL to published requirements.

This Report is intended solely for the use of UL and the Applicant for establishment of UL certification coverage of the product under UL's Follow-Up Service. Any use of the Report other than to indicate that the sample(s) of the product covered by the Report has been found to comply with UL's applicable requirements is not authorized and renders the Report null and void. UL shall not incur any obligation or liability for any loss, expense, or punitive damages, arising out of or in connection with the use or reliance upon the contents of this Report to anyone other than the Applicant as provided in the agreement between UL and Applicant. Any use or reference to UL's name or certification mark(s) by anyone other than the Applicant in accordance with the agreement is prohibited without the express written approval of UL. Any information and documentation involving UL Mark services are provided on behalf of Underwriters Laboratories Inc. (UL) or any authorized licensee of UL.

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