



NOTICE OF AUTHORIZATION TO APPLY THE UL MARK

2007-11-15

Mr. Shaodun He
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China

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Reference: File E203950 Project 07SC05077 P.O. Number Y Shore
Evaluation of Tubing Cat No. SBRS using Modified Jacket Material Compound, reduced liner
Product: thickness and Upgrade From 105C To 125C; 600X, All Colors Except Clear, VW-1 Flame, UR
And c-UR.

Dear Mr. Shaodun He,

Any information and documentation involving UL Mark services are provided on behalf of Underwriters Laboratories Inc. (UL) or any authorized licensee of UL.

UL's investigation of your product has been completed under the above project number and the subject product was determined to comply with the applicable requirements.

This letter temporarily supplements the UL Follow-Up Services Procedure and serves as authorization to apply the UL Recognized Marking and/or Recognized Component Mark only at the factory under UL's Follow-Up Service Program to the subject product, which is constructed as described below:

Identical to Cat. No. SBRS, which was submitted to UL for this investigation. The UL Records covering the product will be in the Follow-Up Services Procedure, File E203950, Volume 2. Section 3.

This authorization is effective from the date of this Notice and only for products at the indicated manufacturing locations. Records in the Follow-Up Services Procedure covering the product are now being prepared and will be sent to the indicated manufacturing locations in the near future. Please note that Follow-Up Services Procedures are sent to the manufacturers only unless the Applicant specifically requests this document.

Products that bear the UL Mark shall be identical to those that were evaluated by UL and found to comply with UL's requirements. If changes in construction are discovered, appropriate action will be taken for products not in conformance with UL's requirements and continued use of the UL Mark may be withdrawn.

Sincerely,

Leesa Hansen

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DESCRIPTION

PRODUCT COVERED:

USR, CNR: Component - Extruded Electrical Tubing, Flexible Heat-Shrinkable Polyolefin Tubing with meltable liner, are Recognized with the following ratings:

Cat. No.	Colors	Recovered ID of jacket [#] , mm	Temp. Rating, Deg. C	Voltage Rating, V	Flame Rating
SBRS	All colors except clear	1.0 - 42.0	125	600	VW-1

- Tubing, excluding liner.

USR: United States Standard Recognized.


CNR: Canadian National Standard Recognized.

GENERAL:

The tubing contained in this Report is constructed in accordance with the Bi-National Standard for Extruded Insulating Tubing, UL 224, Fifth Edition, and with the Canadian Standard for Insulating Tubing, CSA 22.2, No. 198.1, Second Edition.

MARKING:

Full Recognized company name or File Number "E203950", catalog number, voltage rating, temperature rating in degrees C, inside diameter (before and after recovery) and date of manufacture shall be marked on tags attached to both ends of the tubing, on the shipping spool label, or on the smallest unit container.

The markings shall include the Recognized Component Mark for Canada,  in order to be considered UL Canadian Certified.

OPTIONAL MARKING:

May be marked "VW-1".

CONSTRUCTION DETAILS:

The tubing shall conform to the appropriate wall thickness and dimension table in UL 224 and to the following:

Cat. No.	Recovered ID of jacket [#] , mm	Jacket Material	Jacket Color	Liner Color	Compounds
SBRS	1.0 - 42.0 See Table I	Polyolefin	All colors except clear	White	See Table II

[#] - Excluding liner

Jacket - Tubing, excluding liner

Table I - Liner thickness, recovered:

Recovered jacket ID, excluding liner, mm	Average meltable liner Wall thickness ^{##} , mm
1.0 - 42.0	0.062

^{##} - Not to exceed 10%

Maximum Expansion Ratio:

Cat. No. SBRS may be expanded up to a maximum of 318% of its original extruded diameter.

Table II

According to the manufacturer, the following is the composition formulation used for tubing and liner material of Cat. No. SBRS.

Raw Component Material	Material Grade Designation	Material Manufacture	% of each material
Outer Tubing -			
EVA	<u>14-2</u>	Beijing Organic Chemical Plant (BOCP)	44
PE	mLLDPE	Total Petrochemicals, USA	6
Aluminum hydroxid	Powder	Aluminum Corporation of China Ltd (CHAICO)	20
Retardant Saytex	8010	Albemarle	20
Anti-oxygen	1010	Ciba	0.5
Anti-oxygen	Chel-180	Ciba	0.5
Anti-oxygen	P-EPQ	Ciba	0.3
Pigment and colorants	-	Polyone	3.7
Meltable Adhesive -			
EVA - white color	9918A	Five Win Enterprise Co Ltd	93
Anti-oxygen	BHH	Ciba	0.5
Retardant Saytex	8010	Albemarle	5
Antimony Oxide (Sb ₂ O ₃)	Powder	Jiefu Corporation	1.5

Table III -

According to the manufacturer, the following is the composition formulation used for tubing material of Cat. No. SBRS.

Raw Component Material	Material Grade Designation	Material Manufacture	% of each material
Outer Tubing -			
EVA	<u>14-2</u>	Beijing Organic Chemical Plant (BOCP)	44
PE	<u>mLLDPE</u>	Total Petrochemicals, USA	6
Aluminum hydroxid	Powder	Aluminum Corporation of China Ltd (CHAICO)	20
Retardant Saytex	8010	Albemarle	20
Anti-oxygen	1010	Ciba	0.5
Anti-oxygen	Chel-180	Ciba	0.5
Anti-oxygen	P-EPQ	Ciba	0.3
Pigment and colorants	-	Polyone	3.7
Meltable Adhesive -			
EVA - white color	9918A	Five Win Enterprise Co Ltd	93
Anti-oxygen	BHH	Ciba	0.5
Retardant Saytex	8010	Albemarle	5
Antimony Oxide (Sb ₂ O ₃)	Powder	Jiefu Corporation	1.5