



**NOTICE OF AUTHORIZATION TO APPLY THE UL MARK**

2007-09-18

Mr. Shaodun He  
SHENZHEN WOER HEAT-SHRINKABLE MATERIAL CO LTD  
Xinwei Industrial Park, Woer Mansion  
Nanshan District, Xili  
Shenzhen, Guangdong 518052  
China

E-mail: [sfshhd@163.com](mailto:sfshhd@163.com)

Reference: File E203950      Project 07SC04243      P.O. Number HE, SHAODUN  
USR/CNR - Evaluation of Currently Recognized Heat Shrinkable Flexible Cross-linked  
Product: Polyolefin Tubing Cat. No. RSFR-H, rated 125C, 600V, VW-1, in all colors except clear, in 0.35  
mm to 75.0 mm recovered ID, with modified compound.

Dear Mr. 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 the subject model, 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. See attachment – 5 pages.

This authorization applies only to the address on this letter.

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action will be taken for products not in conformance with UL's requirements and continued use of the UL Mark may be withdrawn.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,

Audrey Woo  
Project Engineer  
Department: 3015TSCCL  
Tel: 408-754-6507  
Fax: 408-689-6507  
E-mail: [audrey.woo@us.ul.com](mailto:audrey.woo@us.ul.com)

Reviewed by:

JaneAnn P Matulich  
Lead Engineering Associate  
Department: 3015TSCCL  
E-mail: [janeann.p.matulich@us.ul.com](mailto:janeann.p.matulich@us.ul.com)



## DESCRIPTION

## PRODUCT COVERED:

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

Cat. No.	Colors	Recovered ID, mm	Temp. Rating, Deg. C	Voltage Rating, V	Flame Rating
RSFR-x	Black	1.0 - 4.0	125	600	VW-1
RSFR-x	White	0.5 - 25.0	125	600	VW-1
WKZM-x-yz	White	0.5 - 25.0	125	600	All Tubing
RSFR-H	All except Clear	<b>0.35</b> - 75.0	125	600	<b>VW-1</b>

Note: for RSFR-x only, Black color tubing - x represents expanded ID of 2 mm - 8 mm. For White color tubing - x represents expanded ID of 1 mm - 50 mm.

Note: for WKZM-x-yz only, - x represents expanded ID of 1 mm - 50 mm and - yz represents any alpha and/or numeric combination for internal Client code.

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

## OPTIONAL MARKING:

- \* Cat. Nos. **RSFR-H** and RSFR-x may be marked "VW-1".
- Cat. No. WKZM-x-yz: None

## 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, mm	Color	Material	Composition Formulation @
RSFR-x	1.0 - 4.0	Black	Polyolefin	Beijing Chemical EVA (14-2) 100%
RSFR-x	0.5 - 25.0	White	Polyolefin	Beijing Chemical EVA (14-2)100%
WKZM-x-yz	0.5 - 25.0#	White	Polyolefin	Beijing Chemical EVA (14-2) 50% with Huiyuan ChemicalCo., Ltd. KY-405 50%
<b>RSFR-H</b>	<b>0.35 - 75.0</b>	<b>All except Clear</b>	<b>Polyolefin</b>	<b>See Table I</b>

@ - The tubing formula consists only of the materials stated in the table. No other materials are added such as plasticizers, anti-oxygen agents, etc., unless specified in the formula above.

Note: for RSFR-x only, Black color tubing - x represents expanded ID of 2 mm - 8 mm. For White color tubing - x represents expanded ID of 1 mm - 50 mm.

Note: for WKZM-x-yz only, - x represents expanded ID of 1 mm - 50 mm and - yz represents any alpha and/or numeric combination for internal Client code.

# - the minimum recovered wall thickness is limited to 0.70 mm for the minimum expanded inner diameter size of 1.0 to 16.0 mm.

## Maximum Expansion Ratio:

Cat. No. RSFR-x may be expanded up to a maximum of 155% of its original extruded diameter.

Cat. No. WKZM-x-yz may be expanded up to a maximum of 176% of its original extruded diameter.

Cat. No. RSFR-H may be expanded up to a maximum of **335%** of its original extruded diameter.