

# TEST REPORT: 7191248411-CHM21-LSM (EEC)

Date: 29 JAN 2021

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Client's Ref: -

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## **SUBJECT**

Testing of Cable Trunking and Accessories

## **CLIENT**

United U-Li Marketing Pte Ltd  
17 Tampines Industrial Avenue 5  
Singapore 528618

Attn: Ms. Angeline

## **SAMPLE SUBMISSION DATE**

23 Nov 2020

## **DATE TEST CONDUCTED**

27 Nov to 30 Nov 2020

## **DESCRIPTION OF SAMPLE**

Five samples of coated cable trunking comprising of bodies, covers, connectors, screws, washers, and nuts were submitted by the Client to the Electrical & Electronics Centre of TÜV SÜD PSB Pte Ltd.

Brand	:	U-Li
Colour	:	Grey, Red, Ivory, Orange, White
Size (mm)	:	50 x 50, 75 x 50, 100 x 100, 150 x 100, 300 x 100



Laboratory:  
TÜV SÜD PSB Pte. Ltd.  
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**METHOD OF TEST**

1. SS 249: 1981 (2012)  
"Specification for Steel Surface Cable Trunking and Accessories"
2. SS 5 : Part G1 : 2003  
"Methods of Test for Paints, Varnishes and Related Materials -  
Part G1 : Determination of Resistance to Continuous Neutral Salt Spray"

Test conditions:

Concentration of salt solution	: 50 ± 5 g/L NaCl
S.G. of condensate	: 1.033
pH of condensate	: 6.4
Volume of condensate	: 1.30 mL/hr/80 cm <sup>2</sup>
Test chamber temperature	: 35 ± 2°C
Position of specimens	: Body, cover & connector - Inclined 15° from vertical Screws - Horizontal Nuts and Washer - Hang freely
Exposure period	: 48 hours
<u>Method of cleaning</u>	
Before test	: None
After test	: Water-rinse and air-dry

3. ASTM D610-08(2019)  
"Standard Practice for Evaluating Degree of Rusting on Painted Steel Surfaces"
4. SS 5 : Part F2 : 2013(2018)  
"Methods of Test for Paints, Varnishes and Related Materials - Part F2 : Scratch Test"

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## RESULTS

Component	"U-Li" Grey Colour, 50 x 50 mm Visual Appearance after 48 hours exposure to Continuous Neutral Salt Spray		SS 249 : 1981 (2012) Clause 9 Requirements
	Interior (1 unit)	Exterior (2 units)	
Body <sup>(1)</sup>	No rusting on exposed surfaces	Rusting less than 15% (by area) was observed on the edges of both tested units	Screw threads, interior long bend edges and cut edges shall not show more than 15% (by area) of rusting.  All other areas shall not show more than 0.1% (by area) of rusting.
Cover <sup>(1)</sup>	No rusting on exposed surfaces	No rusting on exposed surfaces of both tested units	
Connector	No rusting on exposed surfaces	No rusting on exposed surfaces of both tested units	
Nuts	No rusting on all ten tested units		
Screws	No rusting on all ten tested units		
Washer	No rusting on all ten tested units		
Component	"U-Li" Grey Colour, 150 mm x 100 mm Resistance to Scratches		SS 249 : 1981 (2012) Clause 11 Requirements
Trunking	Passed		The sample shall withstand a load of 800 g

Note : <sup>(1)</sup> Minimum paint thickness on trunking as measured was 108 µm.

Remark : Characteristics tested on the above samples were found to have complied with SS 249 : 1981 (2012) Clause 9 and Clause 11 requirements.

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**RESULTS** (cont'd)

Component	"U-Li" Ivory Colour, 100 x 100 mm Visual Appearance after 48 hours exposure to Continuous Neutral Salt Spray		SS 249 : 1981 (2012) Clause 9 Requirements
	Interior (1 unit)	Exterior (2 units)	
Body <sup>(2)</sup>	- Rusting less than 15% (by area) was observed on the edges	- Rusting less than 0.1% (by area) was observed on the surface of one tested unit - Rusting less than 15% (by area) was observed on the edges of both tested units	Screw threads, interior long bend edges and cut edges shall not show more than 15% (by area) of rusting.  All other areas shall not show more than 0.1% (by area) of rusting.
Cover <sup>(2)</sup>	- Rusting less than 15% (by area) was observed on the edges	- Rusting less than 15% (by area) was observed on the edges of both tested units	
Connector	- Rusting less than 0.1% (by area) was observed on the surface - Rusting less than 15% (by area) was observed on the edges	- Rusting less than 15% (by area) was observed on the edges of both tested units	

Component	"U-Li" Ivory Colour, 150 mm x 100 mm Resistance to Scratches	SS 249 : 1981 (2012) Clause 11 Requirements
Trunking	Passed	The sample shall withstand a load of 800 g

Note : <sup>(2)</sup> Minimum paint thickness on trunking as measured was 67 µm.

Remark : Characteristics tested on the above samples were found to have complied with SS 249 : 1981 (2012) Clause 9 and Clause 11 requirements.

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## RESULTS (cont'd)

Component	"U-Li" Red Colour, 75 x 50 mm Visual Appearance after 48 hours exposure to Continuous Neutral Salt Spray		SS 249 : 1981 (2012) Clause 9 Requirements
	Interior (1 unit)	Exterior (2 units)	
Body <sup>(3)</sup>	- Rusting less than 15% (by area) was observed on the edges	- No rusting on exposed surfaces of both tested units	Screw threads, interior long bend edges and cut edges shall not show more than 15% (by area) of rusting.  All other areas shall not show more than 0.1% (by area) of rusting.
Cover <sup>(3)</sup>	- No rusting on exposed surfaces	- No rusting on exposed surfaces of both tested units	
Connector	- Rusting less than 15% (by area) was observed on the edges	- Rusting less than 15% (by area) was observed on the edges of both tested units	
Component	"U-Li" Red Colour, 150 mm x 100 mm Resistance to Scratches		SS 249 : 1981 (2012) Clause 11 Requirements
Trunking	Passed		The sample shall withstand a load of 800 g

Note : <sup>(3)</sup> Minimum paint thickness on trunking as measured was 81 µm.

Remark : Characteristics tested on the above samples were found to have complied with SS 249 : 1981 (2012) Clause 9 and Clause 11 requirements.

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## RESULTS (cont'd)

Component	"U-Li" Orange Colour, 150 x 100 mm Visual Appearance after 48 hours exposure to Continuous Neutral Salt Spray		SS 249 : 1981 (2012) Clause 9 Requirements
	Interior (1 unit)	Exterior (2 units)	
Body <sup>(4)</sup>	- No rusting on exposed surfaces	- Rusting less than 15% (by area) was observed on the edges of both tested units	Screw threads, interior long bend edges and cut edges shall not show more than 15% (by area) of rusting.  All other areas shall not show more than 0.1% (by area) of rusting.
Cover <sup>(4)</sup>	- No rusting on exposed surfaces	- No rusting on exposed surfaces of both tested units	
Connector	- No rusting on exposed surfaces	- No rusting on exposed surfaces of both tested units	
Component	"U-Li" Orange Colour, 150 mm x 100 mm Resistance to Scratches		SS 249 : 1981 (2012) Clause 11 Requirements
Trunking	Passed		The sample shall withstand a load of 800 g

Note : <sup>(4)</sup> Minimum paint thickness on trunking as measured was 141 µm.

Remark : Characteristics tested on the above samples were found to have complied with SS 249 : 1981 (2012) Clause 9 and Clause 11 requirements.

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**RESULTS** (cont'd)

Component	"U-Li" White Colour, 300 x 100 mm Visual Appearance after 48 hours exposure to Continuous Neutral Salt Spray		SS 249 : 1981 (2012) Clause 9 Requirements
	Interior (1 unit)	Exterior (2 units)	
Body <sup>(5)</sup>	- Rusting less than 0.1% (by area) on exposed surfaces - Rusting less than 15% (by area) on edges	- No rusting on exposed surfaces of both tested units	Screw threads, interior long bend edges and cut edges shall not show more than 15% (by area) of rusting.  All other areas shall not show more than 0.1% (by area) of rusting.
Cover <sup>(5)</sup>	- Rusting less than 15% (by area) was observed on the edges	- Rusting less than 15% (by area) was observed on the edges of both tested units	
Connector	- Rusting less than 15% (by area) was observed on the edges	- No rusting on exposed surfaces of both tested units	
Component	"U-Li" White Colour, 150 mm x 100 mm Resistance to Scratches		SS 249 : 1981 (2012) Clause 11 Requirements
Trunking	Passed		The sample shall withstand a load of 800 g

Note : <sup>(5)</sup> Minimum paint thickness on trunking as measured was 114 µm.

Remark : Characteristics tested on the above samples were found to have complied with SS 249 : 1981 (2012) Clause 9 and Clause 11 requirements.

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AVP / SENIOR CHEMIST  
COATINGS & INDUSTRIAL CHEMICALS  
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Effective 01 September 2020

