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Test Report: ICL/H21/13558

Test for flammability of Plastic Materials

For Parts in Devices and Appliances

UL 94 Standard for safety

Section 8: Vertical burning test;

V-0, V-1, or V-2



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1 Purpose of Test

To assess the performance of specimens cut from a polymeric sheet when tested in accordance with the procedure specified in UL 94 Section 8 "Vertical burning test" for V-0, V-1, or V-2 rating.

2 Description of Test Specimens

The description of the specimen given below has been prepared from information provided by the sponsor of the test and Interscience Communications Ltd was not involved in any selection or sampling procedure. All values quoted are nominal, unless tolerances are given. All values quoted are nominal, unless tolerances are given.

The product was a Red oxide silicone coated glass fiber sleeving (nominal diameter 15.5mm) product referenced "LSR 2540" manufactured by : Sleeve It Limited (Preston, UK)

The specimen was supplied by the sponsor of the test and Interscience Fire Laboratory was not involved in the selection process.

The sponsor of the test has not supplied additional information relating to the composition of the product that was tested.

3 Conditioning of Specimens

The specimens were received on 9th March 2021.

The first set of 10 specimens were conditioned for a minimum of 48 hours prior to testing at $23 \pm 2^{\circ}$ C and $50 \pm 5\%$ RH, before testing. A second set were conditioned for a minimum of 168 hours at $70 \pm 1^{\circ}$ C before being placed into a drying dessicator for 1 hour at ambient temperature, before testing.

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4 Date of Test

The test was performed on 25th June 2021.

5 Test Procedure

The test was performed in accordance with the procedures specified in UL 94 Section 8 Sub section 8.2 to 8.6 and this report should be read in conjunction with that Standard.

6 Test Results

The test results relate only to the behaviour of the specimens of the product under the particular conditions of test; they are not intended to the sole criterion for assessing the hazard of the product in use.

The test results relate only to the specimens of the product in the form in which they were tested. Small differences in the composition or thickness of the product may significantly affect the performance during the test and will therefore invalidate the test results.

The results for specimens conditioned at 23 ± 2 °C and 50 ± 5 % relative humidity for 48 hours are given in table 1:

Table 1

	Specimen No				
Observation	1	2	3	4	5
After flame time (sec) for each individual specimen, t ₁	0	0	0	0	0
After flame time (sec) for each individual specimen, t ₂	_	-	_	-	-
Afterglow time (sec) after second flame application, t ₃	-	-	-	_	_
After flame or afterglow of any specimen up to the holding clamp	No	No	No	No	No
Cotton indicator ignited by flaming particles or droplets	No	No	No	No	No

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The results for specimens conditioned at 70 ± 1 °C for 168 hours are given in table 2:

Table 2

	Specimen No				
Observation	1	2	3	4	5
After flame time (sec) for each individual specimen, t ₁	0	0	0	0	0
After flame time (sec) for each individual specimen, t ₂	-	-	_	-	-
Afterglow time (sec) after second flame application, t ₃	-	_	-	-	-
After flame or afterglow of any specimen up to the holding clamp	No	No	No	No	No
Cotton indicator ignited by flaming particles or droplets	No	No	No	No	No

Requirements to meet UL classifications are given in the table below:

Observations	Classification requirements			
	V0	V1	V2	
Total after flame time (sec) for each individual specimen t ₁ or t ₂	≤ 10	≤30	≤30	
Total after flame time (sec) for all specimens subjected to test(t ₁ + t ₂ for 5 samples)	≤ 50	≤250	≤ 250	
Afterglow time (sec) after second flame application for each individual specimen	≤ 30	≤ 60	≤ 60	
After flame or afterglow of any specimen up to the holding clamp	No	No	No	
Cotton indicator ignited by flaming particles or droplets	No	No	Yes	

8 Conclusion

The specimens tested satisfies the requirements given for a UL 94 rating V0, V1 and V2.

Prepared by

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Approved by

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