



BUILDING THE FUTURE AROUND THE WORLD

JSL - Material Eléctrico, S.A.

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JSL – Material Eléctrico, S.A.

Clarification and correction addendum regarding the results and observations of the Tests carried out at ISQ- Instituto de Soldadura e Qualidade on JSL Halogen-Free products

The present document issued by JSL, Material Eléctrico SA, with headquarters and manufacturing facilities at Rua Mário Castelhana nº 3, 2746- Queluz , Portugal, aims to clarify inaccuracies in the conclusions and comments issued by ISQ-LABQUI - Chemical Testing Laboratory of ISQ-Instituto de Soldadura e Qualidade on the report nº 21.11.064.072.

The mentioned Test Report presents valid results for the Acidity values determined using the stipulated by the methods PH and Conductivity according the Standard EN 60754-2-Test on gases evolved during combustion of materials from cables - Determination of acidity by PH measurement) and Conductivity on samples of JSL Halogen Free Conduit 40x40 and JSL Accessory flat bend AP40x40 .

Certainly by mistake, the referred Lab wrongly mentioned the permissible restrictions and limits required by the Standard EN 60754-2 for the parameter Conductivity as being $\leq 2.5 \mu\text{S}/\text{mm}$. The true value required by the Standard is un fact $\leq 10 \mu\text{S}/\text{mm}$, and so, the samples tested, with Conductivity average values of **3.367** $\mu\text{S}/\text{mm}$ for the Conduit and **4.307** $\mu\text{S}/\text{mm}$ for the Accessory, fully PASS and complies with the Standard on both PH and Conductivity Tests.

Finally, we would also like to add a small correction to the text referred to in the observations *** of the aforementioned report. The correct sentence should be ;

*(***) To have conclusive results it is recommended to perform the test IEC 60754-1 and if the **total** content of halogen is < 0,5 % the IEC **60754-1** for Fluorine content.*

Still, this comment is completely inadequate as the samples pass the test.

Queluz de Baixo, March 19, 2025

Paulo Carlos Oliveira
JSL Quality an Environment Manager


Annex: ISQ Test Report nº 21.11.064.072 (page 2, 3 and 4)

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TEST REPORT	
EN 60754-2 :2014/ A1 :2020	
Determination of acidity (by pH measurement and conductivity)	
Report reference No	20.11.064.072
Compiled by (+ signature)	João L. Orelhas
Approved by (+ signature)	José M. Madeira Cruz  Assinado por: JOSÉ MANUEL MADEIRA CRUZ Num. de Identificação: 07663220 Data: 2021.07.06 20:25:57+01'00'
Date of reception of samples	17-05-2021
Start of tests	28-06-2021
End of tests	05-07-2021
Date of issue:	05-07-2021
Testing laboratory:	LABCAB – ISQ: <u>Address:</u> TAGUSPARK – OEIRAS – Av. Prof. Dr. Cavaco Silva, 33. 2740-120 Porto Salvo. Portugal
Applicant:	JSL – Material Eletrico, S.A.: <u>Address:</u> Estrada das Palmeiras 34 2734-504 Barcarena Portugal
Type of test object:	Plastic materials
Code	---
Model/type reference:	Trunking for electrical installations (4040 B-LH) and Flat bend (AP 4040)
Manufacturer:	JSL
Rated voltage:	---
Copy of markings:	
Sheath: ---	
Insulation: ---	
Remarks:	The results within this report are valid only for the tested samples. This report should only be copied on its totality. The tests were performed by ISQ-LABQUI and are under the scope of accreditation IPAC nº L0077.



REMARKS

CONCLUSIONS	The sample meet all the requirements of the analysed sub-clauses
Sub-clauses with no compliances	

**pH and conductivity test**

Requirement (*):

pH: ≥ 4.3 Conductivity: $\leq 2,5 \mu\text{S}/\text{mm}$

Sample Ref.	Test Result (EN 60754-2)
1) Trunking for electrical installations (4040B-LH)	<u>pH</u> = test 1: 4,70 test 2: 4,64 test 3: 4,61 Average value (**): $4,65 \pm 0,56$ (25 °C) - PASS <u>Conductivity</u> : test 1: 3,450 $\mu\text{S}/\text{mm}$ test 2: 3,200 $\mu\text{S}/\text{mm}$ test 3: 3,450 $\mu\text{S}/\text{mm}$ Average value (**): $3,367 \pm 0,572$ $\mu\text{S}/\text{mm}$ (25 °C) - NON CONCLUSIVE
2) Flat bend (AP 4040)	<u>pH</u> = test 1: 7,21 test 2: 7,24 test 3: 7,10 Average value (**): $7,18 \pm 0,86$ (25 °C) - PASS <u>Conductivity</u> : test 1: 4,200 $\mu\text{S}/\text{mm}$ test 2: 4,500 $\mu\text{S}/\text{mm}$ test 3: 4,220 $\mu\text{S}/\text{mm}$ Average value (**): $4,307 \pm 0,732$ $\mu\text{S}/\text{mm}$ (25 °C) - NON CONCLUSIVE (***)

(*) Based on the European electrical cable standard EN 50525-1:2011

(**) Average value obtained from 3 test results

(***) To have conclusive results it is recommended to perform the test IEC 60754-2 and if the content of halogen is $< 0,5 \%$ the EN 60684-2 (Fluorine content).