



Test Report

Verified Code:473771

Report No.:H202407106163-01EN

Customer: EASCO ELECTRICAL (JIANG SU) CO,LTD.

Address: No.88 ChaoYang Road, HuiPing Town, Qidong City, JiangSu Province

Sample name: Low Smoke Halogen Free Wiring Duct

Sample model: UHF-L/UHF-S/SDRHF

Receive sample date: Jul.12,2024

Test date: Jul.12,2024~Jul.31,2024

Judgment basis: Q/CR 699-2019

Reference test Method: GB/T 2406.2-2009, Q/CR 699-2019 Appendix A, GB/T 8323.2-2008, and Q/CR 699-2019 Appendix B Method 2

Test item: Oxygen index, 45° angle combustion, Smoke density, Toxic index

Test result: Meet the requirements

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GRG METROLOGY & TEST GROUP CO., LTD.

Issued Date: 2024/7/31

APPROVED(14)

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H202407106163-01EN



Statement

1. The report is invalid without "special seal for inspection and testing"; some copies are invalid; The report is invalid if it is altered or missing; The report is invalid without the signature of the person who prepared, reviewed and approved it.
2. The sample information is provided by the client and responsible for its authenticity; The content of the report is only valid for the samples sent this time.
3. When there are reports in both Chinese and English, the Chinese version will prevail when the language problems are inconsistent.
4. If there is any objection concerning the report, please inform us within 15 days from the date of receiving the report.
5. The test report only used for scientific research, teaching, internal quality control and other purposes.
6. Toxic index is not within the scope of our company CNAS approval.

Test type	<input checked="" type="checkbox"/> Commissioning Test <input type="checkbox"/> Routine test <input type="checkbox"/> DV <input type="checkbox"/> ECV <input type="checkbox"/> PV <input type="checkbox"/> OTS <input type="checkbox"/> R&D test <input type="checkbox"/> Others_____			
Sample Source	<input checked="" type="checkbox"/> Commissioned units send sample <input type="checkbox"/> Others:			
Sample	Model	Quantity	Sample No.	Test No.
Low Smoke Halogen Free Wiring Duct	UHF-L/UHF-S/SDRH F	1 group	/	H202407106163-0001
Sample Components and Accessories	Components: / Accessories: /			
Test with packaging or not	<input type="checkbox"/> Yes, Outer Packing _____ <input checked="" type="checkbox"/> No			
Sample quality before test	<input checked="" type="checkbox"/> Conformity Product <input type="checkbox"/> Non-conformity Product <input type="checkbox"/> Prototype <input type="checkbox"/> Others			
Abnormal condition of sample before test	No Abnormalities			
Environmental requirements	Temperature: 21.0℃~25.0℃ Relative Humidity: 45%~55% Atmospheric pressure: 86kPa~106kPa			
Test Address	Qingdao Laboratory: No.123 Jin rong Road, Qingdao High-tech Zone, Shandong Province, China.			

Summary of Test Information

No.	Item name	Test standard	Technical requirement	Unit	Test result	Test conclusion
1	Oxygen index	GB/T 2406.2-2009	≥30%	/	30.7%	Meet the requirements
2	45° angle combustion	Q/CR 699-2019	Flame retardant level	/	Flame retardant level	
3	Smoke density	GB/T 8323.2-2008	$D_s(4) \leq 200$ (25kW/m ² with ignition, 10min)	/	31.53	
4	Toxic index	Q/CR 699-2019	$CIT_{NLP} \leq 1.2$	/	$CIT_{NLP} = 0.49$	

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1 Oxygen index

1.1 Test Condition

According to GB/T 2406.2-2009.

Test pretreatment: The temperature is $23^{\circ}\text{C} \pm 2^{\circ}\text{C}$, the relative humidity is $50\% \pm 5\%$ under the condition of adjustment for more than 88 hours.

1.2 Sample Information

Sample information is shown in Table 1-1.

Table 1-1 Sample Information

Sample Name	Manufacturer	Model	Size	Thickness	Test No.
Low Smoke Halogen Free Wiring Duct	EASCO ELECTRICAL (JIANG SU) CO, LTD.	UHF-L/UHF-S/SDRHF	100mm × 10mm	About 2mm	H202407106163-0001-01

1.3 Test Requirements

The test requirements are shown in Table 1-2.

Table 1-2 Test requirements

Item name	Judgment basis	Parameter& Unit	Technical requirement (Table 16)
Oxygen index	Q/CR 699-2019	OI, /	≥30%

1.4 Test Result

The test result are shown in Table 1-3.

Table 1-3 Test Result

Test No.	Test result	Single Conclusion
H202407106163-0001-01	30.7%	Meet the requirements

Note: The number of test samples is 1 group, and the total number of samples used in the test is 13.

Statement: the test results relate only to the behavior of the test specimens under the conditions of this test and that these results shall not be used to infer the fire hazards of the materials in other forms or under other fire conditions.

1.5 Test Photos

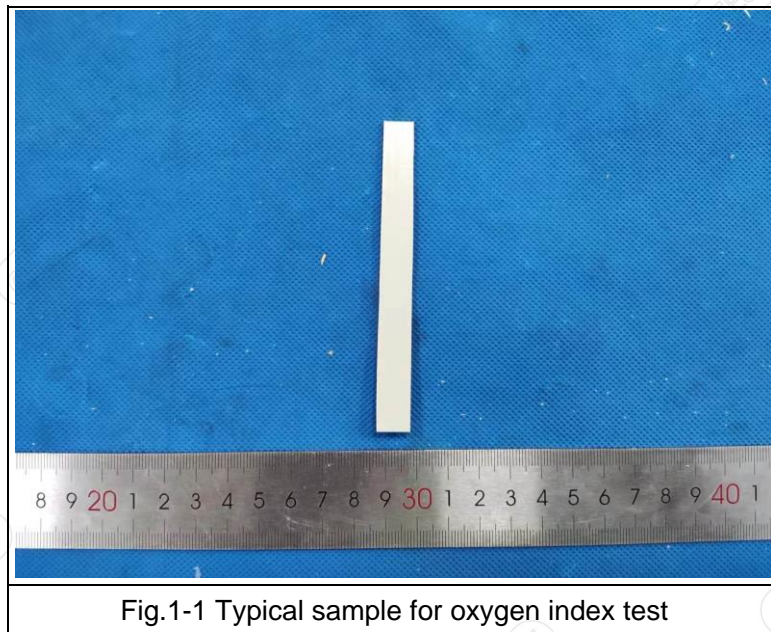


Fig.1-1 Typical sample for oxygen index test

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2 45 ° angle combustion

2.1 Test Condition

According to Q/CR 699-2019 Technical Conditions for Flame-retardant Nonmetallic Materials of Railway Passenger Cars - Appendix A requires testing.

2.2 Sample Information

Sample information is shown in Table 2-1.

Table 2-1 Sample Information

Sample Name	Manufacturer	Model	Size	Thickness	Test No.
Low Smoke Halogen Free Wiring Duct	EASCO ELECTRICAL (JIANG SU) CO, LTD.	UHF-L/UHF-S/SDRHF	257mm×182mm	About 2mm	H202407106163-0001-02
Note: The test sample is composed of splices.					

2.3 Test Requirements

The test requirements are shown in Table 2-2.

Table 2-2 Test requirements

Item name	Judgment basis	Technical requirement (Table 16)
45 ° angle combustion	Q/CR 699-2019	Flame retardant level

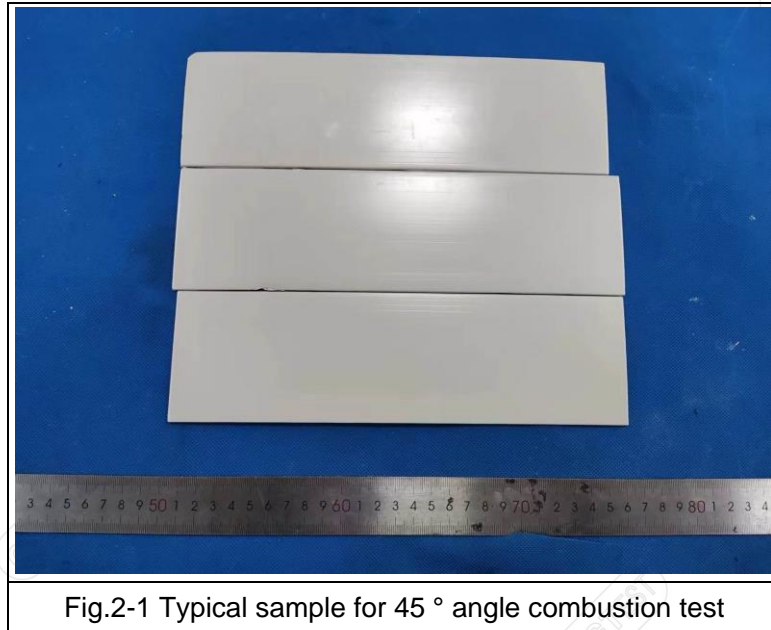
2.4 Test Result

The test result are shown in Table 2-3.

Table 2-3 Test Result

Test No.	Test results	Single Conclusion
H202407106163-0001-02	Flame retardant level	Meet the requirements
Note: There are 1 set of test samples, and a total of 2 samples were used in the experiment.		

2.5 Test Photos



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3 Smoke density

3.1 Test Condition

According to GB/T 8323.2-2008 Plastic Smoke Generation Part 2: Single Chamber Method for Determination of Smoke Density Test Method requires testing, 25kW/m^2 , with ignition.

Test Pretreatment: Adjust to constant weight at $23^\circ\text{C} \pm 2^\circ\text{C}$ and $50\% \pm 5\%$ relative humidity.

3.2 Sample Information

Sample information is shown in Table 3-1.

Table 3-1 Sample Information

Sample Name	Manufacturer	Model	Size	Thickness	Test No.
Low Smoke Halogen Free Wiring Duct	EASCO ELECTRICAL (JIANG SU) CO, LTD.	UHF-L/UHF-S/SDRHF	75mm×75mm	About 2mm	H202407106163-0001-03~ H202407106163-0001-05

3.3 Test Requirements

The test requirements are shown in Table 3-2.

Table 3-2 Test requirements

Item name	Judgment basis	Parameter	Unit	Technical requirement (Table 16)
Smoke density	Q/CR 699-2019	$D_s(4)$ (25kW/m^2 with ignition, 10min)	/	≤ 200

3.4 Test Result

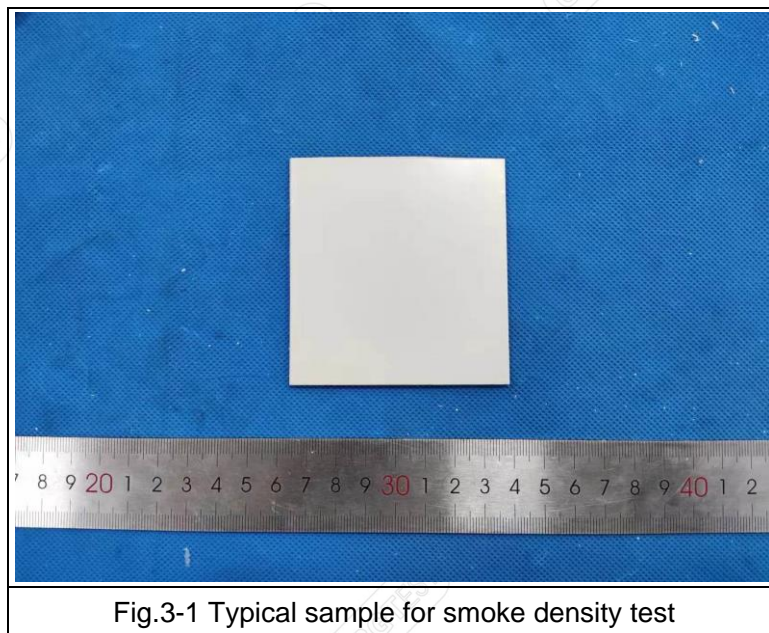
The test result are shown in Table 3-3.

Table 3-3 Test Result

Test No.	Ds(4)	Average	Single Conclusion
H202407106163-0001-03	25.8	31.53	Meet the requirements
H202407106163-0001-04	30.3		
H202407106163-0001-05	38.5		

Statement: these results relate only to the behaviour of the specimens of the product under the particular conditions of test; they are not intended to be the sole criterion for assessing the potential smoke obscuration hazard of the product in use.

3.5 Test Photos



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4 Index of Toxicity¹

4.1 Test Condition

According to Q/CR 699-2019 Technical Conditions for Flame-retardant Nonmetallic Materials of Railway Passenger Cars, Appendix B, Method 2.

Test Pretreatment: Adjust to constant weight at $23^{\circ}\text{C} \pm 2^{\circ}\text{C}$ and $50\% \pm 5\%$ relative humidity.

4.2 Sample Information

Sample information is shown in Table 4-1.

Table 4-1 Sample Information

Sample Name	Manufacturer	Model	Test No.
Low Smoke Halogen Free Wiring Duct	EASCO ELECTRICAL (JIANG SU) CO, LTD.	UHF-L/UHF-S/SDRHF	H202407106163-0001-06~ H202407106163-0001-08

4.3 Test Requirements

The test requirements are shown in Table 4-2.

Table 4-2 Test requirements

Item name	Judgment basis	Parameter	Unit	Technical requirement (Table 16)
Index of Toxicity	Q/CR 699-2019	CIT_{NLP}	/	≤ 1.2

4.4 Test Result

The test result are shown in Table 4-2.

¹ This project was completed by Jiaotie Inspection and Certification (Changzhou) Co., Ltd , the registration No. is CNAS L16879

Table 4-2 Test Result

Test No.	Test result	Single Conclusion
H202407106163-0001-06	0.49	Meet the requirements
H202407106163-0001-07		
H202407106163-0001-08		

Statement: these results relate only to the behaviour of the specimens of the product under the particular conditions of test; they are not intended to be the sole criterion for assessing the potential smoke obscuration and toxicity hazards of the product in use.

4.5 Test Photos

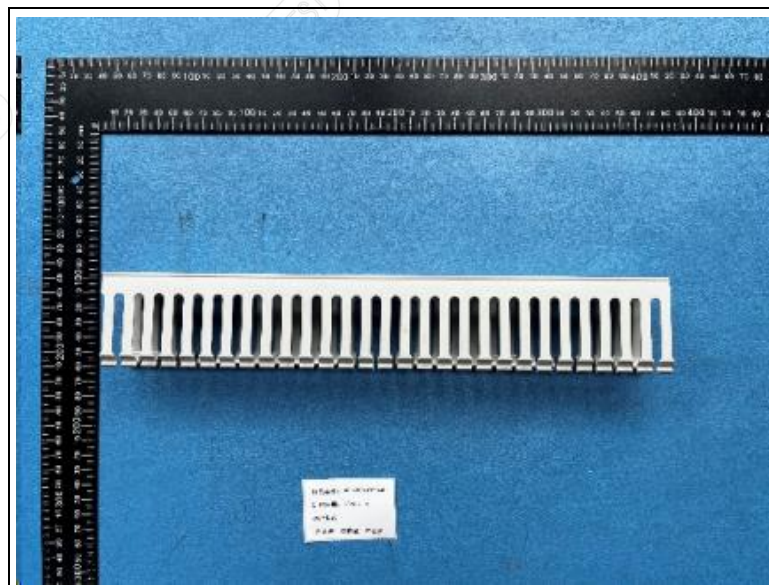


Fig.4-1 Typical samples for toxicity index test

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5 Test Instrument & Equipment

List of Instrument for Testing Equipment					
No.	Testing Item	Instrument/Equipment	Type	Serial No.	Calibration Valid Date
1	Oxygen Index	Oxygen Index Tester	TTech-GBT2406	P2019135	2024-02-18~2025-02-17
2	45° angle combustion	45 ° angle combustion instrument	TTech-TBT3138B	P2020366	2024-04-23~2025-04-22
3	Smoke density	Plastic Smoke density Test chamber	TTech-GBT8323-2	P20220021	2024-05-31~2025-05-30
4	Index of Toxicity	Online gas analyzer	TTech-ANAY01	JRCC-JCYQ-015	2024-04-19~2025-04-18
		Tube Furnace	DFS-02-001	JRCC-JCYQ-016	2024-04-23~2025-04-22
		Ion chromatograph detection tube	ICS-600	JRCC-JCYQ-022	2024-07-02~2025-07-01

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