

NANHAI DISPLAY LIMITED

TEST REPORT

SCOPE OF WORK

Nano Cloaking Film

REPORT NUMBER

240416001SHF-001

TEST DATE(S)

2024-04-16 - 2024-05-06

ORIGINAL ISSUE DATE

2024-05-08

PAGES

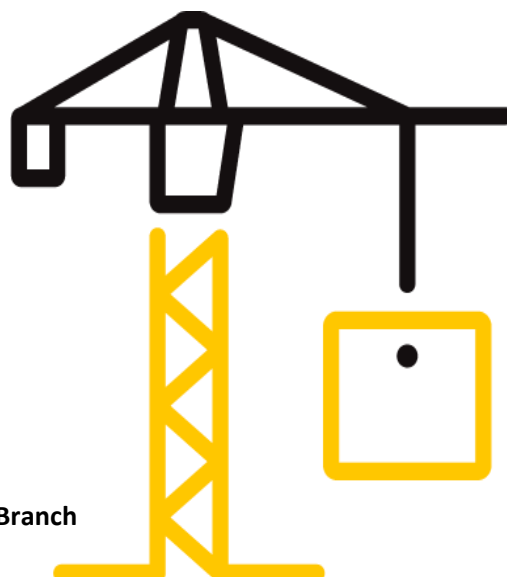
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DOCUMENT CONTROL NUMBER

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Intertek Testing Services Shenzhen Ltd. Shanghai Fengxian Branch



Test Report

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Test Report

Original Issue Date: 2024-05-08

Intertek Report No. 240416001SHF-001

Applicant: NANHAI DISPLAY LIMITED

Address: Rooms 1318-19, Hollywood Plaza, 610 Nathan Road, Mongkok, Kowloon, HK, 999077

Attn: Joe Sun

Manufacturer: Xiuya Technology (Shanghai) Co.,Ltd

Address: Room U22, Building 3, No.39 Linbao Road, Tinglin Town, Jinshan District, Shanghai

Test Type: Performance test, samples provided by the applicant.

Product Information

Product Name	Model	Specification
Nano Cloaking Film	T0F2	60 inch*100 feet
Sample ID	Sample Amount	Sample Received Date
S240416001SHF.001~002	30pcs	2024-04-15
Sample Description		
see sample photo in Appendix A		

Test Methods And Standards

Test Standard	EN 13823:2020+A1:2022 and EN ISO 11925-2:2020
Specification Standard	EN 13501-1:2018
Test Conclusion	The samples were tested according to the above standards, and the results are shown in the following page.

Note:

1.This report does not involve sampling. The report only reflects conformity of the tested items of the samples provided by the testing applicant. Representativeness and authenticity of the submitted samples are responsibilities of the testing applicant.

Report Authorized


Name: Sally Xie

Title: Reviewer




Name: Lu Cheng

Title: Project Engineer

Test Report

Original Issue Date: 2024-05-08

Intertek Report No. 240416001SHF-001

Test Items, Method and Results:

EN 13501-1:2018 Fire classification of construction products and building elements - Part 1: Classification using data from reaction to fire tests

1.1 SINGLE BURNING ITEM TEST

The test was conducted in accordance with EN 13823. This test evaluates the potential contribution of a product to the development of a fire, under a fire situation simulating a single burning item near to the product.

1.2 IGNITABILITY TEST

The test was conducted in accordance with EN ISO 11925-2. This test evaluates the ignitability of a product under exposure to a small flame.

1.3 CLASSIFICATION CRITERIA

The classification was determined in accordance with EN 13501-1:2018. The class C with its corresponding fire performance is given in the table below.

Table - Classes of reaction to fire performance for construction products excluding floorings and linear pipe thermal insulation products.

Class	Test Method(s)	Classification criteria	Additional classifications
C	EN 13823 and	$FIGRA_{0.4MJ} \leq 250 \text{ W/s}$ and $LFS < \text{edge of specimen}$ and $THR_{600s} \leq 15 \text{ MJ}$	Smoke production ^a and Flaming droplets/particles ^b
	EN ISO 11925-2 ^c Exposure = 30 s	$F_s \leq 150 \text{ mm}$ within 60 s	

Note:

a. $s1 = SMOGRA \leq 30 \text{ m}^2/\text{s}^2$ and $TSP_{600s} \leq 50 \text{ m}^2$; $s2 = SMOGRA \leq 180 \text{ m}^2/\text{s}^2$ and $TSP_{600s} \leq 200 \text{ m}^2$; $s3 = \text{not } s1 \text{ or } s2$

b. $d0 = \text{No flaming droplets/particles in EN 13823 within 600s}$;

$d1 = \text{no flaming droplets/particles persisting longer than 10s in EN 13823 within 600s}$;

$d2 = \text{not } d0 \text{ or } d1$.

Ignition of the paper in EN ISO 11925-2 results in a $d2$ classification.

c. Under conditions of surface flame attack and, if appropriate to the end use application of the product, edge flame attack.

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Test Items, Method and Results:

2 RESULTS AND OBSERATIONS

Method	Parameter	Result
EN 13823:2020+A1:202 2	FIGRA _{0.4MJ} , W/s	196.0
	THR _{600s} , MJ	2.57
	LFS < Edge of Specimen (Yes or No)	<Edge of Specimen
	SMOGRA, m ² /s ²	47.5
	TSP _{600s} , m ²	69.3
	Flaming Droplets/Particles occur within 600s (> 10s or ≤10s or No)	No flaming droplets/particles occur within 600s
EN ISO 11925-2:2020 Exposure = 30 s	FS ≤ 150 mm within 60 s	Yes
	Ignition of the paper	No

Note

1. Per EN 13823, the samples were glued to the substrate. Substrate was a 12mm thick calcium silicate board. The density of the calcium silicate board was 850kg/m³.

3 CLASSIFICATION

The classification has been carried out in accordance with EN 13501-1.

Fire behaviour		Smoke production			Flaming droplets	
C	-	s	2	-	d	0

Reaction to fire classification:

C- s2, d0

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Test Items, Method and Results:

4 Test Photos of EN 13823



Before test (Long wing)



Before test (Short wing)



After test (Long wing)



After test (Short wing)



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Appendix A: Sample Received Photo



Revision:

NO.	Date	Changes
240416001SHF-001	2024-05-08	First issue