

Applicant: MEGANITE INC.

Address: 1461 S. Balboa Ave., Ontario, CA 91761, USA

Testing Sample: Meganite Acrylic Solid Surface EN, Material: Acrylic Solid Surface, Thickness: 12mm

Standard: EN 13501-1:2018 & EN 13823 & EN ISO 11925-2

Testing Lab: TÜV SÜD (the lab is accredited by ilac-MRA and ISO 17025:2017, CNAS L6069)

Date of Issue: 2025-08-14

Test Data:

Test Items	Certificate ID Code	Test results	Requirements (Class B)
EN ISO 11925-2:2020	TC.25.08.003700 (Customer ID Code: 4425)	F _s ≤150mm within 60s No ignition of the paper	F _s ≤150mm within 60s No ignition of the paper
EN 13823:2020		FIGRA _{0.2MJ} = 19.8 W/s FIGRA _{0.4MJ} = 19.8 W/s THR _{600s} = 0.1MJ LFS < the edge of specimen	FIGRA _{0.2MJ} ≤120 W/s THR _{600s} ≤7.5 MJ LFS<the edge of specimen
		SMOGRA = 0m ² /s ² TSP _{600s} = 0m ²	s1: SMOGRA≤30 m ² /s ² TSP _{600s} ≤50m ²
		No flaming droplets / particles occur within 600s	d0: No flaming droplets / particles occur within 600s
EN 13501-1:2018		Classification: Class B-s1,d0	

Certificate search:

- Click www.fire-test.com (English)
- Select "Search for Certification"
 - Fill the Certificate ID Code (TC.25.08.003700) and Customer ID Code (4425)
 - Fill the Certificate ID Code (TC.25.08.003700) and applicant name (MEGANITE INC.)
- Submit with confirmation, you may get the search information.



Scan for information
TC.25.08.003700

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WeChat Official Accounts

You can scan the QR code below to follow our WeChat Official/Public Accounts to learn more about the relevant standards and regulations for fire retardant testing of rail transit vehicles or building materials, moreover, and you can also ask for supporting, search for report or certificate information, standards sharing and downloads on the WeChat Official/Public Accounts. Join us!

EN 13501-1:2018

Classes of reaction to fire performance for construction products excluding flooring and linear pipe thermal insulation products

1. EN 13501-1:2018

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

2. Scope - EN 13501-1:2018

Products are considered in relation to their end use application.

- construction products, excluding floorings and linear pipe thermal insulation products.
- Floorings;
- Linear pipe thermal insulation products.

3. Classification criteria for construction products, excluding floorings (see Table 1)

Table 1 – Classes of reaction to fire performance for construction products excluding floorings and linear pipe thermal insulation products

Class	Test method (s)	Classification criteria	Additional classification
A1	EN ISO 1182 ^a and	$\Delta T \leq 30^{\circ}\text{C}$;and $\Delta m \leq 50\%$;and $t_f = 0$ (i.e. no sustained flaming)	-
	EN ISO 1716	$\text{PCS} \leq 2.0 \text{ MJ/kg}^{\text{a}}$ and $\text{PCS} \leq 2.0 \text{ MJ/kg}^{\text{b c}}$ and $\text{PCS} \leq 1.4 \text{ MJ/m}^2^{\text{d}}$ and $\text{PCS} \leq 2.0 \text{ MJ/kg}^{\text{e}}$	-
A2	EN ISO 1182 ^a or	$\Delta T \leq 50^{\circ}\text{C}$;and $\Delta m \leq 50\%$;and $t_f \leq 20\text{s}$	-
	EN ISO 1716 and	$\text{PCS} \leq 3.0 \text{ MJ/kg}^{\text{a}}$ and $\text{PCS} \leq 4.0 \text{ MJ/m}^2^{\text{b}}$ and $\text{PCS} \leq 4.0 \text{ MJ/m}^2^{\text{d}}$ and $\text{PCS} \leq 3.0 \text{ MJ/kg}^{\text{e}}$	-
	EN 13823	$\text{FIGAR}_{0.2 \text{ MJ}} \leq 120 \text{ W/s}$ and LFS < edge of specimen and $\text{THR}_{600\text{s}} \leq 7.5 \text{ MJ}$	Smoke production ^f and Flaming droplets /particles ^g

B	EN 13823 and	FIGRA _{0.2MJ} ≤ 120 W/s and LFS < edge of specimen and THR _{600s} ≤ 7.5 MJ	Smoke production ^f and Flaming droplets /particles ^g
	EN ISO 11925-2 ⁱ Exposure = 30s	F _s ≤ 150mm within 60s	
C	EN 13823 and	FIGRA _{0.4MJ} ≤ 250 W/s and LFS < edge of specimen and THR _{600s} ≤ 15 MJ	Smoke production ^f and Flaming droplets /particles ^g
	EN ISO 11925-2 ⁱ Exposure=30s	F _s ≤ 150mm within 60s	
D	EN 13823 and	FIGRA _{0.4MJ} ≤ 750 W/s	Smoke production ^f and Flaming droplets /particles ^g
	EN ISO 11925-2 ⁱ Exposure=30s	F _s ≤ 150mm within 60s	
E	EN ISO 11925-2 ⁱ Exposure=15s	F _s ≤ 150mm within 20s	Flaming droplets /particles ^h
F	EN ISO 11925-2 ⁱ Exposure=15s	F _s > 150mm within 20s	

- ^a For homogeneous products and substantial components of non-homogeneous products
- ^b For any external non-substantial component of non-homogeneous products
- ^c Alternatively, any external non-substantial component having a PCS ≤ 2,0 MJ/m², provided that the product satisfies the following criteria of EN 13823: FIGRA ≤ 20 W/s, and LFS < edge of specimen, and THR_{600s} ≤ 4,0 MJ, and s1, and d0.
- ^d For any Internal non-substantial component of non-homogeneous products
- ^e For the product as a whole
- ^f **s1** = SMOGRA ≤ 30m²/s² and TSP_{600s} ≤ 50m²; **s2** = SMOGRA ≤ 180m²/s² and TSP_{600s} ≤ 200m²; **s3** = not s1 or s2
- ^g **d0** = No flaming droplets/ particles in EN 13823 within 600s
d1 = No flaming droplets/ particles persisting longer than 10s in EN 13823 within 600s
d2 = not d0 or d1
Ignition of the paper in EN ISO 11925-2 results in a d2 classification
- ^h Pass = no ignition of the paper (no classification);
Fail = ignition of the paper (**d2** classification)
- ⁱ 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 Report

Report No. TC.25.08.003700

Date of Issue 2025-08-14



Applicant: MEGANITE INC.

Applicant Address: 1461 S. Balboa Ave., Ontario, CA 91761, USA

Sample Description: Meganite Acrylic Solid Surface EN

Material: Acrylic Solid Surface

Thickness: 12mm

Receipt Date of Sample: Received on 2025-08-06

Date of Testing: From 2025-08-06 to 2025-08-12

Sample Submitted: The Sample(s) and Its (Their) Information(s) Was (Were) Submitted by Applicant and Identified.

Test Result: Refer to Next Page.

TÜV SÜD SW Rail Transportation Technology (Jiangsu) Co., Ltd.

Prepared by:

Rui Zhang

Approved by:

Wayne Wang

Note:

(1) Each order is subject to acceptance of our [General Terms and Conditions](#) and the [TÜV SÜD Testing, Certification, Validation and Verification Regulation](#), in the version valid at the time the contract is concluded. For full version of above both documents, please visit the link to view.

(2) The results in this report are relevant only to the sample(s) tested.

(3) The test report shall not be reproduced except in full without the written approval of the laboratory.

(4) Disclaimer: Measurement Uncertainty:

Unless otherwise stated, the decision rule for conformity reporting is based on Binary Statement for Simple Acceptance Rule (w=0) stated in ILAC-G8:09/2019 or CNAS-GL015:2022

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Description of the test subject

Sample	Description	Picture of Sample
001	Meganite Acrylic Solid Surface EN	

Conclusion:

Test Items	Standard	Conclusion
1	Burning behaviour	EN 13501-1:2018
		B-s1,d0



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Test Results

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

1. EN 13823:2020+A1:2022 reaction to fire tests for building products – building products excluding floorings exposed to the thermal attack by a single burning item

1.1 Sample details

Sample size	Long limb:1500mm×1000mm
	Short limb:1500mm×495mm
Thickness	About <u>12.5</u> mm

Precondition	Temperature (°C)	Humidity (%)	Duration (h)
	23±2	50±5	≥48

1.2 Results

	1	2	3	Average
FIGRA _{0.2MJ} (W/s)	19.3	21.6	18.6	19.8
FIGRA _{0.4MJ} (W/s)	19.3	21.6	18.6	19.8
LFS< edge of specimen (Yes/No)	Yes	Yes	Yes	--
THR _{600s} (MJ)	0.1	0.2	0	0.1
SMOGRA(m ² /s ²)	0	0	0	0
TSP _{600s} (m ²)	0	0	0	0
Flaming particles or droplets(Yes/No)	No	No	No	--
Observe	--			

Remark:

FIGRA_{0.2MJ}=maximum of the quotient of heat release rate from the specimen and the time of its occurrence using a THR-threshold of 0.2MJ

FIGRA_{0.4MJ}=maximum of the quotient of heat release rate from the specimen and the time of its occurrence using a THR threshold of 0.4MJ

LFS=lateral flame spread on the long specimen wing

THR_{600s}=Total heat release from the specimen in the first 600s of exposure to the main burner flames

SMOGRA=smoke growth rate. the maximum of the quotient of smoke production rate from the specimen and the time of its occurrence

TSP_{600s}=Total smoke production from the specimen in the first 600s of exposure the main burner flames



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2. EN ISO 11925-2:2020 Reaction to fire tests- ignitability of building products subjected to direct impingement of flame- part2: single-flame source

2.1 Sample details

Sample size	250mm×90mm
Thickness	About 12.5 mm

Precondition	Temperature (°C)	Humidity (%)	Duration (h)
	23±2	50±5	≥48

2.2 Test results

Face ignition

Specimen	1	2	3
Whether ignition occurs (Yes/No)	No	No	No
Whether the flame tip reaches 150mm above the flame application point (Yes/No)	No	No	No
The time of the flame tip reaches 150mm above the flame application point.	--	--	--
Whether ignition of the filter paper occurs(Yes/No)	No	No	No

Edge ignition

Specimen	1	2	3
Whether ignition occurs (Yes/No)	No	No	No
Whether the flame tip reaches 150mm above the flame application point (Yes/No)	No	No	No
The time of the flame tip reaches 150mm above the flame application point.	--	--	--
Whether ignition of the filter paper occurs(Yes/No)	No	No	No



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EN 13501-1:2018 table 1 - classification

Classification	Test method		Classification criteria
B	EN 13823 and		FIGRA _{0.2MJ} ≤ 120W/s; LFS < edge of specimen THR _{600s} ≤ 7.5 MJ
	EN ISO 11925-2 Exposure = 30 s		F _s ≤ 150mm within 60s
Additional classification	Smoke	s1	SMOGRA ≤ 30m ² /s ² , TSP _{600s} ≤ 50m ²
		s2	SMOGRA ≤ 180m ² /s ² , TSP _{600s} ≤ 200m ²
		s3	Not s1 or s2
	Flaming droplets/particles	d0	No flaming droplets/particles in EN 13823 within 600s
		d1	No flaming droplets/particles persisting longer than 10 s in EN 13823 within 600s
		d2	Not d0 or d1 Ignition of the paper in EN ISO 11925-2 results in a d2 classification.

Conclusion

Test standard	Record	Conclusion
EN 13823	FIGRA _{0.2MJ} = 19.8 W/s LFS < Sample edge THR _{600s} = 0.1 MJ SMOGRA = 0 m ² /s ² TSP _{600s} = 0 m ² No flaming droplets/particles in EN 13823 within 600s	B-s1,d0
EN ISO 11925-2	F _s ≤ 150mm within 60s No ignition of the filter paper occurs.	



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Test photos

 <p>Before test EN 13823</p>	 <p>During test EN 13823</p>	 <p>After test EN 13823</p>
 <p>Before test EN ISO 11925-2(Face ignition)</p>	 <p>During test EN ISO 11925-2(Face ignition)</p>	 <p>After test EN ISO 11925-2(Face ignition)</p>
 <p>Before test EN ISO 11925-2(Edge ignition)</p>	 <p>During test EN ISO 11925-2(Edge ignition)</p>	 <p>After test EN ISO 11925-2(Edge ignition)</p>

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

-End of Report-