



中国认可
国际互认
检测
TESTING
CNAS L6069



Test Report


Report No. TC.23.03.001257

Date of Issue 04/07/2023

Applicant: ZHANGJIAGANG FEITENG NEW COMPOSITE MATERIALS CO.,LTD.

Applicant address: 77 Huada Rd., Environmental & New Material Industry Park, Bonded Port Zone, Zhangjiagang City, Jiangsu China.

Description of the test subject:

| Sample | Description | Photo |
|--------|---------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| 001 | <p>Sample Description: Aluminum composite panels</p> <p>Style No.: 4mm</p> <p>Manufacturer: FEITENG</p> |  |

Receipt Date of Sample: 03/27/2023

Date of Testing: From 03/27/2023 to 04/07/2023

Sample Submitted: The sample(s) was (were) submitted by applicant and identified.

Conclusion:

| Test Items | | | Conclusion |
|------------|-------------------|-----------------|------------|
| No. | Items | Standard | |
| 1 | Burning behaviour | EN 13501-1:2018 | C-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 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>4.0</u> mm |

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

1.2 Test results

| | 1 | 2 | 3 | Average |
|-------------------------------------------|------|-----|------|---------|
| FIGRA _{0.2MJ} (W/s) | 11.2 | 0 | 25.6 | 12.3 |
| FIGRA _{0.4MJ} (W/s) | 11.2 | 0 | 25.6 | 12.3 |
| LFS< edge of specimen (Yes/No) | Yes | Yes | Yes | -- |
| THR _{600s} (MJ) | 0.5 | 0.4 | 0.9 | 0.6 |
| SMOGRA(m ² /s ²) | 0 | 0 | 2.0 | 0.7 |
| TSP _{600s} (m ²) | 5.6 | 8.2 | 9.7 | 7.8 |
| 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 <u>4.0</u> 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 |
|---------------------------|-----------------------------------|-------------------------------------------------------------------------------------------|
| C | EN 13823 and | FIGRA _{0.4MJ} <250W/s LFS< edge of specimen THR _{600s} ≤15MJ |
| | EN ISO 11925-2 Exposure = 30 s | Fs ≤150mm within 60s |
| Additional classification | Smoke | s1 SMOGRA≤ 30 m ² /s ² , TSP _{600s} ≤50m ² |
| | | s2 SMOGRA≤ 180 m 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 Ignites of the paper in EN ISO 11925-2 results in a d2 classification. |

Conclusion:

| Test standard | Record | Conclusion |
|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| EN 13823 | FIGRA _{0.4MJ} = 12.3 W/s LFS < Sample edge THR _{600s} =0.6 MJ SMOGRA=0.7 m ² /s ² TSP _{600s} =7.8 m ² No flaming droplets/particles persisting longer than 10 s within 600s | C-s1,d0 |
| EN ISO 11925-2 | Fs ≤ 150mm within 60s No ignition of the filter paper occurs. | |

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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. Test results are just for internal reference.

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

Drafted by:

Jinqiang Zhou

Approved by:

Wayne Wang

-End of Report-

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