

Classification of reaction to fire in accordance with EN 13501-1

1 Introduction

This classification report defines the classification assigned to the product family “TEKNOSAFE FLAME GUARD 2457-10” in accordance with the procedure given in EN 13501-1:2018.

This report replaces RISE report O100352-147289-15, dated March 2, 2022. This revision includes new test data as well as a change of classification.

2 Details of classified product

2.1 General

The products in “TEKNOSAFE FLAME GUARD 2457-10” family are fire retardant surface coated construction products. Their classification is valid for the following end use applications:

Wall cladding and wall panel.

According to the owner of this classification report, this product family complies with the European product specification EN 13986:2004+A1:2015 and EN 14915:2013+A2:2020.

2.2 Product description

The product family, “TEKNOSAFE FLAME GUARD 2457-10” (as described by the sponsor), is fully described below or is fully described in the test reports provided in support of classification listed in Clause 3.1.

According to information provided by the client, the product has the following composition:

System 1:

Paint system called, “P1a-A-CS”, consisting of a water-borne intumescent primer called “TEKNOSAFE FLAME GUARD 2457-10”, nominal applied amount 250 g/m² (wet weight).

System 2:

Paint system called: “P1b-AB-CS” consisting of water-borne intumescent primer called “TEKNOSAFE FLAME GUARD 2457-10”, nominal amount 250 g/m² (wet weight).

Top coat called “TEKNOSAFE FLAME PROTECT 2458-00” nominal applied amount 100 g/m² (wet weight).

Both systems are applied by spray application.

RISE Research Institutes of Sweden AB

Postal addressBox 857
501 15 BORÅS
SWEDEN**Office location**Brinellgatan 4
504 62 Borås
SWEDEN**Phone / Fax / E-mail**+46 10-516 50 00
+46 33-13 55 02
info@ri.se

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3 Reports and results in support of this classification

3.1 Test reports/extended application reports

Table 1 Test report and field of application rules forming the basis for this classification.

Name of laboratory	Name of sponsor	Test report reference no	Accredited test methods and date
RISE	Teknos A/S	O100352-147289-1	EN 13823:2020 and EN ISO 11925-2:2020
RISE	Teknos A/S	O100352-147289-14rev1	EXAP based on NB-CPR/SH02/19/832r2
RISE	Teknos A/S	O100352-147289-17	EN 13823:2020
RISE	Teknos A/S	O100352-147289-12	EN 13823:2020
DBI	Teknos A/S	PHB10114A	EXAP Based on EGOLF-recommendation 003-2016

3.2 Test results

Table 2 The test results listed below show the worst case as found in the test programme performed and reported according to the table above. The tests have been carried out on products covering the thickness range, fire retardant coating type, influence of colourant, and mounting of the product group. The protocol NB-CPR/SH02/19/832r2 from the fire sector group of notified bodies, has been applied in the process of selecting suitable products for testing

Test method	Parameter	Number of tests	Results	
			Continuous parameter mean (m)	Compliance with parameters
EN ISO 11925-2		12		
Edge/Surface flame attack**				
30 s exposure	$F_s \leq 150$ mm		(-)	Compliant
Flaming droplets/particles	Ignition of filter paper		(-)	No ignition of filter paper
EN 13823		11		
	$FIGRA_{0,2MJ}$ (W/s)		24	Compliant
	$FIGRA_{0,4MJ}$ (W/s)		24	Compliant
	$LFS < edge$		(-)	Compliant
	THR_{600s} , (MJ)		3.2	Compliant
	$SMOGRA$, (m ² /s ²)		1	Compliant
	TSP_{600s} , (m ²)		37	Compliant
	Flaming droplets/particles		(-)	No flaming droplets/particles

** : as required to the end use application of the product

(-) : not applicable

4 Classification and field of application

4.1 Reference of classification

This classification has been carried out in accordance with clause 11 and 15 of EN 13501-1:2018.

4.2 Classification

The product family “TEKNOSAFE FLAME GUARD 2457-10” in relation to its reaction to fire behaviour is classified:

B

The additional classification in relation to smoke production is:

s1

The additional classification in relation to flaming particles/droplets is:

d0

The format of the reaction to fire classification for construction products excluding floorings and linear pipe thermal insulation product is:

Fire Behaviour		Smoke Production			Flaming Droplets	
B	-	s	1	,	d	0

Reaction to fire classification: *B-s1,d0*

4.3 Field of application:

This classification is valid for the following product parameters:

Coating

Base coat: TEKNOSAFE FLAME GUARD 2457, 250 g/m² (wet weight).

With or without top coat: TEKNOSAFE FLAME PROTECT 2458-00
100 g/m² (wet weight).

Application substrate

Applied to a wood substrate in accordance to EN 13986 or EN 14915 of at least euroclass D-s2,d0 with a thickness of at least 18 mm and a substrate density $\geq 433 \text{ kg/m}^3$.

Or

Applied to a first wood substrate in accordance to EN 13986 or EN 14915 of at least euroclass D-s2,d0 with a thickness of at least 8 mm and having a density of: $\geq 338 \text{ kg/m}^3$. The first substrate shall be mounted direct to a second substrate of wood in accordance to EN 13986 of at least Euroclass D-s2,d0 with a thickness of at least 10 mm and having a density of: $\geq 510 \text{ kg/m}^3$.

Or

Applied to a first wood substrate in accordance to EN 13986 or EN 14915 of at least euroclass D-s2,d0 with a thickness of at least 8 mm and having a density of: $\geq 338 \text{ kg/m}^3$. The first substrate shall be mounted direct to a second substrate of gypsum plaster board (paper faced) or any end use substrate of Euroclasses A1 or A2-s1,d0 at least 10 mm thick having a density $\geq 510 \text{ kg/m}^3$.

This classification is valid for the following end use conditions:

Fixings

- Mechanically fixed.

Joints

- Horizontal and vertical joints.

Orientation

For wooden board in accordance to EN 13986:

- Horizontal and vertical orientation.

For wooden panels in accordance to EN 14915:

- Horizontal and vertical orientation.

Mounting – air gap and substrate

- Mounted with or without an unventilated air gap. The substrate behind the product shall consist of mineral wool with euroclass A1 and a thickness of at least 20 mm and a density $\geq 38 \text{ kg/m}^3$ or a gypsum plasterboard (paper faced) or any end use substrate of Euroclass A1 or A2-s1,d0 at least 10 mm thick having a density $\geq 510 \text{ kg/m}^3$.

Battens

- Wood or – non-combustible battens.

Colours

- All colours.

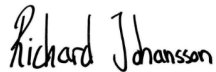
The samples were selected by an official from SKH and delivered by the client. RISE, Fire Technology was not involved in the sampling procedure.

5 Limitations

This classification document does not represent type approval or certification of the product.

RISE Research Institutes of Sweden AB **Department Fire Technology - Reaction to Fire Medium Scale Lab**

Performed by



Richard Johansson

Examined by



Per Thureson

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Signerande parter

Richard Johansson (RJ)
RISE Research Institutes of Sweden AB
Org. nr 556464-6874
richard.johansson@ri.se

Richard Johansson

Signerade 2022-03-29 15:09:31 CEST (+0200)

Per Thureson (PT)
RISE Research Institutes of Sweden AB
per.thureson@ri.se

Per Thureson

Signerade 2022-03-29 15:11:13 CEST (+0200)

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