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TECHNICAL REPORT

COBA Europe Ltd Europark Industrial Estate A5 Watling Street Rugby Leicestershire CV23 0AL United Kingdom	SATRA reference:	FLO2006125	
		2428	4
	Report ID/Issue number:	42933/1	
	Your reference:	50949	
	Date samples received:	03/07/2024	
	Date(s) work carried out:	03/07/2024 to 26/07/2024	
	Date of report:	15/08/2024	

Testing Requirements

Indicative testing of one product described by the customer as "GRP Grating 50mm" to EN ISO 9239-1:2010.

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For SATRA's statements regarding the confidentiality, publication and dissemination of this report, decision rules and UKAS accreditation please see the final page of this technical report.

Report Signed by:

Philip Weal

Report Signatory

TESTING OF ONE PRODUCT, DESCRIBED BY THE CUSTOMER AS "GRP GRATING 50MM" TO EN ISO 9239-1:2010 INDICATIVE TESTING. SINGLE SPECIMEN (L/NCS).

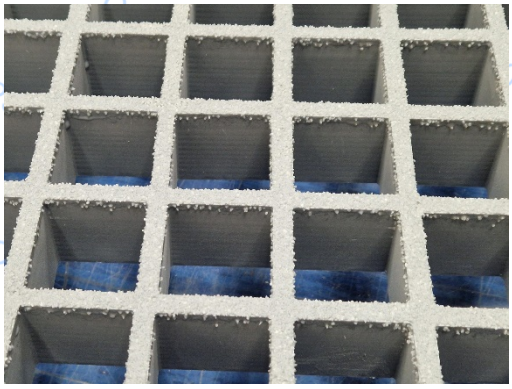
As requested by Coba Europe Ltd, SATRA have assessed the floor covering submitted to determine the burning behaviour using a radiant heat source, as detailed below.

SUMMARY

With regard to the property assessed, the sample submitted under the reference "GRP Grating 50mm" has demonstrated an indicative heat flux at 30mins of 10.9 kW/m^2, with a smoke development of 46.52 %.min, when a single specimen was tested for indicative purposes only.(4)
The specimens were extinguished manually by the operator at 30 minutes, and therefore no CHF value is reported

SAMPLE SUBMITTED

Sample reference: "GRP Grating 50mm" (1)
Appearance:



Date received: 03 July 2024 (2)
Date conditioning commenced: 03 July 2024 (3)
Testing conducted: 26 July 2024
Testing conducted by: Phil Weal

TESTS CARRIED OUT

- EN ISO 9239-1:2010. Reaction to fire tests for floorings. Determination of the burning behaviour using a radiant heat source. (L/NCS) (2,3,4)

Notes:

(1) Information supplied by the customer. Not verified by SATRA.
(2) The specimens were provided to SATRA by the customer. SATRA were not involved in the selection or sampling procedure.
(3) Prior to testing, the specimens were conditioned at (23 ± 2) °C, (50 ± 5) % RH, until constant mass was achieved, or for a fixed period of time as defined in EN 13238:2010.
(4) Only indicative testing was carried out as per customer request. Directionality was not assessed.

FULL DESCRIPTION OF TEST SPECIMENS (1)

The description of the specimen given below has been prepared from information provided by the sponsor of the test. All values quoted are nominal, unless tolerances are given.

General description of flooring system			GRP Slip Resistant Grating
Product reference of flooring system			COBAGRIP Grating
Colour reference			**Yellow, Green or Grey**
Name of Manufacturer			COBA Europe Ltd.
Overall weight per unit area			50mm = 21kg/m2
Overall Thickness			50mm
Product Configuration			
Floor covering	GRP coating	Product Reference	Quartz-Grit
		Generic Type	Note 1
		Name of Manufacturer	Suzhou Haixing Plastic Chemical Co.,Ltd
		% Composition	**4.5**
		Application Rate	Top Surface 100%
		Application method	Applied by hand
		Weight per unit area	1KG/SQM
		Thickness	1mm
		Trade name of flame retardant	HR-15
		Generic form of flame retardant	Liquid
		Amount of flame retardant	0.7%
	Core material	Product Reference	Polyester Resin
		Generic Type	Liquid
		Name of Manufacturer	Shanghai New Tianhe Resin CO.LTD
		% Composition	**95.5**
		Application Rate	Note 1
		Application method	Note 1
		Weight per unit area	50mm – 20kg/m2
		Thickness	50mm
		Trade name of flame retardant	Suzhou Haixing Plastic Chemical Co.,Ltd
		Generic form of flame retardant	Liquid
		Amount of flame retardant	0.7%
Brief Description of the manufacturing process			Note 1

LABORATORY SUPPLIED SUBSTRATE;

Adhesive	Product Reference	N/A
	Generic Type	N/A
	Name of Manufacturer	N/A
	Density (20ºC)	N/A
	Colour	N/A
Substrate	Product reference	'Cembrit HD'
	Generic type	Fibre cement board
	Name of supplier	Clarkes of Walsham Ltd
	Thickness	(8 ± 2) mm
	Density	(1800 ± 200) kg/m³

Note 1: The sponsor of the test has failed to provide the information
Note 2: The sponsor has provided the required information but at the request of the sponsor it has been omitted from the final report.
Note 3: The sponsor was unwilling to provide the required information.

RESULTS

Sample reference	Test method	Property	Mean results
"GRP Grating 50mm"	**EN ISO 9239-1: 2010 (single specimen only)(4)**	Maximum flame front distance	**120 mm**
		Critical radiant flux (CHF) or heat flux at 30 minutes (HF-30)	**10.9 kW/m²**
		Smoke development (% light obscuration over the test time)	**46.52 %.min**
		Maximum light attenuation	**5.4 %**

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

The test results relate only to the specimens of the product in the form in which they were tested. Small differences in the composition or thickness of the product may significantly affect the performance during the test and may therefore invalidate the test results. Care should be taken to ensure that any product which is supplied or used is fully represented by the specimens which were tested. Test results using a standard substrate complying with EN 13238 Clause 5.2.2 or Clause 5.2.3 are applicable if the density of the end use substrate is at least 75% of the nominal density of the standard substrate.

The specification and interpretation of fire test methods are the subject of ongoing development and refinement. Changes in associated legislation may also occur. For these reasons it is recommended that the relevance of test reports over five years old should be considered by the user. The laboratory that issued the report will be able to offer, on behalf of the legal owner, a review of the procedures adopted for a particular test to ensure that they are consistent with current practices, and if required may endorse the test report.

TEST DETAILS

Purpose of test

To determine the performance of specimens of a product when they are subjected to the conditions of the test procedure defined in the document EN ISO 9239-1:2010. This report should be read in conjunction with that standard.

Scope of test

EN ISO 9239-1:2010 describes a European test procedure for assessing the burning behaviour, spread of flame and smoke development of horizontally mounted floorcovering systems exposed to a radiant heat gradient in a test chamber, when ignited with a pilot flame.

The measurements provide a basis for estimating one aspect of the fire exposure behaviour of floor covering systems. The imposed radiant heat simulates the thermal radiation levels likely to impinge on the floors of a building whose upper surfaces are heated by flames or hot gases or both, from a fire in an adjacent room or compartment.

This method is applicable to all types of floor coverings such as textile carpet, cork, wood, rubber and plastic coverings as well as coatings. Results obtained by this method reflect the performance of the total floor covering system as tested. Modifications of the backing, bonding to a substrate, underlay, or other changes to the system may affect the test results. The test is intended for regulatory purposes, specification acceptance, design purposes, classification, or development and research.

Number of specimens tested

A single specimen was tested for indicative purposes only [4]. This deviates from the test method, EN ISO 9239-1:2010 which requires testing to be carried out in triplicate in either the direction of, or perpendicular to the direction of manufacture, whichever is the worst performing.

Exposed Face

The decorative face of the specimen was exposed to the radiant heat of the test when the specimens were mounted in the test position.

Adhesive

The specimen was tested loose-laid (L) to the substrate.

Substrate

Non-combustible substrate (NCS) - End use substrates of classes A1 and A2-s1,d0, are represented by fibre cement board (in accordance with ISO 390).

TABLE 1 - FULL TEST RESULTS - INDIVIDUAL SPECIMEN RESULTS FOR SPECIMEN REFERENCED "GRP GRATING 50MM"

Specimen Number	1
Direction of test	As received
Distance (cm)	Time to travel indicated distance (s)
5	463
10	1660
15	-
20	-
25	-
30	-
35	-
40	-
45	-
50	-
55	-
60	-
65	-
70	-
75	-
80	-
85	-
90	-
95	-
100	-
Max. flame front distance (cm)	12.0
Critical radiant flux (kW/m²)	≥10.9
Smoke development (%.min)	46.52
Max. light attenuation (%)	5.4
Flame front distance after 10 min. (cm)	6.0
Flame front distance after 20 min. (cm)	8.0
Flame front distance after 30 min. (cm)	12.0
Heat flux after 10 min. HF_{10} (kW/m²)	≥10.9
Heat flux after 20 min. HF_{20} (kW/m²)	≥10.9
Heat flux after 30 min. HF_{30} (kW/m²)	≥10.9

OBSERVATIONS

The following observations of the burning characteristics of the specimens during the testing exposure were made:

Specimen extinguished manually after end of test.

Conditions of Use

Confidentiality and Dissemination

SATRA test reports may be forwarded to other parties if they are not changed in any way and are not marked as confidential. Test reports must not be published, for example by including it in advertisements, without the prior, written permission of SATRA.

Liability

Results given in this report refer only to the samples submitted for analysis and tested by SATRA. Comments are for guidance only.

A satisfactory test report in no way implies that the product tested is approved by SATRA and no warranty is given as to the performance of the product tested. SATRA shall not be liable for any subsequent loss or damage incurred by the client as a result of information supplied in the report.

Accreditation

Where the UKAS logo is included on the test report then tests marked ≠ fall outside the UKAS Accreditation Schedule for SATRA. Where no UKAS logo is included on the test report then none of the tests reported are covered by SATRA's UKAS Accreditation.

Tests marked ¥ are performed under SATRA's Flexible UKAS Schedule.

Opinions and interpretations fall outside the UKAS Accreditation for SATRA.

Uncertainty of Measurement and Decision Rules

Where values for uncertainty of measurement are included within the report then the uncertainty of the corresponding results are based on a standard uncertainty multiplied by a coverage factor k=2, which provides a coverage probability of approximately 95%.

When reporting results against a conformance statement (Pass/Fail or the allocation of a class or level) then uncertainty of measurement is taken into account based on a non-binary acceptance which itself is based on the guard band being equal to the expanded uncertainty.

Where the result corrected for uncertainty falls within the tolerance of the conformance statement then the risk of the conformance statement being a false accept or false reject is up to 2.5% and SATRA will in this instance quote a Pass/Fail, class, or level.

Where the result corrected for uncertainty falls outside of the tolerance of the conformance statement then the risk of the conformance statement being a false accept or false reject is up to 50%. In this instance SATRA will not provide a Pass/Fail statement or a class or level but will include information in the notes in relation to the result obtained.

SATRA's guidelines provide recommendations that are based upon SATRA's knowledge and experience. The guidelines are intended to indicate conformance by providing information on the likely performance or characteristics of a property. As such, uncertainty of measurement is not applied when evaluating results against guideline recommendations.