

Classification report

Issuing laboratory: Warringtonfire Frankfurt GmbH

Notification number of the test laboratory: NB 1378

Test standard: Classification of the burning behaviour
according to
DIN EN 13501-1 (2019-05)

Test sponsor(s): SIMONA AG

Product(s): PVC-CAW

Report number: 230160-K1

Version: 1

Warringtonfire Frankfurt GmbH , accredited for compliance with ISO/IEC 17025:2019 – Classification according to DIN EN 13501-1:2019



Quality management

Version	Date	Summary of amendments including reasons	
1	26 May 2023	Description	Initial issue
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	*Signed for and on behalf of Warringtonfire Frankfurt GmbH		

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1. Introduction

This report documents the classification of the reaction to fire tests of "PVC-CAW" in accordance with DIN EN 13823: 2020 and DIN EN ISO 11925-2:2020.

Warringtonfire Frankfurt GmbH (Warringtonfire) performed the test on 20.04.2023, 04.05.2023 and 25.05.2023 at the request of the test sponsor listed in Table 1.

Table 1 Test sponsor details

Entity	Address
Test sponsor	
SIMONA AG	Jan Pavlov Kirn, Sulzbacher Straße 77 55606 Germany

2. Test specimens

The description of the test specimens is detailed in table 2 unless otherwise specified:

- The information including measurements was provided by the test sponsor.
- All measurements taken by Warringtonfire are clearly identified.

Table 2 Test specimen description

	Discription of sponsor	Discription of test laboratory
Product name	PVC-CAW	-
Sample material	PVC	PVC plates
Material type	n/a	-
Manufacturing method	n/a	-
Total thickness	1-10mm	1-10mm
Surface weight	1,4-15kg/m ²	-
Density	n/a	-
Colour	White, black, red	black, white und red
Flame retardant	n/a	-
Area of application	Roof components for cladding Interior cladding Interior baffles Air conditioning and ventilation systems External wall interlocking without requirement of stability	-

The individual sampled were bonded to the full surface of calcium silicate plates using an adhesive provided by the sponsor. Table 3 shows the amounts of adhesive and the tested thicknesses and colours. Sample preparation was taken by Warringtonfire.

Table 3 Bonding log

Test No.	Thickness	Colour	Bonding	Amount of bonding	
				Small wing	big wing
5	1mm	Red	Full surface	283	604
6	1mm	Black	Full surface	286	531
7	1mm	White	Full surface	311	540
8	10mm	Red	Full surface	309	446
9	10mm	White	Full surface	299	500
10	10mm	Black	Full surface	291	447
Used adhesive (provided by sponsor): COSMO HD-100.800/.802					

3. Test procedure

Table 4 details the test procedure for this reaction to fire test.

Table 4 Test procedure

Item	Detail
Test standard	DIN EN 13823 and DIN EN ISO 11925
Supplementary standard	DIN EN 13501-1: 2019
Deviations from the test standard	None
Product standard and/or EAD	The client did not provide an instruction to work in accordance with a product standard.
EGOLF agreements and/or recommendations	
Pre-test conditioning	Test specimens were received on 05/04/2023 15:00. Before testing, the test specimens were conditioned in accordance with the requirements of DIN EN 13238: 2010 at a temperature of 23 ± 2 °C and a relative humidity of $50 \pm 5\%$ for a minimum period of 48 hours, until constant mass was achieved.
Sampling / test specimen selection	The test specimens were supplied by the test sponsor. Warringtonfire was not involved in any selection or sampling procedure.
Test face	One of two identical faces of the test specimens was exposed to the heating conditions of the test when the test specimens were mounted in the test position.
Number of replicate tests	6 for DIN EN 13823 and 36 for DIN EN ISO 11925-2
Intended application	Roof components for cladding Interior cladding Interior baffles Air conditioning and ventilation systems External wall interlocking without requirement of stability

Name of test laboratory	Customer	Report to form the basis	Test procedure
Warringtonfire, Frankfurt GmbH	SIMONA AG	230160	DIN EN 13823 (SBI) DIN EN ISO 11925-2 (30s ignition time surface and edge ignition)

2.2 Test results

Test procedures	Parameter / classes	Test results average
DIN EN 13823 (SBI)	FIGRA _{0,2MJ} ≤ 120 [W/s] for class A2 FIGRA _{0,2MJ} ≤ 120 [W/s] for class B	82
	FIGRA _{0,4MJ} ≤ 250 [W/s] for class C FIGRA _{0,4MJ} ≤ 750 [W/s] for class D	79
	THR _{600s} [MJ] ≤ 7,5 MJ for class A2 THR _{600s} [MJ] ≤ 7,5 MJ for class B THR _{600s} [MJ] ≤ 15 MJ for class C THR _{600s} [MJ] no requirement for class D	5,1
	SMOGRA-index ≤ 30 [m ² /s ²] für s1 SMOGRA-index ≤ 180 [m ² /s ²] für s2	134
	TSP _{600s} ≤ 50 [m ²] for s1 TSP _{600s} ≤ 200 [m ²] for s2	529
	LFS < edge of the specimen for class A2 LFS < edge of the specimen for class B LFS < edge of the specimen for class C	fulfilled
	no burning dripping off/dropping within 600s for class d0	fulfilled
	no burning dripping off/dropping > 10 s within 600s for class d1	-
	burning dripping off/dropping > 10 s within 600s for class d2	-
DIN EN ISO 11925-2 30s	FS ≤ 150 mm within 60 s for class B, C u. D FS ≤ 150 mm within 20 s for class E	fulfilled
	no inflammation of the filter paper within 60 s for class d0	fulfilled
	inflammation of the filter paper within 60 s for class d2	-

Explanations of table standing to above:

Figra_{0,2MJ}: Heat release rate with consideration of the THR of threshold value of 0,2MJ [W/s]

Figra_{0,4MJ}: Heat release rate with consideration of the THR of threshold value of 0,4MJ[W/s]

THR_{600s}: Total set free warmth during 600s [MJ]

SMOGRA: Smoke development rate

TSP_{600s}: Total set free smoke quantity during 600s [m²]

LFS: lateral propagation of flames

3.1 Reference

The classification was carried out according to the chapter 11 of DIN EN 13501-1

3.2 Classification

The tested material is incorporated regarding its behaviour in case of fire into the class **B**. Concerning the smoke development, the tested material is incorporated into the class **s3**. Concerning the dripping off behaviour the tested material is incorporated into the class **d0**.

The classification of the tested material reads thus:

B – s3, d0

3.3 Area of application

The classification is only valid for the material described in chapter one, in the tested colour black, white and red with a thickness of 1-10mm, glued over the entire surface, with the adhesive COSMO HD-100.800/.802 and the specified amount of adhesive, on a substrate of the building material class A1 or A2 according to DIN EN 13501-1 (raw density $\geq 870 \pm 50 \text{ kg/m}^3$).

All colours of the material are included in the classification.

4 Reservation

This classification report replaces not a possible required type admittance or type certification of the product.

4. Application of test results

4.1 Validity

This document is a translation into English of report No. 230160-K1, originally issued in German. This translated report has been issued under the responsibility of and checked by Warringtonfire Frankfurt GmbH. This translation is issued according to the “Interpretations of the European standard DIN EN ISO/IEC 17025: 2019” which applies to fire test laboratories.

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The test results relate to the behaviour of the test specimens of a product under the conditions of the test; they are not intended to be the sole criterion for assessing the potential fire hazard of the product in use, nor can the results be extrapolated and applied to other products.

Test reports are statements of fact prepared in accordance with the referenced version of the standards stated in Section 0 of this report. Test reports are based upon the information provided to Warringtonfire. Warringtonfire takes no responsibility for the accuracy or completeness of such information.

The results stated in this report apply to the sample as received. Any differences in composition, production process, thickness, density, or colour of the product may significantly affect the performance and will therefore invalidate the application of the test results to the variant product. It is recommended that any proposed variation to the tested configuration or product should be referred to the test sponsor. The test sponsor should then obtain appropriate documentary evidence of compliance from Warringtonfire or another notified testing authority. The supplier of the product is responsible for ensuring that the product which is supplied for use is identical to the test sample as received.

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4.2 Uncertainty of measurement

Because of the nature of reaction to fire testing and the consequent difficulty in quantifying the uncertainty of measurements obtained from a reaction to fire test, it is not possible to provide a stated degree of accuracy of the result.



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