


CLASSIFICATION REPORT


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TEST SPECIMEN	Type: DRY CHEMICAL CEMENT Reference: "DEKTON-DOMOOS"
CONCERNING TO:	CLASSIFICATION OF THE BEHAVIOUR IN CASE OF FIRE OF THE CONSTRUCTION PRODUCTS AND THE ELEMENTS FOR BUILDING. CLASSIFICATION USING AS A STARTING POINT THE DETAILS OBTAINED AT THE FIRE RESISTANCE TESTS. ACCORDING TO STANDARD UNE-EN 13501: 07+A1:2010
APPLICANT	COSENTINO, S.A. CR BAZA A HUERCAL OVERA KM 59 04850 CANTORIA (ALMERÍA)
DATE/S OF TEST	Reception of specimens: 06/11/13 Beginning of tests: 20/11/13 End of tests: 20/11/13

AUTHORIZED SIGNATORY/IES



Signed.: Mrs. Nerea Carpintero Cardona
Reaction to Fire Lab Technician



Signed.: Ph.D. Rosa Mª Pérez
Head of the Raw Materials and Environment Dept.

The result of this/these test/s only refers to the object/s tested.
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CONTENTS

	<i>Page</i>
1. INTRODUCTION	3
2. DETAILS OF THE CLASSIFIED PRODUCT	3
3. TEST REPORTS SUPPORTING THE CLASSIFICATION.....	4
4. TEST RESULTS SUPPORTING THE CLASSIFICATION	4
5. CLASSIFICATION AND DIRECT APPLICABILITY	5
6. CONSIDERATIONS.....	5
APPENDIX	A1, A2 y A3



1. INTRODUCTION

This classification report describes the classification allocated to the product described on section 2, according to the procedures stated in standard UNE-EN 13501-1:2007+A1:2010 "Classification of the behaviour in case of fire of the construction products and the elements for building. Part 1: Classification using as a starting point the details obtained at the fire resistance tests".

2. DETAILS OF THE CLASSIFIED PRODUCT

2.1. Description and identification of the tested object. Inspection before the test

Sample of a dry chemical cement intended for using as wall coverings, floor coverings, ventilated facade, work surfaces, worktops, composed of cement with ceramic support, and solid-looking black colour, with a density of 2500 kg/m³, and approximate surface density of 50 kg/m².

All that according to information provided by the customer and referenced by the customer as:

↳ "DEKTON-DOMOOS"



Sample detail



3. TEST REPORTS SUPPORTING THE CLASSIFICATION

Laboratory	Company/customer	Reference of the test report	Tests method
AIDIMA	COSENTINO, S.A.	1311029-01 BC+HNC	UNE EN ISO 1716:11
AIDIMA	COSENTINO, S.A.	1311029-01 BC+HNC	UNE EN ISO 1182:11

4. TEST RESULTS SUPPORTING THE CLASSIFICATION

Tests method	Parameter	N° of tests	Results	
			Average of continuous parameter	Parameters to be met
UNE-EN-ISO 1716:11 (calorimeter pump)	Higher heat power (MJ/Kg)	3	0,00	Not applicable
UNE-EN-ISO 1182:11 (Furnace non combustibility)	ΔT° (°C)	5	3,3	Not applicable
	Inflammation (Y/N)		No	yes
	Δt (s)		0,0	Not applicable
	Δm (%)		0,001	Not applicable



5. CLASSIFICATION AND DIRECT APPLICABILITY

5.1. Classification

Therefore, and according to standard UNE-EN 13501-1:07+A1:2010 and in view of the results of the tests and the classification criteria attached in the appendix (Table 2 of the said standard), the sample described in the point 2.1 of this test report, all this according to information provided by the customer, and which he has referenced as: "DEKTON-DOMOOS", is classified regarding its behaviour of fire reaction as **A1** or **A1_{fl}**.

Fire reaction Walls and ceilings	Fire reaction floors
A1	A1 _{fl}

5.2. Direct applicability

This classification is valid for the application of final use as floor coverings, wall coverings, ventilated facade, work surfaces, worktops. Its classification is valid for application with this final use.

6. CONSIDERATIONS

The result of this report concerns only the products described in section 2 of the said report.

This document is neither a standard approval nor a certification of the product.

The duration of the effect of this classification report is subject to the current law applicable when it was issued.

APPENDIX

CLASSES OF BEHAVIOUR TO FIRE REACTION FOR CONSTRUCTION PRODUCTS EXCLUDING FLOOR PANELLING ACCORDING TO STANDARD UNE EN 13.501-1:07+A1:2010

Class	Test method(s)	Classification criteria	Additional compulsory statement
A1	UNE-EN-ISO 1182:2011 ⁽¹⁾ , and	$\Delta T \leq 30^{\circ}\text{C}$; and $\Delta m \leq 50\%$; and $t_f = 0$ (that is to say, without sustained flame)	-
	UNE-EN-ISO 1716:2011	$\text{PCS} \leq 2.0 \text{ MJ.kg}^{-1}$ ⁽¹⁾ ; and $\text{PCS} \leq 2.0 \text{ MJ.kg}^{-1}$ ⁽²⁾ (2a); and $\text{PCS} \leq 1.4 \text{ MJ.m}^{-2}$ ⁽³⁾ ; and $\text{PCS} \leq 2.0 \text{ MJ.kg}^{-1}$ ⁽⁴⁾	-
A2	UNE-EN-ISO 1182:2011 ⁽¹⁾ , Or	$\Delta T \leq 50^{\circ}\text{C}$; and $\Delta m \leq 50\%$; and $t_f \leq 20\text{s}$	-
	UNE-EN-ISO 1716:2011; And	$\text{PCS} \leq 3.0 \text{ MJ.kg}^{-1}$ ⁽¹⁾ ; and $\text{PCS} \leq 4.0 \text{ MJ.m}^{-2}$ ⁽²⁾ ; and $\text{PCS} \leq 4.0 \text{ MJ.m}^{-2}$ ⁽³⁾ ; and $\text{PCS} \leq 3.0 \text{ MJ.kg}^{-1}$ ⁽⁴⁾	-
	UNE-EN-13823:2012 (SBI)	$\text{FIGRA} \leq 120 \text{ W.s}^{-1}$; and $\text{LFS} < \text{specimen margin}$; and $\text{THR}_{600\text{s}} \leq 7.5 \text{ MJ}$	Smoke production ⁽⁵⁾ ; and Fall of burning drops/particles ⁽⁶⁾
B	UNE-EN 13823:2012 (SBI); and	$\text{FIGRA} \leq 120 \text{ W.s}^{-1}$; and $\text{LFS} < \text{specimen margin}$; and $\text{THR}_{600\text{s}} \leq 7.5 \text{ MJ}$	Smoke production ⁽⁵⁾ ; and Fall of burning drops/particles ⁽⁶⁾
	UNE-EN-ISO 11925-2:2011 ⁽⁸⁾ ; Exposure = 30s	$F_s \leq 150\text{mm}$ in 60s	
C	UNE-EN 13823:2012 (SBI); and	$\text{FIGRA} \leq 250 \text{ W.s}^{-1}$; and $\text{LFS} < \text{specimen margin}$; and $\text{THR}_{600\text{s}} \leq 15 \text{ MJ}$	Smoke production ⁽⁵⁾ ; and Fall of burning drops/particles ⁽⁶⁾
	UNE-EN-ISO 11925-2:2011 ⁽⁸⁾ ; Exposure = 30s	$F_s \leq 150\text{mm}$ in 60s	
D	UNE-EN 13823:2012 (SBI); and	$\text{FIGRA} \leq 750 \text{ W.s}^{-1}$	Smoke production ⁽⁵⁾ ; and
	UNE-EN-ISO 11925-2:2011 ⁽⁸⁾ ; Exposure = 30s	$F_s \leq 150\text{mm}$ in 60s	Fall of burning drops and particles ⁽⁶⁾
E	UNE-EN-ISO 11925-2:2011 ⁽⁸⁾ ; Exposure = 15s	$F_s \leq 150\text{mm}$ in 20s	Fall of burning drops/particles ⁽⁷⁾
F	Without determining the properties		

(1) For homogeneous products and substantial components of non-homogeneous products

(2) For any non-substantial components of non-homogeneous products

(2a) Alternatively, for any non-substantial component which has a $\text{PCS} \leq 2.0 \text{ MJ/m}^2$, provided that the product complies with the following criteria of UNE-EN 13823:2002 (SBI): $\text{FIGRA} \leq 20 \text{ W.s}^{-1}$, and $\text{LFS} < \text{specimen margin}$; and $\text{THR}_{600\text{s}} \leq 4.0 \text{ MJ}$; and s1; and d0.

(3) For any non-substantial internal component of non-homogeneous products

(4) For the product as a whole

(5) s1 = $\text{SMOGR} \leq 30\text{m}^2.\text{s}^{-2}$ and $\text{TSP}_{600\text{s}} \leq 50\text{m}^2$; s2 = $\text{SMOGR} \leq 180\text{m}^2.\text{s}^{-2}$ and $\text{TSP}_{600\text{s}} \leq 200\text{m}^2$; s3 = neither s1 nor s2

(6) d0 = Without fall of burning drops and particles in UNE-EN 13823 2002 (SBI) in 600s; d1 = Without fall of burning drops and particles in 10s in UNE-EN 13823:2002 (SBI) in 600s; d2 = neither d0 nor d1; ignition of paper in UNE-EN-ISO 11925-2:2002 determines a d2 classification.

(7) Success = absence of paper ignition (without classification); Failure = paper ignition (d2 classification)

(8) Under conditions of surface flame attack and, if appropriate, for the final usage conditions of the product, lateral flame attack

**CLASSES OF BEHAVIOUR OF FIRE REACTION FOR CONSTRUCTION PRODUCTS OF FLOOR
PANELLING ACCORDING TO STANDARD UNE EN 13.501-1:07+A1:2010**

Class	Test method(s)	Classification criteria	Additional compulsory statement
A1 _{FL}	UNE-EN-ISO 1182:2011 ⁽¹⁾ , and	$\Delta T \leq 30^{\circ}\text{C}$; and $\Delta m \leq 50\%$; and $t_f = 0$ (that is to say, without sustained flame)	-
	UNE-EN-ISO 1716:2011	$\text{PCS} \leq 2.0 \text{ MJ.kg}^{-1}$ ⁽¹⁾ ; and $\text{PCS} \leq 2.0 \text{ MJ.kg}^{-1}$ ⁽²⁾ ; and $\text{PCS} \leq 1.4 \text{ MJ.m}^{-2}$ ⁽³⁾ ; and $\text{PCS} \leq 2.0 \text{ MJ.kg}^{-1}$ ⁽⁴⁾	-
A2 _{FL}	UNE-EN-ISO 1182:2011 ⁽¹⁾ , Or	$\Delta T \leq 50^{\circ}\text{C}$; and $\Delta m \leq 50\%$; and $t_f \leq 20\text{s}$	-
	UNE-EN-ISO 1716:2011; And	$\text{PCS} \leq 3.0 \text{ MJ.kg}^{-1}$ ⁽¹⁾ ; and $\text{PCS} \leq 4.0 \text{ MJ.m}^{-2}$ ⁽²⁾ ; and $\text{PCS} \leq 4.0 \text{ MJ.m}^{-2}$ ⁽³⁾ ; and $\text{PCS} \leq 3.0 \text{ MJ.kg}^{-1}$ ⁽⁴⁾	-
B _{FL}	UNE-EN-ISO 9239-1:2011 ⁽⁵⁾	Critical flow ⁽⁶⁾ $\geq 8.0 \text{ kW.m}^{-2}$	Smoke production ⁽⁷⁾
	UNE-EN-ISO 9239-1:2011 ⁽⁵⁾ And	Critical flow ⁽⁶⁾ $\geq 8.0 \text{ kW.m}^{-2}$	Smoke production ⁽⁷⁾
C _{FL}	UNE-EN-ISO 11925-2:2011 ⁽⁸⁾ Exposure = 15s.	$F_s \leq 150\text{mm}$ in 20s	
	UNE-EN-ISO 9239-1:2011 ⁽⁵⁾ and	Critical flow ⁽⁶⁾ $\geq 4.5 \text{ kW.m}^{-2}$	Smoke production ⁽⁷⁾
D _{FL}	UNE-EN-ISO 11925-2:2011 ⁽⁸⁾ Exposure = 15s	$F_s \leq 150\text{mm}$ in 20s	
	UNE-EN-ISO 9239-1:2011 ⁽⁵⁾ and	Critical flow ⁽⁶⁾ $\geq 3.0 \text{ kW.m}^{-2}$	Smoke production ⁽⁷⁾
E _{FL}	UNE-EN-ISO 11925-2:2011 ⁽⁸⁾ Exposure = 15s.	$F_s \leq 150\text{mm}$ in 20s	-
F _{FL}	Without determining the properties		

(1) For homogeneous products and substantial components of non-homogeneous products

(2) For any external non-substantial components of non-homogeneous products

(3) For any non-substantial internal component of non-homogeneous products

(4) For the product as a whole

(5) Test duration = 30 minutes

(6) Critical flow is described as the radiant power which determines the flame extinction or the radiant power after a test period of 30 minutes, either of which is lower (that is to say, the relevant flow corresponding to the maximum extension of flame propagation).

(7) s1 = Smoke $\leq 750\%$.min; s2 = no s1

(8) In conditions of surface flame attack and, if it is adequate for the final applications of product in its final use, of side flame attack.

**INFORMATION APPENDIX (excluded from the scope of the accreditation):
CLASSIFICATION SYSTEM OF FIRE REACTION ACCORDING TO
STANDARD UNE EN 13.501-1:07+A1:2010**

The European classification system as far as the materials behaviour in their reaction to fire includes 7 euroclasses or main classifications: A1, A2, B, C, D, E and F.

Euroclasses A1, A2 and B correspond to the non-combustible and little combustible product classes. They represent those construction products which are safer regarding safety against fire.

Euroclasses C, D and E correspond to classified products as combustible and represent the most dangerous construction products regarding their behaviour against fire.

Finally, the products classified with Euroclass F do not undergo any kind of evaluation regarding their benefits with respect to their reaction to fire.

On the same normative base, a specific system in order to classify the products for floor panelling has been developed: A1_{fl}, A2_{fl}, B_{fl}, C_{fl}, D, E_{fl} y F_{fl} (subscript "fl" means ground panelling -floor).

Except for classes A1 and F, in the case of materials for panelling of walls and ceilings, the rest of classes are complemented by two new subclassifications, one regarding the production and opacity of smoke and the other regarding the production of burning drops or particles.

The levels of these parameters are three:

↳ For the smoke opacity, levels s1 (low amount and speed of smoke emission), s2 (middle amount and speed of smoke emissions) and s3 (high amount and speed of smoke emissions).

↳ For burning drops or particles, the levels are d0 (burning drops/particles are not produced), d1 (there are not any burning drops/particles whose duration is longer than 10 seconds) and d2 (products which are not classified neither as d0 nor as d1).

In the case of floor panelling, with the exception also of classes A1 and F, the subclassification only affects at the levels of emission and opacity of smoke and they are only two, s1 (low percentage of smoke emission and production) and s2 (products for which no behaviour regarding the smoke is declared or those who do not meet the condition of s1).

Class A1: materials which cannot contribute in any phase of the FIRE including the corresponding one to the totally developed fire. *It is not affected by the additional classification of smokes and fall of drops.*

Class A2: they have to meet the same criteria as class B. Besides, in conditions of totally developed fire, these products do not have to contribute significantly to the fire load and the growth of the fire. *Additional classification of smoke production and fall of drops.*

Class B: very limited contribution to fire. It is like class C but meeting strictest requirements. *It is affected especially by the additional classification of smoke production and fall of drops.* Besides, in case of a totally developed fire, these products will not increase significantly the thermal load of the premises and the development of the fire.

Class C: limited contribution to fire. It is like class D but meeting the strictest requirements. Besides, under thermal etching by an only burning object they have to offer a side propagation of the limited flame. *It is affected especially by the additional classification of smoke production and fall of drops.*

Class D: *acceptable contribution to fire.* Products which meet the criteria corresponding to class E and which are able to resist, during a longer period of time, the etching of a small flame without producing a substantial propagation of the flame. Besides, they have to be able to resist thermal etching of an only burning object with a sufficient delay and with a limited heat release. *It is affected especially by the additional classification of smoke production and fall of drops.*

Class E: Products which are able to resist, during a short period of time, the etching of a flame without producing a substantial propagation of the flame. *It is only affected by the additional classification of fall of drops.*

Class F: without a determined behaviour. Materials for which characteristics of fire reaction have not been specified or which cannot be classified into any of the other classes.

subclasses related to smoke production	subclasses related to the production of burning drops/particles
S1 (low amount and speed of smoke emission) S2 (middle amount and speed of smoke emission) S3 (high amount and speed of smoke emission)	d0 (no burning drops/particles are produced) d1 (there are not burning drops/particles whose duration is longer than 10s) d2 (products which are not classified neither as d0 nor as d1)