

# CLASSIFICATION REPORT

|                       |  |   |
|-----------------------|--|---|
| <b>NUMBER</b>         | 1011065-01 CL I and<br>1011065-02 CL I   | Worksheet: 21001504                                       |
| <b>DATE OF ISSUE</b>  | December 21 <sup>st</sup> , 2010   |   |
| <b>NOTIFIED BODY</b>  | Notified body to the European Commission for the Directive of Construction Products 89/106/CEE with number 1981  |   |
| <b>PAGES</b>          | The report consist of 10 pages consecutively numbered plus an Annex of 1 page and an informative appendix of 1 page.   |   |
| <b>TEST SPECIMEN</b>  | Type: PIGMENTED FINISHING PROCESS<br>TWO COMPONENT POLYURETHANE ON FIRE-RETARDANT MDF  | Reference: " RANGE PIGMENTED FLAME RETARDANT PROCESS 004" |
| <b>CONCERNING TO</b>  | CLASSIFICATION OF FIRE PERFORMANCE OF CONSTRUCTION PRODUCTS AND BUILDING ELEMENTS. CLASSIFICATION USING DATA OBTAINED IN REACTION TO FIRE TESTS. ACCORDING TO STANDARD UNE-EN 13501-1:07 |   |
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| <b>DATE/S OF TEST</b> | Sample reception:  | 07/11/10  |
|                       | Tests beginning:   | 15/12/10  |
|                       | Tests completion:  | 20/12/10  |

**AUTHORIZED SIGNATORY/IES**



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## 1. INTRODUCTION

This classification report defines the classification assigned to the product described in section 2, in accordance with the procedures outlined in standard UNE-EN 13501-1:2007 "Classification of fire performance of construction products and building elements. Part 1: Classification using test data obtained in reaction to fire tests".

## 2. DETAILS OF THE CLASSIFIED PRODUCT

### 2.1. Description and identification of the test object. Inspection prior to test

Samples corresponding to medium density fibreboard (MDF) fireproof (classified as B-s2-d0 according to UNE EN 13501-1:02), of 19 mm thickness, finished by the company with spray gun, with a flame retardant system, based on two component polyurethane products, in a process that consist of a primer coat with an application grammage of approximately of 100 g/m<sup>2</sup>, always of the same product (VALPON F 240 PIGMENTED FLAME RETARDANT PROCESS 004 140240) and a finishing coat of 80 g/m<sup>2</sup>, that could be different depending on the superficial and/or colour (VALPON A PIGMENTED FLAME RETARDANT PROCESS 004), with drying/curing between coats of 16 hours.

The ensemble presents an approximate density between 0,76 and 0,78 g/cm<sup>3</sup> and an approximate superficial density between 14,50 and 14,80 kg/m<sup>2</sup>.

The scope of application of the reaction to fire classification according to classification standard UNE EN 13501-1, may be valid for products within the same family, if the family itself is defined as a range of products within defined limits of variability of its parameters, for which it is demonstrated that the reaction to fire classification remains unchanged.

Therefore, it is intended to certify a product range, where is done a selection based on the different mentioned parameters of the range. According to the information provided by the client, the range to be tested, consist of different colours with a very enclosed range of densities and chance of different finishing according to the superficial gloss grade (gloss, satin and matte), all of them with the same system and production materials.

Tests as well as sample selection is conducted with reference to the different protocols defined by the Sector Group SH02 (European body that coordinates all aspects of the CE in terms of fire characteristics), particularly taking as a reference the NB-CDP/SH02/06/029 document "Classification following extended application: All specifications covering reaction to fire performance").

Furthermore, are also used as reference document the CEN/TS 15117:05 document: "Guidance on direct and extended application".

As reference document are also used, in the sample selection for the range test, the recommendations given in the document prEN 15725:08 "Extended applications reports on the fire performance of construction products and building elements".



Pursuant the aforementioned recommendations , it was adopted, within the test plan, the following sample selection criteria taking into account the range between the maximum superficial brightness grade – high gloss- , and minimum – matte-, as well as the covering colour (Light colour and dark colour):

- ❖ For the SBI test: you will need to test a sample corresponding to the light colour and a given brightness grade, a sample corresponding to the dark colour with a different brightness grade. Once the worse superficial colour is known, a whole test for this colour and for its brightness grade is carried out.
- ❖ Small Burner Test: Complete testing for the systems mentioned above.

Classification will apply for all products in the range provided that is such selected products same reaction is observed so the same classification can be applied to all of them.

Commercial references of selected varnishing systems according to the customer are:

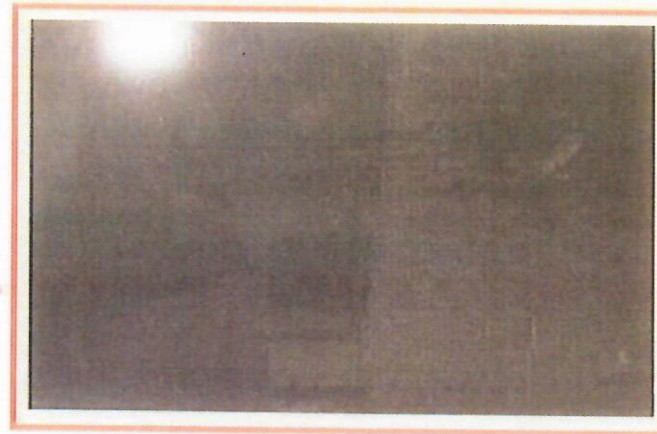
↳ "VALPON F 240 PIGMENTED FLAME RETARDANT PROCESS 004 140240 + VALPON A PIGMENTED FLAME RETARDANT PROCESS BCO MT 161540 (WHITE-MATTE)". Ref.: 1011065-01



Sample retail on its main surface



↳ "VALPON F 240 PIGMENTED FLAME RETARDANT PROCESS 004 140240 + VALPON A PIGMENTED FLAME RETARDANT PROCESS 004 NGO BD161549 (BLACK-HIGH GLOSS)". Ref.: 1011065-02



Sample detail on its main surface

The product range, according to information provided by the customer is referenced as:

↳ "RANGE PIGMENTED FLAME RETARDANT PROCESS 004"

## 2.2. Range of products

The reaction to fire classification according to the UNE EN 13501-1 standard classification is valid for products within the same family, if the family is defined as a range of products within defined limits of variability of its parameters, in this specific case the parameter of different colours with a very enclosed range of densities and chance of different finishing according to the superficial gloss grade (gloss, satin and matte).

Thus, the range of products included in the scope of the classification results of reaction to fire, according to information provided by the customer is that covered by a flame retardant system, based on two component polyurethane products, in a process that consist of a primer coat with an application grammage of approximately of 100 g/m<sup>2</sup>, always of the same product (VALPON F 240 PIGMENTED FLAME RETARDANT PROCESS 004 140240) and a finishing coat of 80 g/m<sup>2</sup>, that could be different depending on the superficial and/or colour (VALPON A PIGMENTED FLAME RETARDANT PROCESS 004), with drying/curing between coats of 16 hours.



### 3. TEST REPORTS SUPPORTING THE CLASSIFICATION

| Laboratory | Company/client                     | Reference of the test report                 | Test Method           |
|------------|------------------------------------|--|-----------------------|
| AIDIMA     | VALENCIANA DE RECUBRIMIENTOS, S.A. | 1011065-01 SBI + PQ y<br>1011065-02 SBI + PQ | UNE-EN 13823:02       |
| AIDIMA     | VALENCIANA DE RECUBRIMIENTOS, S.A. | 1011065-01 SBI + PQ y<br>1011065-02 SBI + PQ | UNE EN ISO 11925-2:02 |

### 4. TEST RESULTS SUPPORTING THE CLASSIFICATION

| Test Method   | Parameter                | Number of test | Results                         |                             |
|---|--------------------------|----------------|---------------------------------|-----------------------------|
|   |                          |                | Medium continuous parameter (m) | Parameters that must be met |
| <b>UNE EN ISO 11925-2:02 (small burner)</b><br><br>"VALPON F 240 PIGMENTED FLAME RETADANT PROCESS. 004 140240 + VALPON A PIGMENTED FLAME RETADANT PROCESS 004 BCO MT 161540 (WHITE-MATTE)".<br>Ref.: 1011065-01 | Fs ≤ 150mm               | 3              | Not applicable                  | yes                         |
|   | Ignition of filter paper |                | Not applicable                  | yes                         |



|  |  |   |                |                |
|--|--|---|----------------|----------------|
| <b>UNE-EN 13823:02 (SBI)</b><br><br>"VALPON F 240 PIGMENTED FLAME RETADANT PROCESS. 004 140240 + VALPON A PIGMENTED FLAME RETADANT PROCESS 004 BCO MT 161540 (WHITE-MATTE)".<br>Ref.: 1011065-01 | FIGRA <sub>0,2MJ</sub> (W/s)             | 3 | 232,77         | Not applicable |
|  | FIGRA <sub>0,4MJ</sub> (W/s)             |   | 231,39         | Not applicable |
|  | THR <sub>600s</sub> (MJ)                 |   | 5,88           | Not applicable |
|  | SMOGRA (m <sup>2</sup> /s <sup>2</sup> ) |   | 10,98          | Not applicable |
|  | TSP <sub>600s</sub> (m <sup>2</sup> )    |   | 73,23          | Not applicable |
|  | LFS (Y/N)                                |   | Not applicable | yes            |
|  | Droplets/ particles into flame (Y/N)     |   | Not applicable | yes            |

| Método de ensayo  | Parámetro                | Nº de ensayos | Resultados                      |                                  |
|---|--------------------------|---------------|---------------------------------|----------------------------------|
|   |                          |               | Média de parámetro continuo (m) | Parámetros que tiene que cumplir |
| <b>UNE EN ISO 11925-2:02 (pequeño quemador)</b><br><br>"VALPON F 240 PIGMENTED FLAME RETARDANT PROCESS 004 140240 + VALPON A PIGMENTED FLAME RETARDANT PROCESS. 004 NGO BD161549 (BLACK-HIGH GLOSS)".<br>Ref.: 1011065-02 | F <sub>s</sub> ≤ 150mm   | 3             | Not applicable                  | yes                              |
|   | Ignition of filter paper |               | Not applicable                  | yes                              |



|  |  |   |                |                |
|--|--|---|----------------|----------------|
| <b>UNE-EN 13823:02 (SBI)</b><br><br>"VALPON F 240 PIGMENTED FLAME RETARDANT PROCESS 004 140240 + VALPON A PIGMENTED FLAME RETARDANT PROCESS. 004 NGO BD161549 (BLACK-HIGH GLOSS)".<br>Ref.: 1011065-02 | FIGRA <sub>0,2MJ</sub> (W/s)             | 1 | 160,13         | Not applicable |
|  | FIGRA <sub>0,4MJ</sub> (W/s)             |   | 159,30         | Not applicable |
|  | THR <sub>600s</sub> (MJ)                 |   | 1,10           | Not applicable |
|  | SMOGRA (m <sup>2</sup> /s <sup>2</sup> ) |   | 12,29          | Not applicable |
|  | TSP <sub>600s</sub> (m <sup>2</sup> )    |   | 68,97          | Not applicable |
|  | LFS (Y/N)                                |   | Not applicable | yes            |
|  | Droplets/ particles into flame (Y/N)     |   | Not applicable | yes            |

## 5. CLASSIFICATION AND DIRECT SCOPE

### 5.1. Classification

The scope of the reaction to fire classification according to the classification standard UNE EN 13501-1:07, is valid for all products within the same family, since the family is defined as a product range defined within the limits of variability of its parameters, in this specific case the parameter of different colours with a very enclosed range of densities and chance of different finishing according to the superficial gloss grade (gloss, satin and matte).

The classification is valid for all the products in the range because the selected representative samples in accordance with the protocol defined by the Sector Group SH02 (taking as reference the NB-CDP/SH02/06/029 document, the CEN/TS 15117:05 document and the prEN 15725:08 document), similar behaviour is obtained and the same classification.





Therefore, according to standard UNE-EN 13501-1:07, and in view of the tests results and classification criteria are attached at the Annex (Table 1 of the above standard), the samples corresponding to medium density fibreboard (MDF) fireproof (classified as B-s2-d0 according to UNE EN 13501-1:02), of 19 mm thickness, finished by the company with spray gun, with a flame retardant system, based on two component polyurethane products, in a process that consist of a primer coat with an application grammage of approximately of 100 g/m<sup>2</sup>, always of the same product (VALPON F 240 PIGMENTED FLAME RETARDANT PROCESS 004 140240) and a finishing coat of 80 g/m<sup>2</sup>, that could be different depending on the superficial and/or colour (VALPON A PIGMENTED FLAME RETARDANT PROCESS 004), with drying/curing between coats of 16 hours, presenting an approximate density between 0,76 and 0,78 g/cm<sup>3</sup> and an approximate superficial density between 14,50 and 14,80 kg/m<sup>2</sup>, all according to information provided by the customer and referenced by the same as "RANGE PIGMENTED FLAME RETARDANT PROCESS", are classified regarding their behaviour in response to fire as **C-s2,d0**.

| Reaction to fire | Smoke production | Drops in flame |
|------------------|------------------|----------------|
| C                | S2               | d0             |

## 5.2. Direct Scope

The classified product is defined as a wall or ceiling covering, that consist of a medium density fibreboard (MDF) fireproof (classified as B-s2-d0 according to UNE EN 13501-1:02), of 19 mm thickness, finished by the company with spray gun, with a flame retardant system, based on two component polyurethane products, in a process that consist of a primer coat with an application grammage of approximately of 100 g/m<sup>2</sup>, always of the same product (VALPON F 240 PIGMENTED FLAME RETARDANT PROCESS 004 140240) and a finishing coat of 80 g/m<sup>2</sup>, that could be different depending on the superficial and/or colour (VALPON A PIGMENTED FLAME RETARDANT PROCESS 004), with drying/curing between coats of 16 hours, presenting an approximate density between 0,76 and 0,78 g/cm<sup>3</sup> and an approximate superficial density between 14,50 and 14,80 kg/m<sup>2</sup>, all according to information provided by the customer. Its classification is valid for the final end use applications.

This classification is valid for the end use application as pigmented finishing process, only for indoor use, for wood and wood derivates, ranked by its fire properties B-s2-d0 according to UNE EN 13501-1.

Samples are mounted on a substrate of calcium fibersilicate board that simulates the wall or ceiling which is going to be coated, installed while performing the practice.



The sample is mounted with its supporting plate by mechanical fixing, without screws or rear cavity between the substrate and the sample.

Also, no joints are reproduced, either horizontal or vertical in the test samples.

The mounting and fixing conditions, representative of the final terms of use, are described in the relevant test reports, according to the specifications recommended in both the appropriate test standard as in the classification standard UNE EN 13501-1:07.

It is also used as reference documents the UNE-CEN/TS 15447:06 document "Mounting and fixing in reaction to fire tests under the Directive of Construction Products"

Are used therefore mounting standard conditions and thus the test results obtained are valid for that end-use condition and for a greater number of applications.

## 6. LIMITATIONS

The result of this report only refers to the products described in paragraph 2 thereof.

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

The duration of the validity of this classification report is subject to applicable law at the time of issue.



## ANNEX

### CLASSES OF BEHAVIOUR TO FIRE REACTION FOR CONSTRUCTION PRODUCTS EXCLUDING FLOOR PANNELLING ACCORDING TO STANDARD UNE EN 13.501-1:07

| Class | Test method(s)   | Classification criteria   | Additional compulsory statement  |
|-------|--|---|--|
| A1    | UNE-EN-ISO 1182:2002 <sup>(1)</sup> ,<br>and               | $\Delta T \leq 30^{\circ}\text{C}$ ; and<br>$\Delta m \leq 50\%$ ; and<br>$t_f = 0$ (that is to say, without sustained flame)   | -  |
|       | UNE-EN-ISO 1716:2002                                       | $\text{PCS} \leq 2.0 \text{ MJ.kg}^{-1}$ <sup>(1)</sup> ; and<br>$\text{PCS} \leq 2.0 \text{ MJ.kg}^{-1}$ <sup>(2)</sup> (2a); and<br>$\text{PCS} \leq 1.4 \text{ MJ.m}^{-2}$ <sup>(3)</sup> ; and<br>$\text{PCS} \leq 2.0 \text{ MJ.kg}^{-1}$ <sup>(4)</sup> | -  |
| A2    | UNE-EN-ISO 1182:2002 <sup>(1)</sup> ,<br>or                | $\Delta T \leq 50^{\circ}\text{C}$ ; and<br>$\Delta m \leq 50\%$ ; and<br>$t_f \leq 20\text{s}$   | -  |
|       | UNE-EN-ISO 1716:2002;<br>and                               | $\text{PCS} \leq 3.0 \text{ MJ.kg}^{-1}$ <sup>(1)</sup> ; and<br>$\text{PCS} \leq 4.0 \text{ MJ.m}^{-2}$ <sup>(2)</sup> ; and<br>$\text{PCS} \leq 4.0 \text{ MJ.m}^{-2}$ <sup>(3)</sup> ; and<br>$\text{PCS} \leq 3.0 \text{ MJ.kg}^{-1}$ <sup>(4)</sup>      | -  |
|       | UNE-EN-13823:2002 (SBI)                                    | $\text{FIGRA} \leq 120 \text{ W.s}^{-1}$ ; y<br>LFS < specimen margin; and<br>$\text{THR}_{600\text{s}} \leq 7.5 \text{ MJ}$  | Smoke production <sup>(5)</sup> ; and<br>Fall of burning<br>drops/particles <sup>(6)</sup>     |
| B     | UNE-EN 13823:2002 (SBI);<br>and                            | $\text{FIGRA} \leq 120 \text{ W.s}^{-1}$ ; y<br>LFS < specimen margin; and<br>$\text{THR}_{600\text{s}} \leq 7.5 \text{ MJ}$  | Smoke production <sup>(5)</sup> ; and<br>Fall of burning<br>drops/particles <sup>(6)</sup>     |
|       | UNE-EN-ISO 11925-2:2002 <sup>(8)</sup> .<br>Exposure = 30s | $F_s \leq 150\text{mm}$ in 60s  | drops/particles <sup>(6)</sup>   |
| C     | UNE-EN 13823:2002 (SBI);<br>and                            | $\text{FIGRA} \leq 250 \text{ W.s}^{-1}$ ; y<br>LFS < specimen margin; and<br>$\text{THR}_{600\text{s}} \leq 15 \text{ MJ}$   | Smoke production <sup>(5)</sup> ; and<br>Fall of burning<br>drops/particles <sup>(6)</sup>     |
|       | UNE-EN-ISO 11925-2:2002 <sup>(8)</sup> .<br>Exposure = 30s | $F_s \leq 150\text{mm}$ in 60s  | drops/particles <sup>(6)</sup>   |
| D     | UNE-EN 13823:2002 (SBI);<br>and                            | $\text{FIGRA} \leq 750 \text{ W.s}^{-1}$  | Smoke production <sup>(5)</sup> ; and<br>Fall of burning drops and<br>particles <sup>(6)</sup> |
|       | UNE-EN-ISO 11925-2:2002 <sup>(8)</sup> .<br>Exposure = 30s | $F_s \leq 150\text{mm}$ in 60s  | particles <sup>(6)</sup>   |
| E     | UNE-EN-ISO 11925-2:2002 <sup>(8)</sup> .<br>Exposure = 15s | $F_s \leq 150\text{mm}$ en 20s  | Fall of burning<br>drops/particles <sup>(7)</sup>  |
| 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 LFS < 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)  $s1 = \text{SMOGRA} \leq 30\text{m}^2\text{.s}^{-2}$  and  $\text{TSP}_{600\text{s}} \leq 50\text{m}^3$ ;  $s2 = \text{SMOGRA} \leq 180\text{m}^2\text{.s}^{-2}$  and  $\text{TSP}_{600\text{s}} < 200\text{m}^3$ .  
 $s3 =$  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 etching



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

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<sub>fl</sub>, A2<sub>fl</sub>, B<sub>fl</sub>, C<sub>fl</sub>, D<sub>fl</sub>, E<sub>fl</sub> y F<sub>fl</sub> (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 only 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 single burning item 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 a single burning item 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)<br>S2 (middle amount and speed of smoke emission)<br>S3 (high amount and speed of smoke emission) | d0 (no burning drops/particles are produced)<br>d1 (there are not burning drops/particles whose duration is longer than 10s)<br>d2 (products which are not classified neither as d0 nor as d1) |