

IBS-Institute, Linz, Austria

Test Certificate

BV-ref. no. 4303/13

Date: 10 June 2013

IBS-/KI-gk

Subject of testing: Anti-flaming agent type "Ceracoat Anti fire" (fire retardant) – for kraft paper
Total quantity layed on: 63 g/m²

Classification: B1, "inflammable with difficulty"
Tr 1, "non dripping"

Applicant: Ceracoat Group
Flawilerstrasse 31
CH-9500 WIL

Date of application: 13 June 2013

Date of test: 20 June 2013

Expert: Ing. R. KIBLER

This report contains:

Pages: 5

Enclosures: 1 test protocol

2 technical data sheets

Validity: until 20 June 2024 – according to ÖNORM B 3800, part 2

Subject of testing: Anti-flaming agent type "Ceracoat Anti fire " (fire retardant) – for Craft paper

ORIGINAL 003049

Seen by the
Chamber of Industry and Commerce
of Thurgovia

8870 Weinfelden (Switzerland), 2014 -09- 24



Bases for testing:

ÖNORM B 3800, part 2:

"Behavior in case of fire of building materials and construction units –
construction units: definitions, requirements, tests"

Edition: 1 march 1997

withdrawn on: 1 january 2004

ÖNORM B 3800, part 1 (historical)

"Behavior in case of fire of building materials and construction units –
construction units: definitions, requirements, tests"

Edition: 1 december 1998

withdrawn on: 1 january 2004

Note:

Because of the still lacking national legislation regarding construction/building concerning European classification according to EN 13501-1 the aforementioned historical standard is further consulted as bases.

Air conditioning before execution of tests:

Standard climate 23° C/50 % humidity. The test samples were stored before testing at 23° C +/- 2° C and 50 % +/- 5 % humidity until the approximative mass constancy. The impregnated linen fabric was stored in the standard climate at least for two weeks before the tests.

Description of test samples according to applicant data:

Antiflame agent, type "Ceracoat Anti fire " (fire retardant) on kraft paper

Type kraft paper: Advantag MG Kraft of Messrs. GarnTEc with a weight per unit area of 50 g/m². Each sample fabric was treated by spraying in two steps resulting in a total spray-on quantity of dry substance antiflame agent of 63 g/m². The antiflame agent was applied half and half on both sides, evenly and full-laminar. The test samples were backed with 12 mm CaSi-plates (A "non inflammable").

The technical data of the antiflame agent and of the kraft paper can be viewed in the appendix.





Temperature of test samples:

The test samples had a temperature of 23° C before test started.

The tests were carried out on:

20 June 2013

Results of the fire tests:

The detailed test results of the combustibility test with exploration of the dripping behavior can be viewed in the enclosed test protocol.

General description of the execution of tests:

Examination of hard inflammability:

The material samples received from the applicant with measurements of 800 x 300 mm are tested in the Schlyter-test appliance.

Combustion tests are thus carried out in vertical insertion position with test samples inserted in parallel position (distance 50 mm). During a period of 15 minutes a test sample is fire treated by a six-nozzle-serial burner (propane-nitrogene-air mixture) covering a full surface in the lower area of the sample.

According to ÖNORM B 3800, part 1, a maximum of 40 cm of charred length should not be exceeded; the test sample not exposed to flammation should not catch fire and the period of afterburning resp. afterglowing should not exceed 1 minute resp. 5 minutes.

Observations of test:

(see also enclosed test protocol)

- Discoloration can already be observed directly after test start
- Blistering and melting cannot be observed.
- After 5 sec max. the test material catches fire in the area of direct flame exposure, however only a very short time ($t < 2s$) co-burning is observed.
- An expansion of the flame area beyond the area of direct flame exposure is not observed.
- A dropping of parts of the test sample is not observed.
- A afterburning and the afterglowing is not observed



- The destroyed length amounts to max. 12

Evaluation:

As it may already be stated concerning the accomplished burning tests according to the conditions of the already mentioned ÖNORMs, all the tested samples fulfil these standards and therefore can be designated as **B1, "inflammable with difficulty"**. Further the samples in question can be classified as **Tr 1, "non dripping"**.

The achieved test results refer only to the test samples presented for testing.

Mechanical or chemical admission is to be avoided in any case.

Duration of validity:

From the test date (20 June 2013) eleven years **until 20 June 2024** according to ÖNORM B 3800, part 2. The duration of validity expires automatically, if technical modifications on the tested product as described herein or if the lay-on quantity of the antifiame agent falls below the quantity as stated herein.

IBS-Institute for fire protection technique and security research GmbH (Ltd)
State approved inspection and monitoring station

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