

ÖTI – Institut für Ökologie, Technik und Innovation GmbH



Report 74880 Test Report



Applicant

Kvadrat A/S Lundbergsvej 10 8400 Ebeltoft DÄNEMARK

Reference

Mrs. Lone Henriksen

Application

Determination of burning behaviour and dropping behaviour according to EN 13773.

Test Material

"Divina Family"

Material used in testing was anonymized for laboratory purposes. A detailed sample list is contained in the report.

Issuing and Signatures

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Authorised for Institute Ing. Hannes Vittek

OTI – Institut für Ökologie, Technik und Innovation GmbH
 Spengergasse 20
 A-1050 Wien
 Austria
 Tel. +43 1 5442543-0
 Fax +43 1 5442543-10
 Email office@oeti.at
 Web www.oeti.at
 FN: 326826b
 UID-Nr ATU65149029

- Tel. +43 1 5442543-0 * Fax +43 1 5442543-10 * Email office@oefil.a1 * Web www.oefil.a1 * FN: 326826b * UID-Nr A1065149029 *
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1 Order

1.1 Chronology

| Date | Received | Order |
|------------|------------|--|
| 2014-10-02 | 2014-10-02 | Determination of burning behaviour and dropping behaviour according to EN 13773. |

1.2 Samples

| No | Deceived | Coursela | I do o tifi o orti o o |
|-----|----------|----------|------------------------|
| NO. | Received | sample | laenilication |

1 2014-10-02 ⁽¹⁾ "Divina Family"

(1) Samples provided by the customer. (2) Sample drawn by ÖTI.



2 Findings / Tests performed

2.1 Description of the specimen

Description of the specimen according to DIN 60 000

Test results

Tested sample: 1

| Type of fibre according to DIN 60 001 part 1 | 100 % Wool (declaration by the applicant) |
|--|--|
| Technological description | non-woven fabric |

2.2 Dry cleaning procedure

Test conditions

Tested sample: 1 According to EN ISO 3175 part 2 accr.) Performed by: TZU Cleaning procedure: Process for sensitive material Solvent: Tetrachloreethene Max. temperature of the solvent: 30 °C Max. drying temperature: 60°C - normal material Number of cleaning processes: 1 and 6 Finishing treatment procedure: none



2.3 Determination of the ignitability of vertically oriented specimen (small flame)

Test conditions

According to EN 1101 accr.) and EN 13773 accr.) Conditioning climate: 20 ± 2 °C / 65 ± 2 % relative humidity Test climate: temperature: 23 °C, relative humidity: 38 % Specimen size: 200 mm x 80 mmTest gas: Propan Mode of ignition: Edge ignition Cleaning procedure: 1 cleaning process (see 2.2)

Test results

Tested sample: 1

| | Longitudinal di | rection | | Cross direc | tion | |
|------------------------------|-----------------|--------------|-----------|--------------|--------------|--|
| Ignition | Num | ber of | Ignition | Number of | | |
| time | Ignitions | no ignitions | time | Ignitions | no ignitions | |
| 1 s | 0 | 1 | 1 s | 0 | 1 | |
| 2 s | 0 | 1 | 2 s | 0 | 1 | |
| 3 s | 0 | 1 | 3 s | 0 | 1 | |
| 4 s | 0 | 1 | 4 s | 0 | 1 | |
| 5 s | 0 | 1 | 5 s | 0 | 1 | |
| 10 s | 0 | 1 | 10 s | 0 | 1 | |
| 15 s | 0 | 1 | 15 s | 0 | 1 | |
| 20 s | 0 | 5 | 20 s | 0 | 5 | |
| Middle ignition time: > 20 s | | | Middle ig | nition time: | > 20 s | |
| Minimum | ignition time: | | > 20 s | | | |



2.4 Determination of the flame spread of vertically oriented specimen with large ignition source – delivered condition

Test conditions

According to EN 13 772 $^{accr.}$ Conditioning climate: 20 ± 2 °C/ 65 ± 2 % relative humidity Gas: Propan Cleaning procedure: The examination took place in the delivered condition.

Test results

Tested sample: 1

| | exposed surface | 1 st marker thread severed | 3 rd marker thread severed | Time from start of inflammation to burning through of the 1 st marker 3 rd marker thread thread | | destroyed length | flaming debris |
|-------------|--------------------|---|---|---|--|---------------------|-------------------|
| Longituding | al direction | | | | | I | |
| Sample 1 | right side | no | no | | | 11 cm | no |
| Sample 2 | back side | no | no | | | 10 cm | no |
| Sample 3 | right side | no | no | | | 11 cm | no |
| Sample 4 | right side | no | no | | | 12 cm | no |
| Cross direc | tion | | | | | | |
| Sample 1 | right side | no | no | | | 12 cm | no |
| Sample 2 | back side | no | no | | | 10 cm | no |
| Sample 3 | right side | no | no | | | 12 cm | no |
| Sample 4 | right side | no | no | | | 11 cm | no |

Precision

With an interlaboratory test with 16 textilen samples in 11 European laboratories it showed up that the determined results are reproducible and repeatable.

Between all laboratories agreeing results showed up. The uncertainty of the measurement [u] corresponds therefore to the dispersion of the individual values of the respective examination.



2.5 Determination of the flame spread of vertically oriented specimen with large ignition source – after cleaning

Test conditions

According to EN 13 772 $^{accr.}$ Conditioning climate: 20 ± 2 °C/ 65 ± 2 % relative humidity Gas: Propan Cleaning procedure: 6 cleaning processes (see 2.2)

Test results

Tested sample: 1

| | exposed surface | 1 st marker thread severed | 3 rd marker thread severed | Time from start of inflammation to burning through of the 1 st marker 3 rd marker | | destroyed length | flaming debris |
|-------------|--------------------|---|---|--|--------|---------------------|-------------------|
| | | | | thread | thread | | |
| Longituding | al direction | | | | | | |
| Sample 1 | back side | no | no | | | 14 cm | no |
| Sample 2 | right side | no | no | | | 13 cm | no |
| Sample 3 | back side | no | no | | | 11 cm | no |
| Sample 4 | back side | no | no | | | 13 cm | no |
| Cross direc | Cross direction | | | | | | |
| Sample 1 | back side | no | no | | | 13 cm | no |
| Sample 2 | right side | no | no | | | 12 cm | no |
| Sample 3 | back side | no | no | | | 11 cm | no |
| Sample 4 | back side | no | no | | | 14 cm | no |

Precision

With an interlaboratory test with 16 textilen samples in 11 European laboratories it showed up that the determined results are reproducible and repeatable.

Between all laboratories agreeing results showed up. The uncertainty of the measurement [u] corresponds therefore to the dispersion of the individual values of the respective examination.



2.6 Determination of dropping behaviour – curtains and drapes – delivered condition

Test conditions

According to EN 13772 accr.) Type of specimen: curtain Comment: The determination of dropping behaviour for curtains classified as class 1 or 2 ensures according EN 13 772. Cleaning procedure: The examination took place in the delivered condition.

Test results

Tested sample: 1

| | Longitud | linal direction | | | Cross | direction | |
|--------|----------|--------------------|----------------------|--------|----------|--------------------|----------------------|
| Sample | Dropping | Number of drops | Igniting dropping | Sample | Dropping | Number of drops | Igniting dropping |
| 1 | no | 0 | | 1 | no | 0 | |
| 2 | no | 0 | | 2 | no | 0 | |
| 3 | no | 0 | | 3 | no | 0 | |
| 4 | no | 0 | | 4 | no | 0 | |

2.7 Determination of dropping behaviour – curtains and drapes – after cleaning

Test conditions

According to EN 13772 accr.) Type of specimen: curtain Comment: The determination of dropping behaviour for curtains classified as class 1 or 2 ensures according EN 13 772. Cleaning procedure: 6 cleaning processes (see 2.2)

Test results

Tested sample: 1

| | Longitud | linal direction | | | Cross | direction | |
|--------|----------|--------------------|----------------------|--------|----------|--------------------|----------------------|
| Sample | Dropping | Number of drops | Igniting dropping | Sample | Dropping | Number of drops | Igniting dropping |
| 1 | no | 0 | | 1 | no | 0 | |
| 2 | no | 0 | | 2 | no | 0 | |
| 3 | no | 0 | | 3 | no | 0 | |
| 4 | no | 0 | | 4 | no | 0 | |



3 Evaluation / Classification

3.1 Classification of burning behaviour of curtains and drapes

Evaluation conditions

In the following the testing methods and test results are aforementioned, after which the classification of the burning behaviour takes place:

- Determination of the ignitability of verticallc oriented specimen (small flame) according EN 1101 (see 2.3)
- Determination of the flame spread of vertically oriented specimen with large ignition source according EN 13 772 – delivered condition (see 2.4)
- Determination of the flame spread of vertically oriented specimen with large ignition source according EN 13 772 – after cleaning (see 2.5)

Classification

According the conditions of classification of the EN 13 773 accr.) the tested specimen "Divina Family" can be classified into

Class 1

3.2 Classification of dropping behaviour

Evaluation conditions

According to EN 13772 accr.)

Explanation: For curtains of the class 1 or 2 the determination of dropping behaviour will be performed in accordance with EN 13772. The classification takes place in corresponding interpretation of the former test and classification guideline as follows

| ٠ | Tropfenbildungsklasse: nicht tropfend | no sample dripped on the filter paper |
|---|--|--|
| • | Tropfenbildungsklasse: tropfend | At least one of the flamed samples dripping off on the filter paper. But the dripped material did not burn further |
| • | Tropfenbildungsklasse: zündendtropfend | At least one of the flamed samples dripping off on the filter paper and the dripped material burns further. |

Classification

According the former test and classification guideline the tested specimen "Divina Family" can be classified as follows

nicht tropfend

Note: Not dropping behaviour corresponds in accordance with the former standard ÖNORM B 3800 part 1 point 6,1 to the drop education class Tr1- nicht tropfend

no ignition

1st marker thread not severed 3rd marker thread not severed no flaming debris

1st marker thread not severed 3rd marker thread not severed no flaming debris



4 Remarks

Validity

There are no regulations concerning duration of validity in the individual test standards. As the results of the examinations refer only to the submitted and examined samples, the report is valid for these for an unlimited period. A period of validity specified as part of an expert evaluation is in the discretion of the consultant or the ÖTI.

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