West Yorkshire Materials Testing Service
West Yorkshire Joint Services

West Yorkshire Materials Testing Service
PO Box 5, Nepshaw lane South, Morley,
Leeds LS27 0QP
Tel: 0113 253 0241 Fax: 0113 252 7029
Head of Laboratory: G. Briggs C. Text ATI

**Client:** Crevin, s.a.
Pol.Ind.Santa Margarita I
C/Llobregat, 21
08223 Terrassa (BCN)
Spain

**Entry No:** 64125

**Date received:** 04/03/2014

**Client's Description:** 3 samples of fabric Fusion:- Colours 07, 41, 45

## TEST REPORT

**Test Required:** Colour Fastness to Rubbing

**Method of Test:** BS EN ISO 105-X12 : 2002

**Date of Test:** 06.03.14 to 07.03.14

| | | Dry | Wet |
|---|---|---|---|
| 07:- | Warp | 4-5 | 5 |
| | Weft | 4-5 | 5 |
| 41:- | Warp | 5 | 4-5 |
| | Weft | 5 | 4-5 |
| 45:- | Warp | 4-5 | 4-5 |
| | Weft | 4-5 | 4-5 |

----------End of Document ----------

*This is hereby certified to be a correct return of the tests made of the items referred to herein.*

Geoff Briggs C.Text., A.T.I.
Head of laboratory
12th march 2014

1104

- Unless instructed otherwise by the client sample remnants will be disposed of after 28 days
- Test marked (*) in this certificate are not included in the UKAS Accreditation Schedule for this Laboratory.
- Opinions and interpretations expressed herein are outside the scope of UKAS accreditation.
- This Certificate relates only to the sample received and, unless that sample has been drawn by the staff of this laboratory, or its agent, and endorsed accordingly, any application of the result to a bulk quantity or other material is entirely the responsibility of the client.

Acondicionamiento Tarrasense
C/ de la Innovació, 2 - 08225 Terrassa (Barcelona)
Tel. +34 93 788 23 00 - Fax +34 93 789 19 06
leitat@leitat.org - http://www.leitat.org

ENAC ENSAYOS Nº 18/LE 026

**CREVIN, S.A.**
LLOBREGAT,21-P.STA.MARGARITA-
08223 - TERRASSA
BARCELONA

## TECHNICAL REPORT

**Report Nº:** **IN-00598/2015-E-4**
Pages: 2

### PRESENTED SAMPLE

**Sample description:**

A sample of fabric to upholstery referenced as: **"ARTÍCULO: FUSION"**

**Presentation date:** 05/09/13

### REQUESTED TESTS

*Tests according to standard UNE EN 14465:2004/A1:2007: "TEXTILE UPHOLSTERY FABRIC. Specification and method of test":*

- PILLING RESISTANCE
  Standard UNE EN ISO 12945-2:2001

**Performance dates:** from 05/09/13 to 16/09/13

*"This report is a partial copy and traslation of the report no. IN-01969/2013-2 issued by LEITAT on the 25 of September 2013".*

Firmado digitalmente por MIGUEL MORERA ESCUDÉ
Nombre de reconocimiento (DN): c=ES, cn=MIGUEL MORERA ESCUDÉ, email=miquelmorera@leitat.org, serialNumber=39179291X, sn=MORERA ESCUDÉ, givenName=MIGUEL, 1.3.6.1.4.1.17326.30.3=G08360232, o=ACONDICIONAMIENTO TARRASENSE, ou=STA, ou=TEXTIL, title=RESPONSABLE TÉCNICO TEXTIL, 2.5.4.13=Qualified Certificate: CAM-PF-SW-KPSC
Fecha: 2015.03.09 13:27:27 +01'00'

**Textile Unit Coordinator**
Yolanda Cabrejas

**Textile Technical Manager**
Miquel Morera

Terrassa, March 09th, 2015.

Acondicionamiento Tarrasense
C/ de la Innovació, 2 - 08225 Terrassa (Barcelona)
Tel. +34 93 788 23 00 - Fax +34 93 789 19 06
leitat@leitat.org - http://www.leitat.org

ENAC ENSAYOS Nº 18/LE 026

## PILLING RESISTANCE

**Standard UNE EN ISO 12945-2:2001**

**Scope:** This test is intended to determine fabric propensity to surface fuzzing and to pilling.

**Conditioning of the specimens:** 24 hours to 20ºC ± 2ºC - 65 % ± 4 % h.r.

**Equipment used:** Modified Nu – Martindale equipment.

**Test conditions:**

| |
|---|
| Test atmosphere: 20ºC ± 2ºC - 65% ± 4% h.r. |
| Type of abrasive: Rubbing against a standard wool fabric (UNE EN ISO 12947-1) |
| Load elements mass: 415 ± 2 g. |
| Number of cycles: 2.000 – 7.000 (requested by the client.) |
| Number of specimens tested: 4 |
| Number of observers: 3 |
| Previous treatment: Null |

**Results obtained:**

| | 2.000 | 7.000 |
|---|---|---|
| **Pilling index** | 4-5 | 4-5 |
| **Aspect of the surface** | Fuzzing | |

| Interpretation of index or pilling according to the standard UNE EN ISO 12945/2:2001 | |
|---|---|
| **1** | Thick fuzzing and/or pilling on the surface. Pills of several sizes and densities covering the surface of the specimen completely. |
| **2** | Evident fuzzing and/or pilling on the surface. Pills of several sizes and densities covering the surface of the specimen largely. |
| **3** | Moderated fuzzing and/or pilling on the surface. Pills of several sizes and densities covering the surface of the specimen partially. |
| **4** | Slight fuzzing and/or pilling on the surface |
| **5** | No change. |

Acondicionamiento Tarrasense
C/ de la Innovació, 2 - 08225 Terrassa (Barcelona)
Tel. +34 93 788 23 00 - Fax +34 93 789 19 06
leitat@leitat.org - http://www.leitat.org

ENAC ENSAYOS Nº 18/LE 026

**CREVIN, S.A.**
LLOBREGAT,21-P.STA.MARGARITA-
08223 - TERRASSA
BARCELONA

# TECHNICAL REPORT

**Report Nº:** **IN-00598/2015-E-3**
Pages: 2

## PRESENTED SAMPLE

**Sample description:**

A sample of fabric to upholstery referenced as: **"ARTÍCULO: FUSION"**

**Presentation date:** 05/09/13

## REQUESTED TESTS

*Tests according to standard UNE EN 14465:2004/A1:2007: "TEXTILE UPHOLSTERY FABRIC. Specification and method of test":*

- ABRASION RESISTANCE.
  Standard UNE EN ISO 12947-2:1999.

**Performance dates:** from 05/09/13 to 16/09/13

*"This report is a partial copy and traslation of the report no. IN-01969/2013-2 issued by LEITAT on the 25 of September 2013".*

Firmado digitalmente por MIGUEL MORERA ESCUDÉ
Nombre de reconocimiento (DN): c=ES, cn=MIGUEL MORERA ESCUDÉ, email=miquelmorera@leitat.org, serialNumber=39179291X, sn=MORERA ESCUDÉ, givenName=MIGUEL, 1.3.6.1.4.1.17326.30.3=G08360232, o=ACONDICIONAMIENTO TARRASENSE, ou=STA, ou=TEXTIL, title=RESPONSABLE TÉCNICO TEXTIL, 2.5.4.13=Qualified Certificate: CAM-PF-SW-KPSC
Fecha: 2015.03.09 13:26:49 +01'00'

**Textile Unit Coordinator**
Yolanda Cabrejas

**Textile Technical Manager**
Miquel Morera

Terrassa, March 9th, 2015.

Acondicionamiento Tarrasense
C/ de la Innovació, 2 - 08225 Terrassa (Barcelona)
Tel. +34 93 788 23 00 - Fax +34 93 789 19 06
leitat@leitat.org - http://www.leitat.org

ENAC ENSAYOS Nº 18/LE 026

## ABRASION RESISTANCE

**Standard UNE EN ISO 12947-2:1999**

**Scope:** This test is intended to determine the abrasion resistance of fabrics by means of the Martindale method.

**Equipment used:** Abrasion tester Nu – Martindale.

**Conditioning of the specimens:** 24 hours to 20ºC ± 2ºC - 65 % ± 4 % h.r.

**Test conditions:**

| |
|---|
| Test atmosphere: 20ºC ± 2ºC - 65% ± 4% h.r. |
| Abrasive: Rubbing against a standard wool fabric (UNE EN ISO 12947-1) |
| Test pressure: 12 kPa (795 ± 7 g) |
| Final point:<br>- Valuation of the change of color to 3.000 cycles according to standard UNE-EN 14465:2004/ A1:2007 (Annex A) and UNE-EN ISO 105 – A02. |
| Number of specimens tested: 3 |
| Previous treatment: Null |

**Results obtained:**

| Valuation of the change of color to 3.000 cycles according to standard UNE EN ISO 105-A02 | |
|---|---|
| index grey-scale | 4-5 |

# Test report Martindale Abrasion
# NS-EN 12947-2 :1999

| Client | | Product | |
|---|---|---|---|
| **Crevin,s.a.**<br>**Pol.Ind.Sta. Margarita**<br>**c/ Llobregat, 21 08223**<br>**Terassa (Barselona)**<br>**Spania** | | FUSION-1<br>Product specification – tested object | |
| Client's reference<br>Pep Margarit | | R-no.<br>**R15019** | |
| Date<br>22.11.2013 | Date of receipt, tested object<br>12.11.2013 | Test completed date<br>22.11.2013 | Rev. no. / Rev. date<br>0/ |

Manufacturer:

Composition: 34%WO, 28%PES, 23%PP, 15%CO

Pressure : 795 g(12 kPa) Type felt: Woven

The samples are conditioned at 20 degrees C and 65 % relative humidity for 18 hours

Determination of the abrasion resistance of textiles on a Martindale testmachine according to NS-EN 12947-2. Circular specimens of fabric are abraded against a reference fabric. For woven fabrics the resistance to abrasion is estimated by number when two threads are broken.
For pile fabrics the resistance to abrasion is estimated by the number of cycles when the pile is fully worn off. For nonwovens the resistance to abrasion is estimated by the number when there is a hole of 0.5mm.
The average of four samples gives the results. The test is stopped and evaluated every 2000 cycles.
The last value before breakdown is therefore 2000 cycles lower than the given value.

| | |
|---|---|
| **Sample no. 1:** | 62000 |
| **Sample no. 2:** | 62000 |
| **Sample no. 3:** | 62000 |
| **Sample no. 4:** | 62000 |
| **Average 4 Samples:** | **62000** |

**Comments:**

**Deviations from test standards:** *3 yarns breaking*

Bård Vestre
Manager

West Yorkshire Materials Testing Service
West Yorkshire Joint Services

West Yorkshire Materials Testing Service
PO Box 5, Nepshaw lane South, Morley,
Leeds LS27 0QP
Tel: 0113 253 0241 Fax: 0113 252 7029
Head of Laboratory: G. Briggs C. Text ATI

**Client:** Crevin, s.a.
Pol.Ind.Santa Margarita I
C/Llobregat, 21
08223 Terrassa (BCN)
Spain

**Entry No:** 64128-01

**Date received:** 04/03/2014

**Client's Description:** Sample of fabric Fusion

**TEST REPORT**

**Test Required:** Flammability in accordance with The Furniture and Furnishings (Fire) (Safety) Regulations 1988 and Amendments Schedule 4 Part I and Schedule 5 Part I

**Pre-treatment:** None

**Conditioning:** A minimum of 96 hours at 50 +/- 20% Relative Humidity, 20 +/- 5°C

**Method of Test:** BS 5852 : Part 1 : 1979

**Date of Test:** 13/03/2014

The following test results relate only to the ignitability of the combination of materials under the particular conditions of test; they are not intended as a means of assessing the full potential fire hazard of the materials in use.

| Ignition Source | Observations | Result |
|---|---|---|
| **0 (cigarette)** | No flaming or progressive smouldering was observed within one hour of placement of the cigarettes. | PASS |
| **1 (butane flame)** | Flaming ceased within the specified two minute period after removal of the butane flame and no progressive smouldering occurred. | PASS |

**Note:** 20-22 kg/m3 non fire retardant polyurethane foam was used as the filling.

**Comments**

On the basis of the tests carried out this sample of fabric meets the requirements of Schedule 4 Part I and Schedule 5 Part I.

----------End of Document----------

*This is hereby certified to be a correct return of the tests made of the items referred to herein.*

D Brockbank
Senior Technologist
14th March 2014

1104

- Unless instructed otherwise by the client sample remnants will be disposed of after 28 days
- Test marked (*) in this certificate are not included in the UKAS Accreditation Schedule for this Laboratory.
- Opinions and interpretations expressed herein are outside the scope of UKAS accreditation.
- This Certificate relates only to the sample received and, unless that sample has been drawn by the staff of this laboratory, or its agent, and endorsed accordingly, any application of the result to a bulk quantity or other material is entirely the responsibility of the client.

West Yorkshire Materials Testing Service
West Yorkshire Joint Services

West Yorkshire Materials Testing Service
PO Box 5, Nepshaw Lane South, Morley,
Leeds LS27 0QP
Tel: 0113 253 0241 Fax: 0113 252 7029
Materials Testing Manager: D. Brockbank

**Client:** Crevin, s.a.
Pol.Ind.Santa Margarita I
C/Llobregat, 21
08223 Terrassa (BCN)
Spain

**Entry No:** 68661

**Date received:** 29/01/2015

**Client's Description:** Sample of fabric: Fusion

## TEST REPORT

**Test Required:** Flammability BS 7176 Low Hazard

**Pre-treatment:** None

**Conditioning:** A minimum of 24 hours at 50 +/- 5% Relative Humidity, 23 +/- 2° C

**Method of Test:** BS EN 1021-1: 2006 – smouldering cigarette
BS EN 1021-2: 2006 – match flame equivalent

**Date of Test:** 13/02/2015

| Ignition Source | Observations | Result |
|---|---|---|
| **Smouldering cigarette** | No flaming or progressive smouldering was observed within one hour of placement of the cigarettes. | PASS |
| **Match flame equivalent** | No flaming or progressive smouldering was observed after removal of the butane flame. | PASS |

**Note:** A 35 kg/m$^3$ CMHR foam (Carpenters RX36-125) which meets the requirements of Annex A of BS 7176 was used as the filling

The above results relate only to the ignitability of the combination of materials under the particular conditions of test; they are not intended as a means of assessing the full potential fire hazard of the materials in use.

**Comments**

BS 7176 : 2007 + A1 : 2011 relates to labelling of furniture. If an item of furniture was manufactured from a composite of the fabric and foam tested above then it would comply with the low hazard category flammability requirements provided that it was tested every 2.500 units or once per month as required by Para 5 of BS 7176.

----------End of Document----------

*This is hereby certified to be a correct return of the tests made of the items referred to herein.*

D. Brockbank.
Materials Testing Manager
16th February 2015

1104

- Unless instructed otherwise by the client sample remnants will be disposed of after 28 days
- Test marked (*) in this certificate are not included in the UKAS Accreditation Schedule for this Laboratory.
- Opinions and interpretations expressed herein are outside the scope of UKAS accreditation.
- This Certificate relates only to the sample received and, unless that sample has been drawn by the staff of this laboratory, or its agent, and endorsed accordingly, any application of the result to a bulk quantity or other material is entirely the responsibility of the client.

West Yorkshire Materials Testing Service
West Yorkshire Joint Services

West Yorkshire Materials Testing Service
PO Box 5, Nepshaw lane South, Morley,
Leeds LS27 0QP
Tel: 0113 253 0241 Fax: 0113 252 7029
Head of Laboratory: G. Briggs C. Text ATI

**Client:** Crevin, s.a.
Pol.Ind.Santa Margarita I
C/Llobregat, 21
08223 Terrassa (BCN)
Spain

**Entry No:** 64128

**Date received:** 04/03/2014

**Client's Description:** Sample of fabric Fusion

**TEST REPORT**

**Test Required:** Flammability

**Pre-treatment:** None

**Conditioning:** A minimum of 24 hours at 50 +/- 5% Relative Humidity, 23 +/- 2℃

**Method of Test:** BS EN 1021-1:2006 – smouldering cigarette
BS EN 1021-2:2006 – match flame equivalent

**Date of Test:** 13/03/2014

| Ignition Source | Observations | Result |
|---|---|---|
| **Smouldering cigarette** | No flaming or progressive smouldering was observed within one hour of placement of the cigarettes. | PASS |
| **Match flame equivalent** | Flaming ceased within the specified two minute period after removal of the butane flame and no progressive smouldering occurred. | PASS |

**Note:** 20-22 kg/m3 non fire retardant polyurethane foam was used as the filling

The above tests relate only to the ignitability of the combination of materials under the particular conditions of test; they are not intended as a means of assessing the full potential fire hazard of the materials in use.

----------End of Document----------

*This is hereby certified to be a correct return of the tests made of the items referred to herein.*

D Brockbank
Senior Technologist
14th March 2014

ilac-MRA UKAS TESTING 1104

- Unless instructed otherwise by the client sample remnants will be disposed of after 28 days
- Test marked (*) in this certificate are not included in the UKAS Accreditation Schedule for this Laboratory.
- Opinions and interpretations expressed herein are outside the scope of UKAS accreditation.
- This Certificate relates only to the sample received and, unless that sample has been drawn by the staff of this laboratory, or its agent, and endorsed accordingly, any application of the result to a bulk quantity or other material is entirely the responsibility of the client.