TEST REPORT

2020CN0215

DATE OF RECEPTION
30/04/2020

DATE TESTS
Starting: 06/05/2020
Ending: 02/06/2020

APPLICANT

KUNSHAN SUNSHINETEX NEW MATERIAL CO. LTD.
No. 417 Sanxiang Road
CN-215300 Kunshan
JIANGSU

IDENTIFICATION AND DESCRIPTION OF SAMPLES

REFERENCES
FABRIC POBFD3XY

According to information supplied by the customer:

Fabric reference: POBFD3XY
Composition and percentage: 56% Modacrylic, 43% Polyester and 1% Antistatic
Color: Fluo yellow, Fluo orange, Navy
Others: FR softshell

TESTS CARRIED OUT

- PRE-TREATMENT FOR DOMESTIC WASHING AND DRYING PROCEDURES FOR TEXTILE TESTING.
- HEAT RESISTANCE.
- LIMITED FLAME SPREAD.
- DETERMINATION OF DIMENSIONAL CHANGE IN DOMESTIC WASHING AND DRYING.
- DETERMINATION OF BREAKING STRENGTH AND ELONGATION.
- DETERMINATION OF TEAR RESISTANCE.
- ELECTRIC ARC TEST.
- VERTICAL RESISTANCE.

Tests marked with * are not included within the scope of the ENAC accreditation

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RESULTS

PRE-TREATMENT FOR DOMESTIC WASHING AND DRYING PROCEDURES FOR TEXTILE TESTING

Standard
ISO 6330:2012

Standard deviation

Reference
Sample1 Fabric POBFD3XY

Units	1	2
Equipment	Wascator 13337E12	Wascator 13369E12
Dryer machine	ELECTROLUX 13427E12	ELECTROLUX 13429E12

Washing procedure 4N **Washing cycles** 5

Drying procedure
F (tumble dryer)

Washing powder
ECE detergent 98 + sodium perborate + TAED

Units	Dry mass of the samples	Counterweight mass	Equipment
1	2.00 Kg	---	Wascator 13337E12
2	2.10 Kg	---	Wascator 13369E12

Start and finish date
07/05/2020 - 08/05/2020

RESULTS

PRE-TREATMENT FOR DOMESTIC WASHING AND DRYING PROCEDURES FOR TEXTILE TESTING

Standard
ISO 6330:2012

Standard deviation

Reference
Sample1 Fabric POBFD3XY

Units 1

Equipment Wascator 13370E12

Dryer machine ELECTROLUX 13426E12

Washing procedure 4N **Washing cycles** 5

Drying procedure
F (tumble dryer)

Washing powder
ECE detergent 98 + sodium perborate + TAED

Units	Dry mass of the samples	Counterweight mass	Equipment
1	0,014 Kg	1,900 Kg of Polyester	Wascator 13370E12

Start and finish date
06/05/2020 - 07/05/2020

RESULTS

PRE-TREATMENT FOR DOMESTIC WASHING AND DRYING PROCEDURES FOR TEXTILE TESTING

Standard
ISO 6330:2012

Standard deviation

Reference
Sample1 Fabric POBFD3XY

Units 1

Equipment Wascator 13470E05

Dryer machine JAMES HEAL
13472E05

Washing procedure 4N **Washing cycles** 5

Drying procedure
F (tumble dryer)

Washing powder
ECE detergent 98 + sodium perborate + TAED

Units	Dry mass of the samples	Counterweight mass	Equipment
1	0,093 Kg	1,900 Kg of Polyester	Wascator 13470E05

Start and finish date
27/05/2020 - 28/05/2020

RESULTS

HEAT RESISTANCE

Standard
ISO 17493:2016

Apparatus
Air stove

Temperature
(180 ± 5) ºC

Length of the test
5 min (+0,15/-0) min

Deviation from the Standard

Pre-Treatment
5 washing cycles at 40ºC, according to standard EN ISO 6330:2012, method 4N and type F drying (tumble dry)

Tested material
Orange woven fabric with grey fleece inner face.

Reference
Fabric POBFD3XY

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RESULTS

Fabric			
Flame	**Melting**	**Shrink**	**Elongation**
No	No	Warp Weft	-2,6 % -3,9 %
No	No	Warp Weft	-3,3 % -4,0 %
No	No	Warp Weft	-3,0 % -4,0 %

Remark

The uncertainty of the assay of Heat Resistance is ±19% of the value measured, for a coverage factor of K=2 (95%).

PERFORMANCE LEVEL ACCORDING IEC 61482-2:2018	**PASS**

Requisites to be met according to IEC 61482-2:2018, point 4.3.1

No layer can ignite
No layer can melt
No layer shrinks more than 5%

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RESULTS

LIMITED FLAME SPREAD

Standard
EN ISO 15025:2016 (Method A)

Apparatus
Equipment for determination of limited flame spread 13008IE12

Original and after pre-treatment test date
08/05/2020 - 12/05/2020

Conditioned
24h in indoor ambient conditions at (20 ± 2) ºC and (65 ± 5) % RH

Original and after pre-treatment ambient conditions test
22,5ºC and 51,4% RH - 22,6ºC and 48,8% RH

Gas used
Propane gas

Deviation from the standard

Face exposed to the flame
Surfaces: Outer

Tested material
Orange woven fabric with grey fleece inner face.

Test uncertainty
± 0,29 s

Reference
Fabric POBFD3XY

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RESULTS

Pre-Treatment As received

Specimen	1	2	3	4	5	6
Direction		Warp			Weft	
Flaming to top or either side edge	No	No	No	No	No	No
After flame time (s)	0	0	0	0	0	0
Afterglow time (s)	0	0	0	0	0	0
Melting	No	No	No	No	No	No
Loose waste	No	No	No	No	No	No
Inflammation of the filter paper detached from waste	No	No	No	No	No	No
Hole formation	No	No	No	No	No	No

Pre-Treatment 5 washing cycles at 40ºC, according to standard EN ISO 6330:2012, method 4N and type F drying (tumble dry)

Specimen	1	2	3	4	5	6
Direction		Warp			Weft	
Flaming to top or either side edge	No	No	No	No	No	No
After-flame time (s)	0	0	0	0	0	0
Afterglow time (s)	0	0	0	0	0	0
Melting	No	No	No	No	No	No
Loose waste	No	No	No	No	No	No
Inflammation of the filter paper detached from waste	No	No	No	No	No	No
Hole formation	No	No	No	No	No	No

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RESULTS

PERFORMANCE LEVEL ACCORDING TO EN IEC 61482-2:2018	PASS

Requirements to be met according to IEC 61482-2:2018, point 4.3.3.3. Table 2 – Outer and innermost layer materials:

a) No specimen shall permit any part of the lowest boundary of any flame to reach the upper or either vertical edge
b) No specimen shall give flaming or molten debris
c) No specimen shall give hole formation of 5 mm or greater in any direction
d) Afterglow time shall be ≤ 2 s
e) Afterflame time shall be ≤ 2 s

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RESULTS

LIMITED FLAME SPREAD

Standard
EN ISO 15025:2016 (Method A)

Apparatus
Equipment for determination of limited flame spread 13008IE12

Original and after pre-treatment test date
08/05/2020 - 12/05/2020

Conditioned
24h in indoor ambient conditions at (20 ± 2) ºC and (65 ± 5) % RH

Original and after pre-treatment ambient conditions test
22,5ºC and 51,4% RH - 22,6ºC and 49,2% RH

Gas used
Propane gas

Deviation from the standard

Face exposed to the flame
Surfaces: Inner

Tested material
Orange woven fabric with grey fleece inner face.

Test uncertainty
± 0,29 s

Reference
Fabric POBFD3XY

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RESULTS

Pre-Treatment As received

Specimen	1	2	3	4	5	6
Direction		Warp			Weft	
Flaming to top or either side edge	No	No	No	No	No	No
After flame time (s)	0	0	0	0	0	0
Afterglow time (s)	0	0	0	0	0	0
Melting	No	No	No	No	No	No
Loose waste	No	No	No	No	No	No
Inflammation of the filter paper detached from waste	No	No	No	No	No	No
Hole formation	No	No	No	No	No	No

Pre-Treatment 5 washing cycles at 40ºC, according to standard EN ISO 6330:2012, method 4N and type F drying (tumble dry)

Specimen	1	2	3	4	5	6
Direction		Warp			Weft	
Flaming to top or either side edge	No	No	No	No	No	No
After-flame time (s)	0	0	0	0	0	0
Afterglow time (s)	0	0	0	0	0	0
Melting	No	No	No	No	No	No
Loose waste	No	No	No	No	No	No
Inflammation of the filter paper detached from waste	No	No	No	No	No	No
Hole formation	No	No	No	No	No	No

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RESULTS

PERFORMANCE LEVEL ACCORDING TO EN IEC 61482-2:2018	PASS

Requirements to be met according to IEC 61482-2:2018, point 4.3.3.3. Table 2 – Outer and innermost layer materials:

a) No specimen shall permit any part of the lowest boundary of any flame to reach the upper or either vertical edge
b) No specimen shall give flaming or molten debris
c) No specimen shall give hole formation of 5 mm or greater in any direction
d) Afterglow time shall be ≤ 2 s
e) Afterflame time shall be ≤ 2 s

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RESULTS

DETERMINATION OF DIMENSIONAL CHANGE IN DOMESTIC WASHING AND DRYING

Standard
EN ISO 5077:2008

Standard deviation

Preparation, marking and measuring of fabric specimens according to EN ISO 3759:2011
Starting test date 06/05/2020 **Ending test date** 28/05/2020

Washing procedure
4N (Tª = 40 ± 3ºC; Total dry load test samples and the counterweight 2 ± 0.1 Kg) according to ISO 6330:2012

Used apparatus
Wascator type A-Horizontal drum, front loading (13337E12)

Detergent
98 ECE reference detergent without optical brightener.

Counterweight
Type III - 100% polyester

Number of washing cycles
5

Dryer type
A3

Procedure F – Tumble dry(13427E12)

Uncertainty of test (% of the measured value)
± 15 %

Tested material
Fluorescent orange woven fabric with grey fleece fabric on back side

Reference	Specimen	Direction	Dimensional change (%)
Fabric POBFD3XY	1	Warp	-1,5
		Weft	0,0

REMARK
Negative dimensional change indicates shrinkage
Positive dimensional change indicates lengthening

REQUISITE
In accordance with the Standard EN 61482-1-2:2014, the dimensional change shall not exceed ± 3%, both in width warp and in length weft.

PASS

REQUISITE
In accordance with the Standard IEC 61482-2:2018, the dimensional change shall not exceed ± 3%, both in width warp and in length weft.

PASS

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RESULTS

DETERMINATION OF DIMENSIONAL CHANGE IN DOMESTIC WASHING AND DRYING

Standard
EN ISO 5077:2008

Standard deviation

Preparation, marking and measuring of fabric specimens according to EN ISO 3759:2011
Starting test date 06/05/2020 **Ending test date** 28/05/2020

Washing procedure
4N (T^a = 40 ± 3ºC; Total dry load test samples and the counterweight 2 ± 0.1 Kg) according to ISO 6330:2012

Used apparatus
Wascator type A-Horizontal drum, front loading (13370E12)

Detergent
98 ECE reference detergent without optical brightener.

Counterweight
Type III - 100% polyester

Number of washing cycles
5

Dryer type
A3

Procedure F – Tumble dry(13426E12)

Uncertainty of test (% of the measured value)
± 15 %

Tested material
Blue woven fabric with grey fleece fabric on back side

Reference	Specimen	Direction	Dimensional change (%)
Fabric POBFD3XY	1	Warp	-1,5
		Weft	-1,0

REMARK
Negative dimensional change indicates shrinkage
Positive dimensional change indicates lengthening

REQUISITE
In accordance with the Standard EN 61482-1-2:2014, the dimensional change shall not exceed ± 3%, both in width warp and in length weft.

PASS

REQUISITE
In accordance with the Standard IEC 61482-2:2018, the dimensional change shall not exceed ± 3%, both in width warp and in length weft.

PASS

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RESULTS

DETERMINATION OF BREAKING STRENGTH AND ELONGATION

Standard
EN ISO 13934-1:2013

Apparatus
INSTRON Dynamometer

Conditioning date	13/05/2020	**Test date**	20/05/2020

Atmosphere for conditioning testing

Temperature	(20±2) ºC	**Relative humidity**	(65±4) %

Gauge length

Lengthwise	200 mm.	**Crosswise**	200 mm.

Test velocity

Lengthwise	100 mm/min	**Crosswise**	100 mm/min

Pretension

Lengthwise	5 N	**Crosswise**	5 N

Nº of specimens

Tested	5 for each direction	**Rejected**	0
State of the specimens	Conditioned		

Previous treatment
5 washing cycles at 40ºC, according to standard EN ISO 6330:2012, method 4N and type F drying (tumble dry)

Reference
Fabric POBFD3XY

Direction	Maximum average load (N)		C.V. (%)	Average elongation (%)		C.V. (%)
Lengthwise	920 940 900 960 890	**920**	3.0	31.5 32.5 30.5 32.5 31.0	**31.5**	2.8
Crosswise	720 730 750 740 760	**740**	2.0	42.5 43.5 44.0 45.0 46.0	**44.0**	3.2

Remark
The relative expanded uncertainty of Tensile strength resistance is ±5% assay value of the measured, for a probability of coverage of 95%.

The test procedure described in the two versions of the Standard (EN ISO 13934-1:1999 and EN ISO 13934-1:2013) is the same.

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RESULTS

REQUISITE ACCORDING TO IEC 61482-2:2018

The woven and laminated outer material must have a tensile strength of at least 400 N for a weight greater than 220 g/m^2 or at least 250 N for a weight of 220 g/m^2 or less in the machine and cross directions when test according to 5.3.4.3.

PASS

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RESULTS

DETERMINATION OF TEAR RESISTANCE

Standard
EN ISO 13937-2:2000

Apparatus
INSTRON Dynamometer

Conditioning date 11/05/2020 **Test date** 18/05/2020

Atmosphere for conditioning testing
Temperature (20±2) ºC **Relative humidity** (65±5) %

Nº of specimens
Tested 5 for each direction **Rejected** 0

The calculation of averages has been made
For electronic device

Previous treatment
5 washing cycles at 40ºC, according to standard EN ISO 6330:2012, method 4N and type F drying (tumble dry)

Reference
Fabric POBFD3XY

Tear	Average load (N)	C.V. (%)
Lengthwise	30 29 33 31 30 36	8.7
Crosswise	30 41 30 33 31 32	14.0

Remark
The relative expanded uncertainty of Tear resistance is ±3.9% assay value of the measured, for a probability of coverage of 95%.

REQUISITE ACCORDING TO STANDARD IEC 61482-2:2018
The woven outer material shall have a tear resistance of at least 15 N for weight higher than 220 g/m^{2}or at least 10 N for a weight of 220 g/m^{2}or less, in both directions

PASS

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RESULTS

VERTICAL RESISTANCE

Standard
EN 1149-2:1997

Conditioned
24h in indoor ambient conditions at (23 ± 1) ºC and (25 ± 5) % RH according to standard EN 1149-5:2008

Ambient conditions test
23,0 ºC and 28,0% RH

Radius of the inner electrode
50,4 mm

Inner radius of the outer electrode
69,2 mm

Outer radius of the outer electrode
89,0 mm

Contact pressure
2,25 kPa

Potential applied
100 V

Current measurement after
15 s

Test date
13/05/2020

Deviation from the standard

Tested material
Orange woven fabric with grey fleece inner face.

>>>

RESULTS

Pre-Treatment

5 washing cycles at 40ºC, according to standard EN ISO 6330:2012, method 4N and type F drying (tumble dry)

Reference

Fabric POBFD3XY

Specimen	Vertical Resistance (Ohm)
1	$1{,}73\ 10^{12}$
2	$2{,}03\ 10^{12}$
3	$2{,}72\ 10^{12}$
4	$2{,}16\ 10^{12}$
5	$2{,}27\ 10^{12}$
Classification value	**$1{,}73\ 10^{12}$**
Average (Ohm)	**$2{,}18\ 10^{12}$**

The uncertainty of the assay of Vertical Resistance is ±20% of the value measured, for a coverage factor of K=2 (95%)

ACCORDING TO STANDARD IEC 61482-2:2018	**PASS**

REQUIREMENT

According to the Standard IEC 61482-2:2018, point 4.3.2, the vertical resistance must be at least than $10^5\Omega$.

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RESULTS

ELECTRIC ARC TEST

Standard	EN 61482-1-2: 2014 equivalent to IEC 61482-1-2: 2014
Principle of the Box test method	Determine the behaviour of materials against to thermal risk when exposed to heat energy from electric arc with specific characteristics Materials performance for this procedure is determined from the amount of the heat transmitted through the specimen and other thermal parameters
Sample type	Laminated woven fabric, orange colour sewn to a polar fabric, grey colour with a total weight according to the customer of 345 g/m²

Test conditions	
Class	Class 1
Testing atmosphere	23,00 ºC 41,60 % RH
Test current I_{class} for class 1	4 kA ± 5%
Calibration test current	3956,26 A
Average direct exposure incident energy E_{io}	142,91 kJ/m^2
Arc duration	500 ms ± 5%
Average real arc duration	497,55 ms
Test voltage	400 V ± 5%
Average real test voltage	384,885 V
Average real Arc Energy W_{arc}	178,42 kJ

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RESULTS

ELECTRIC ARC TEST

Test conditions	
Gap between electrodes	(30 ± 1) mm
Distance between the electrodes and sample	(300 ± 5) mm

Electrodes type
Electrodes Cu/Al

Measurement uncertainty

Temperature	17% of the measured value in ºC
Equivalent energy	17% of the measured value in kJ/m^2
Time	± 0,390 s

Technician performing the test
David Lazaro

Person verifying the test report
Lucía Martinez

Pre-treatment
5 washing cycles at 40ºC, according to standard ISO 6330:2012, method 4N; and F drying

Pre-conditioning of the test specimens
24h. in indoor ambient conditions between (18-28)ºC and between (45-75)% RH

Starting and ending pre-conditioning date
14/05/2020 - 18/05/2020

Observation or deviation of the standard

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RESULTS

ELECTRIC ARC TEST

Testing date 18/05/2020
Reference Fabric POBFD3XY

VISUALLY OBTEINED DATA

Property	Measurement	Specimen 1	Specimen 2	Specimen 3	Specimen 4
	Class	1	1	1	1
Burning time	Video	0,00 s	0,00 s	0,00 s	0,00 s
Hole formation >5mm. on external layer	Visual	Yes	No	No	No
Hole formation >5mm. on internal layer	Visual	No	No	No	No
Melting through to the inner side	Visual	No	No	No	No
Embrittlement	Visual	Yes	No	No	No
Damage on the outside	Visual	Yes	No	No	No
Charring on the outside	Visual	Yes	Yes	Yes	Yes
Dripping	Visual	No	No	No	No
Shrinkage	Calculated	No	No	No	No

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RESULTS

ELECTRIC ARC TEST

Reference
Fabric POBFD3XY

COMPUTER OBTEINED DATA

Class 1				
Property	**Specimen 1**	**Specimen 2**	**Specimen 3**	**Specimen 4**
Transmitted incident energy E_{it}	43,26 kJ/m^2	40,29 kJ/m^2	43,18 kJ/m^2	44,38 kJ/m^2
Time to delta peak temperature t_{max}	29,83 s	29,67 s	29,96 s	29,96 s
Delta peak temperature ΔT_p	7,84 ºC	7,30 ºC	7,82 ºC	8,04 ºC
Differences ΔEi of the transmitted energy values to the Stoll limit value at t_{max}	-91,18 kJ/m^2	-93,94 kJ/m^2	-91,43 kJ/m^2	-90,23 kJ/m^2
Maximum difference between the transmitted energy E_{it} to the Stoll energy E_{iSTOLL} in t_i (1)	-43,98 kJ/m^2	-44,21 kJ/m^2	-43,59 kJ/m^2	-44,73 kJ/m^2
Excess of the Stoll curve by the heat curve of the transmitted incident energy E_{it} (t)	No	No	No	No

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RESULTS

ELECTRIC ARC TEST

Remark

t_i is the time where the difference between the transmitted incident energy E_{it} and the Stoll Energy E_{iSTOLL} is maximum.

(1) Interpretation: In negative value, a higher difference implies a better behavior. In positive value, a less difference implies a better behavior, considering that the material fails the test.

IN ACCORDANCE WITH THE ACEPTANCE CRITERIA ACCORDING TO EN 61482-1-2:2014, FOR CLASS 1 **PASS**

CATEGORY OF ARC THERMAL PROTECTION ACCORDING TO IEC 61482-2:2018	**(2)APC 1**

Remark

(2)Arc Protection Class

The arc protection class is characterized by the test energy level of arc exposure (arc energy and incident energy)

Requirement for the standard compliance EN 61482-1-2:2014

a) Burning time ≤ 5 s.
b) No melting through to the inner side.
c) No hole bigger than max. 5 mm. in any direction in the innermost layer.
d) All four pairs of values (E_{it} - t_{max}) are below corresponding Stoll values, and all four heat curves E_{it} (t) of transmitted energy are at any moment of time “t” of the exposure period below Stoll curve.

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RESULTS

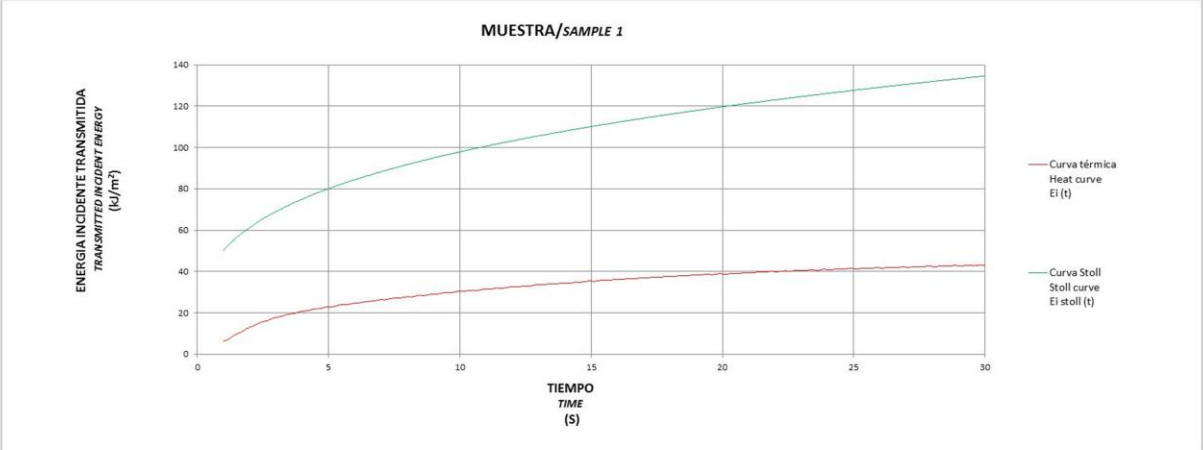
ELECTRIC ARC TEST

STOLL CURVES

Specimen 1

Reference

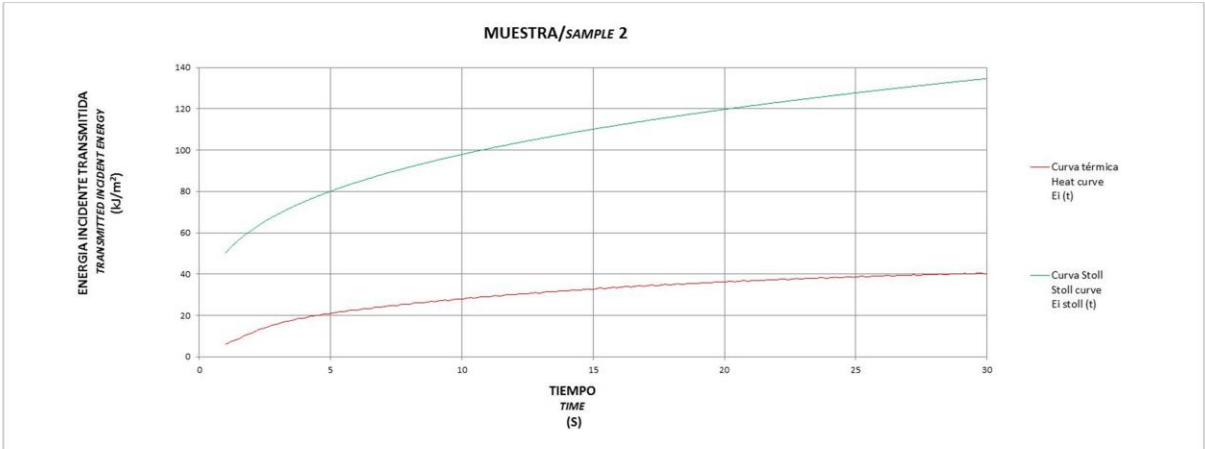
1- Fabric POBFD3XY



Specimen 2

Reference

2- Fabric POBFD3XY



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RESULTS

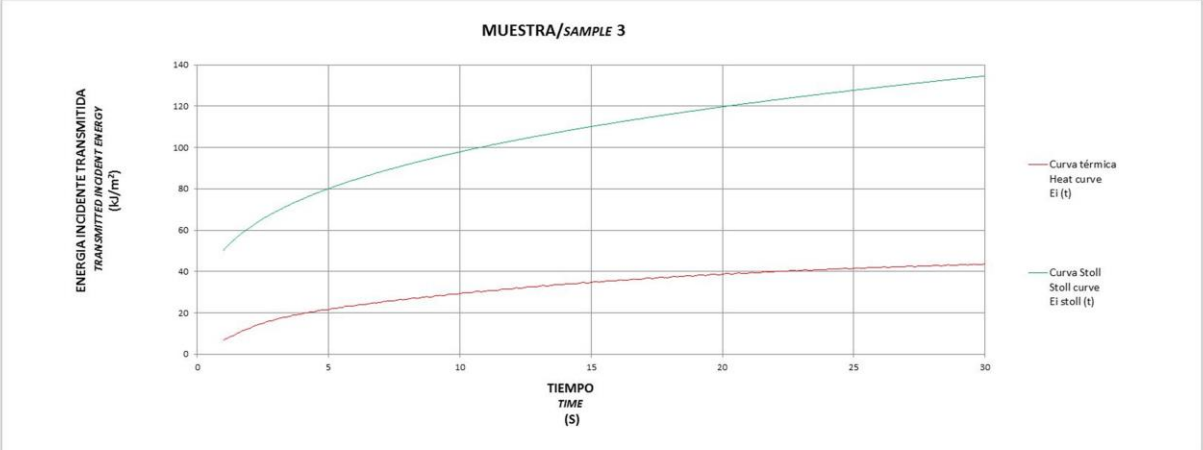
ELECTRIC ARC TEST

STOLL CURVES

Specimen 3

Reference

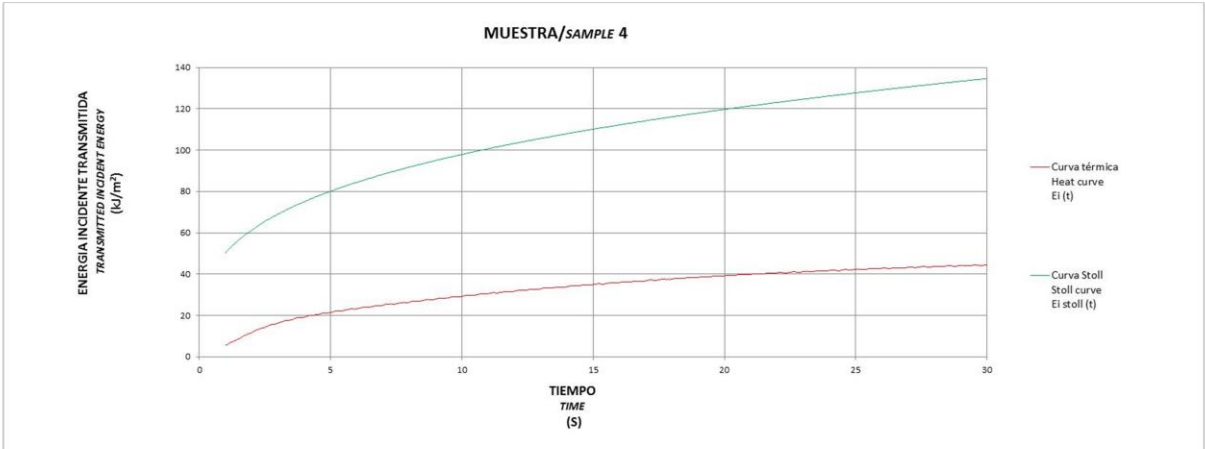
3- Fabric POBFD3XY



Specimen 4

Reference

4- Fabric POBFD3XY



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RESULTS

ELECTRIC ARC TEST

Reference

Fabric POBFD3XY

Original material

Outer fabric

Inner fabric

Tested material

Remark

The electric arc test is performed in: Cr. Villaviciosa de Odón a Móstoles (M-856) Km. 1,5 Móstoles 28935.

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RESULTS

ELECTRIC ARC TEST

Standard	EN 61482-1-2: 2014 equivalent to IEC 61482-1-2: 2014
Principle of the Box test method	Determine the behaviour of materials against to thermal risk when exposed to heat energy from electric arc with specific characteristics Materials performance for this procedure is determined from the amount of the heat transmitted through the specimen and other thermal parameters
Sample type	Laminated woven fabric, orange colour sewn to a polar fabric, grey colour with a total weight according to the customer of 345 g/m²

Test conditions	
Class	Class 2
Testing atmosphere	23,00 ºC 41,60 % RH
Test current I_{class} for class 2	7 kA ± 5%
Calibration test current	6700,66 A
Average direct exposure incident energy E_{io}	449,19 kJ/m^2
Arc duration	500 ms ± 5%
Average real arc duration	509,40 ms
Test voltage	400 V ± 5%
Average real test voltage	383,23 V
Average real Arc Energy W_{arc}	341,81 kJ

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RESULTS

ELECTRIC ARC TEST

Test conditions	
Gap between electrodes	(30 ± 1) mm
Distance between the electrodes and sample	(300 ± 5) mm

Electrodes type
Electrodes Cu/Al

Measurement uncertainty

Temperature	17% of the measured value in ºC
Equivalent energy	17% of the measured value in kJ/m^2
Time	± 0,390 s

Technician performing the test
David Lazaro

Person verifying the test report
Lucía Martinez

Pre-treatment
5 washing cycles at 40ºC, according to standard ISO 6330:2012, method 4N; and F drying

Pre-conditioning of the test specimens
24h. in indoor ambient conditions between (18-28)ºC and between (45-75)% RH

Starting and ending pre-conditioning date
14/05/2020 - 18/05/2020

Observation or deviation of the standard

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RESULTS

ELECTRIC ARC TEST

Testing date 18/05/2020
Reference Fabric POBFD3XY

VISUALLY OBTEINED DATA

Property	Measurement	Specimen 1
	Class	2
Burning time	Video	0,00 s
Hole formation >5mm. on external layer	Visual	Yes
Hole formation >5mm. on internal layer	Visual	Yes
Melting through to the inner side	Visual	No
Embrittlement	Visual	Yes
Damage on the outside	Visual	Yes
Charring on the outside	Visual	Yes
Dripping	Visual	No
Shrinkage	Calculated	No

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RESULTS

ELECTRIC ARC TEST

Reference
Fabric POBFD3XY

COMPUTER OBTEINED DATA

Class 2	
Property	**Specimen 1**
Transmitted incident energy E_{it}	97,86 kJ/m^2
Time to delta peak temperature t_{max}	29,58 s
Delta peak temperature ΔT_p	17,73 ºC
Differences ΔEi of the transmitted energy values to the Stoll limit value at t_{max}	-36,25 kJ/m^2
Maximum difference between the transmitted energy E_{it} to the Stoll energy E_{iSTOLL} in t_i (1)	-24,19 kJ/m^2
Excess of the Stoll curve by the heat curve of the transmitted incident energy E_{it} (t)	No

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RESULTS

ELECTRIC ARC TEST

Remark

t_i is the time where the difference between the transmitted incident energy E_{it} and the Stoll Energy E_{iSTOLL} is maximum.

(1) Interpretation: In negative value, a higher difference implies a better behavior. In positive value, a less difference implies a better behavior, considering that the material fails the test.

Requirement for the standard compliance EN 61482-1-2:2014

a) Burning time ≤ 5 s.
b) No melting through to the inner side.
c) No hole bigger than max. 5 mm. in any direction in the innermost layer.
d) All four pairs of values (E_{it} - t_{max}) are below corresponding Stoll values, and all four heat curves E_{it} (t) of transmitted energy are at any moment of time “t” of the exposure period below Stoll curve.

>>>

RESULTS

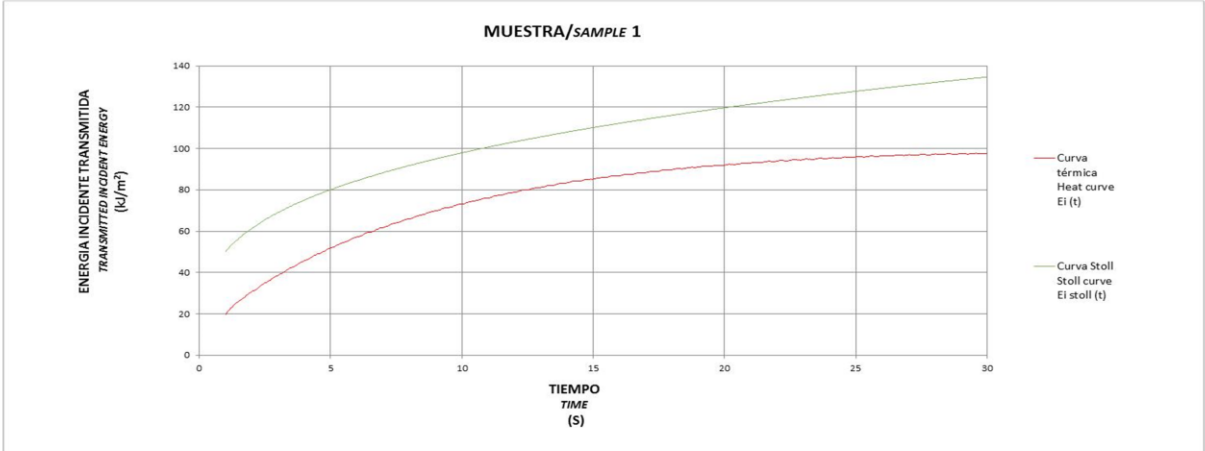
ELECTRIC ARC TEST

STOLL CURVES

Specimen 1

Reference

1- Fabric POBFD3XY



>>>

RESULTS

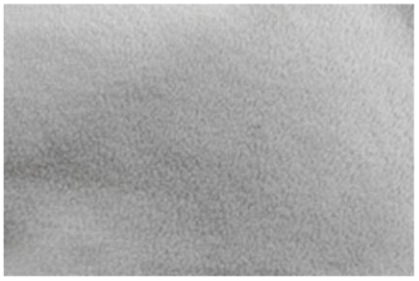
ELECTRIC ARC TEST

Reference

Fabric POBFD3XY

Original material

Outer fabric



Inner fabric

Tested material

Remark

The electric arc test is performed in: Cr. Villaviciosa de Odón a Móstoles (M-856) Km. 1,5 Móstoles 28935.

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Lucia Martinez
Head of PPE and Ballistics department

Digitally signed by ISABEL LLOPIS LUMBRERAS - NIF:21678551Q
Date: 2020.06.10 08:46:11 +02:00
Reason: Autorizado
Location: Alcoy

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