

TEST REPORT

2025BR0278

DATE OF RECEPTION

Date Format: dd/MM/yyyy 04/06/2025

DATE OF TESTS

Starting : 04/06/2025

Ending: 19/06/2025

APPLICANT

 PERFORMANCE SPECIALTY PROD. DO BR SERV E
 COMDE PROD. ELETRONICOS E DE PROT E SEG.
 LTDA

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Brazil

Att Eduardo Moreira

REFERENCE OF SAMPLES

Reference by AITEX	Reference by customer	AITEX sample description
2025BR0278-S01	Tecido Nomex PRFAxAxxxWxxx652Txx	Fabric

TESTS CARRIED OUT

- DETERMINATION THE pH VALUE OF AQUEOUS EXTRACT
- DETERMINATION OF CANCEROGENIC ARYLAMINES
- PRE-TREATMENT FOR DOMESTIC WASHING AND DRYING PROCEDURES FOR TEXTILE TESTING
- DETERMINATION OF HEAT RESISTANCE 260°C
- VOLUMETRIC RESISTANCE*
- ELECTROSTATIC PROPERTIES: INDUCTIVE CHARGING METHOD TO DETERMINE CHARGE DECAY

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



**DESCRIPTION OF SAMPLES**

Reference by AITEX: 2025BR0278-S01

Reference by customer:

Tecido Nomex PRFAxAxxxWxxx652Txx

Information supplied by the customer

220g/m2 (6.5 oz/yd)2, mescla de 62% modacrílico, 36% aramidas (Nomex e Kelvar) e 2% fibra antiestática - Cor: Light Grey

AITEX Subsamples	Subsample Description
2025BR0278-S01_P1	TRAS 5 CICLOS DE LAVADO



EXECUTIVE SUMMARY

NBR 16623:2021	Reference	Test/Standard	Result
	2025BR0278-S01	DETERMINATION THE pH VALUE OF AQUEOUS EXTRACT EN ISO 3071:2020	PASS
		DETERMINATION OF ARYLAMINES EN ISO 14362-1:2017	PASS
EN 61482-2:2020	2025BR0278-S01_P1	DETERMINATION OF HEAT RESISTANCE 260°C ISO 17493:2016	PASS
	2025BR0278-S01_P1	VOLUMETRIC RESISTANCE IEC 61340-2-3:16 Pto.8.2.3 (Subcontratado)	PASS
EN 1149-5:2018	2025BR0278-S01_P1	Reference	Result
		ELECTROSTATIC PROPERTIES: INDUCTIVE CHARGING METHOD TO DETERMINE CHARGE DECAY EN 1149-3:2004 Método 2	PASS



REQUIREMENT SUMMARY

DETERMINATION THE pH VALUE OF AQUEOUS EXTRACT

REQUIREMENT ACCORDING NBR 16623:2021

In accordance with Standard NBR 16623:2021, the pH value shall be greater than 3.5 and less than 9.5

DETERMINATION OF CANCEROGENIC ARYLAMINES

REQUIREMENT ACCORDING NBR 16623:2021

In accordance with standard NBR 16623:2021, by detecting Azo colorants the limited established is not detected by standard EN ISO 14362-1:2017

DETERMINATION OF HEAT RESISTANCE 260°C

REQUIREMENT ACCORDING NBR 16623:2021

Fabric

No layer can melt and/or drip.

At 260°C not layer shrink by more than 10%.

Not layer must ignite.

Hardware

No hardware/strip/seam shall ignite or melt

Closures opens

VOLUMETRIC RESISTANCE

REQUIREMENT ACCORDING EN 61482-2:2020

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

ELECTROSTATIC PROPERTIES: INDUCTIVE CHARGING METHOD TO DETERMINE CHARGE DECAY

REQUIREMENT ACCORDING EN 1149-5:2018

Requirements according to Standard EN 1149-5:2018 for the induction charge method according to the Standard EN 1149-3:2004 are:

$t_{50} < 4s$ or $S > 0,2$

Where

t_{50} = decay half time

S = shielding factor



RESULTS

DETERMINATION THE pH VALUE OF AQUEOUS EXTRACT

Standard

EN ISO 3071:2020

Determination date

6/6/2025

Extractor solution

B - KCl

pH Extractor solution

5.95

Temperature

(21.5)°C

Reference	pH	Uncertainty
2025BR0278-S01	6.10	±2%

Reference	Description
2025BR0278-S01	Tecido Nomex PRFAxAxxxWxxx652Txx



RESULTS

DETERMINATION OF CANCEROGENIC ARYLAMINES

Standard

EN ISO 14362-1:2017

Test date

Start date

09/06/2025

End date

11/06/2025

Testing Method

GC/MSD

Sampling and preparation procedure

Preparation without extraction

Reference

2025BR0278-S01

Substance	CAS number	Results (mg/Kg)
o-Toluidine	95-53-4	< 15
2,6-Xylidine	87-62-7	< 15
2,4-Xylidine	95-68-1	< 15
o-Anisidine	90-04-0	< 15
p-Chloroaniline	106-47-8	< 15
p-Cresidine	120-71-8	< 15
2,4,5-Trimethylaniline	137-17-7	< 15
4-Chloro-o-toluidine	95-69-2	< 15
2,4-Diaminotoluene	95-80-7	< 15
2,4-Diaminoanisole	615-05-4	< 15
2-Naphthylamine	91-59-8	< 15
2-Amino-4-nitrotoluene	99-55-8	< 15
4-Aminobiphenyl	92-67-1	< 15
4-Aminophenyl-ether	101-80-4	< 15
Benzidine	92-87-5	< 15
4,4-Diaminodiphenylmethane	101-77-9	< 15
o-Aminoazotoluene	97-56-3	< 15
4,4'-Diamino-3,3'-dimethyldiphenylmethane	838-88-0	< 15
3,3'-Dimethylbenzidine	119-93-7	< 15
4,4'-Thiodianiline	139-65-1	< 15
3,3'-Dichlorobenzidine	91-94-1	< 15
4,4'-Methylene-bis(2-chloroaniline)	101-14-4	< 15
3,3'-Dimethoxybenzidine	119-90-4	< 15
4-Aminoazobenzene	60-09-3	< 15

**Note**

Annex XVII of the REACH Regulation 1907/2006 defines a limit values of 30 mg/Kg of the simple material. According to the analysis carried out, no azo dyes have been detected that release the aromatic amines listed.

Reference	Description
2025BR0278-S01	Tecido Nomex PRFAxAxxxWxxx652Txx



RESULTS

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

Standard

EN ISO 6330:2021

Test date**Start date**

06/06/2025

End date

09/06/2025

Washing procedure

6N

Washing temperature

60°C

Washing cycles

5

Dryer type

James Heal

Drying procedure

F (type A1 tumble drying)

Drying temperature

70°C

Washing powder

Reference detergent 3

Reference

2025BR0278-S01

Units	Dry mass of the samples(Kg)	Counterweight mass(Kg)	Counterweight type
1	1.34	0.7	Type III

Deviation of the standard

Reference	Description
2025BR0278-S01	Tecido Nomex PRFAxAxxxWxxx652Txx



RESULTS

DETERMINATION OF HEAT RESISTANCE 260°C

Standard

ISO 17493:2016

Equipment

Air stove

Temperature

(260 ± 5)°C

Length of the test

5 min (+0,15/-0) min

Reference

2025BR0278-S01_P1

Test date**Start date**

11/06/2025

End date

17/06/2025

Ignition	Melting	Direction	Shrink(-) Elongation(+)
NO	NO	Warp	0%
		Weft	-2%
NO	NO	Warp	0%
		Weft	-1%
NO	NO	Warp	0%
		Weft	-1%

Uncertainty

± 8 %

Deviation of the standard

Reference	Description
2025BR0278-S01_P1	TRAS 5 CICLOS DE LAVADO



RESULTS

VOLUMETRIC RESISTANCE *

Standard

IEC 61340-2-3:16 Pto.8.2.3 (Subcontratado)

Equipment

Megger BM 80/2

Atmosphere for conditioning

Temperature $(20 \pm 1) ^\circ\text{C}$

Relative Humidity $(65 \pm 3) \%$

Potential applied

$(100 \pm 5) \text{ V}$

Current measurement after

$(15 \pm 1) \text{ s}$

Uncertainty

$\pm 20\%$ of the obtained value

Reference

2025BR0278-S01_P1

Test date

Start date 12/06/2025

End date 19/06/2025

Atmosphere for testing

Temperature $20 ^\circ\text{C}$

Relative Humidity 65%

Specimen	Vertical resistance (Ohm)
1	$7.50 \cdot 10^9$
2	$8.30 \cdot 10^9$
3	$5.30 \cdot 10^9$
4	$7.60 \cdot 10^9$
5	$8.70 \cdot 10^9$
Average (Ohm)	$7.48 \cdot 10^9$

Note

Test covered by accreditation number D-PL-11239-01-00, emitted by DAkks,

Reference	Description
2025BR0278-S01_P1	TRAS 5 CICLOS DE LAVADO



RESULTS

ELECTROSTATIC PROPERTIES: INDUCTIVE CHARGING METHOD TO DETERMINE CHARGE DECAY

Standard

EN 1149-3:2004 Método 2

Testing Method

Induction charge (Test method 2).

Conditioned date

Start date 9/6/2025 **End date** 11/6/2025

Conditioning time

24 h. ambient conditions at $(23 \pm 1) ^\circ\text{C}$ and $(25 \pm 5) \% \text{ RH}$

Potential applied

$(1200 \pm 50) \text{ V}$ in $30 \mu\text{s}$

Time measurement

30 s

Deviation of the standard

Uncertainty

Shielding factor: $\pm 0,02$ t_{50} : $\pm 0,01 \text{ s}$

Reference

2025BR0278-S01_P1

Test date

Start date 09/06/2025 **End date** 11/06/2025

Atmosphere for testing

Temperature 23.1 $^\circ\text{C}$ **Relative Humidity** 27.8 %

Specimen	Decay half time (s)	Shielding factor (units)
1	<0.01	0.7
2	<0.01	0.7
3	<0.01	0.7
Average	<0.01	0.7

Reference	Description
2025BR0278-S01_P1	TRAS 5 CICLOS DE LAVADO



Lucia Martinez
Head of PPE and Ballistics department



Date: 20/06/2025 11:55:20

Digitally Signed by: ISABEL LLOPIS LUMBRERAS -

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