



Laboratório de Ensaio	Relatório de Ensaio	Ordem de Serviço	Folha
Físico-químicos	Nº. 4290/21	Nº. 1841/21	Nº. 1/1

**Requisitante:** BOXFLEX COMPONENTES PARA CALCADOS LTDA.

**Endereço:** Avenida dos Municípios, 101 – Novo Hamburgo - RS.

**Data de recebimento da amostra:** 30/08/2021

**Caracterização da amostra:** 01 amostra de material polimérico, identificada pelo requisitante como: "FAMÍLIA TEXAIR ECO HM".

**Amostragem:** a/c requisitante.

**Tomada do corpo-de-prova:** a/c laboratório.

ENSAIOS	RESULTADOS			
	Numérico	Limite Quantificação	Unidade	Procedimento
Amostra 1 /FQ 4290/21 ("FAMÍLIA TEXAIR ECO HM")				
1 – Pentaclorofenol (PCP)	<0,05	0,05	mg/kg	ISO 17070:2015

**DATA DE REALIZAÇÃO DOS ENSAIOS:** 30/08 a 16/09/2021.

**EQUIPAMENTOS RASTREÁVEIS UTILIZADOS NO ENSAIO:**

- NI 102 Balança Analítica com Certificado de Calibração RBC nº 005938/2020, emitido pelo INSTITUTO SENAI DE INOVAÇÃO EM METALMECÂNICA – CETEMP e válido até 04/2022.

Estância Velha, 16 de setembro de 2021.

  
Técnico Analista  
Lucas Zoldan  
CRQ 05202050

Revisão 04  
LBS

**Instituto SENAI de Tecnologia em Couro e Meio Ambiente**

Rua Gregório de Mattos, 111, Centro - Estância Velha/RS

(51) 3904-2735 | laboratorios.couro@senairs.org.br | institutosennai.org.br

*Os resultados contidos no presente relatório de ensaio se aplicam somente à amostra ensaiada conforme recebida.  
A reprodução deste documento só poderá ser feita integralmente, sem nenhuma alteração.*



Laboratório de Ensaaios	Relatório de Ensaio	Ordem de Serviço	Folha
Físico-químicos	Nº. 4256/21	Nº. 1822/21	Nº. 1/1

**Requisitante:** BOXFLEX COMPONENTES PARA CALÇADOS LTDA.

**Endereço:** Avenida dos Municípios, 101 – Novo Hamburgo - RS.

**Data de recebimento da amostra:** 25/08/2021

**Caracterização da amostra:** 01 amostra de material polimérico, identificada pelo requisitante como: "FAMÍLIA TEXAIR ECO HM".

**Amostragem:** a/c requisitante.

**Tomada do corpo-de-prova:** a/c laboratório.

ENSAIOS	RESULTADOS			
	Númerico	Limite Quantificação	Unidade	Procedimento
<u>Amostra 1 /FQ 4256/21 ("FAMÍLIA TEXAIR ECO HM")</u>				
1 - Formaldeído	<0,50	0,50	mg/kg	ISO 14184-1:2011
2 - Corantes Dispersos <sup>1</sup>	<5,00	5,00	mg/L	DIN 54231:2005
3 - Clorotoluenos e Clorobenzenos <sup>2</sup>	<0,20	0,20	mg/Kg	DIN EN 17137:2019
3.1 - 3-Clorotolueno	0,30	0,20	mg/Kg	DIN EN 17137:2019
4 - Bisfenol A (BPA)	<1,00	1,00	mg/Kg	Método AFIRM - Bisfenol A (BPA)
5- Arsênio Solúvel	<0,50	0,50	mg/kg	EN 71-3:2019 / DIN EN-71-3:2019-08

<sup>1</sup> Corantes dispersos analisados: Azul 1, Azul 3, Azul 35, Azul 106, Azul 124, Amarelo 3, Laranja 3, Laranja 37/76/59 e Vermelho 1.

<sup>2</sup> Clorotoluenos e Clorobenzenos analisados: Monoclorobenzeno, 2-Clorotolueno, 4-Clorotolueno, 2,3-Diclorotolueno, 2,4-Diclorotolueno, 2,5-Diclorotolueno, 2,6-Diclorotolueno, 3,4-Diclorotolueno, 2,3,6-Triclorotolueno, 2,4,5-Triclorotolueno, Pentaclorotolueno, 1,2-Diclorobenzeno, 1,3-Diclorobenzeno, 1,4-Diclorobenzeno, 1,2,3-Triclorobenzeno, 1,2,4-Triclorobenzeno, 1,3,5-Triclorobenzeno, 1,2,3,4-Tetraclorobenzeno, 1,2,3,5-Tetraclorobenzeno, 1,2,4,5-Tetraclorobenzeno, Pentaclorobenzeno, Hexaclorobenzeno.

**DATA DE REALIZAÇÃO DOS ENSAIOS:** 25/08 a 16/09/2021.

**EQUIPAMENTOS RASTREÁVEIS UTILIZADOS NO ENSAIO:**

- NI 102 Balança Analítica com Certificado de Calibração RBC nº 005938/2020, emitido pelo INSTITUTO SENAI DE INOVAÇÃO EM METALMECÂNICA – CETEMP e válido até 04/2022.

Estância Velha, 17 de setembro de 2021.

  
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Revisão 04  
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## Test Report

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**BOXFLEX COMPONENTES PARA CALCADOS LTDA**  
**AVENIDA DOS MUNICIPIOS**  
**101**  
**NOVO HAMBURGO, RS 93544750**  
**BRAZIL**

The following sample(s) was/were submitted and identified on behalf of the buyer as: **FAMILIA TEXAIR**

SGS Order No. : 40014816  
Total of Sample : 05 Samples  
Buyer's Name/Division :  
Age Group : All Ages  
Sample Classification : Others Polymers (206)  
Test Required Key Code No. :  
Project :  
Request Composite Test (Materials Mix) : No  
Order Info : Full Compulsory Test (FT)  
Material Supplier : Família Texair  
Finished Product Factory :  
Sample Description : Família Texair  
Model Name : Família Texair  
Country of Supplier : Brazil  
PLM Number : MI-INS00042/K001 + 40051496\_D0001  
Buyers Name :  
Season : SS'21  
Contact Person : Joana C. Amaral  
Material Name : Família Texair  
Colour : Branco

**The informations above was provided by or on behalf of the customer.**

Proposal Number : PR20-60026 rev.01  
Sample Receiving Date : 15 Oct 2020  
Test Performing Period : 15 Oct 2020 - 04 Nov 2020  
Test Requested : Selected test(s) as requested by client.  
Test Part Description : Please refer to next page(s).  
Test Method : Please refer to next page(s).  
Test Results : Please refer to next page(s).  
Technical Responsibility : Alessandra Shimizu - Laboratory Manager CRQ 04245592

### Summary of Test Result:

Test Parameter

Test Method

Conclusion

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## Test Report

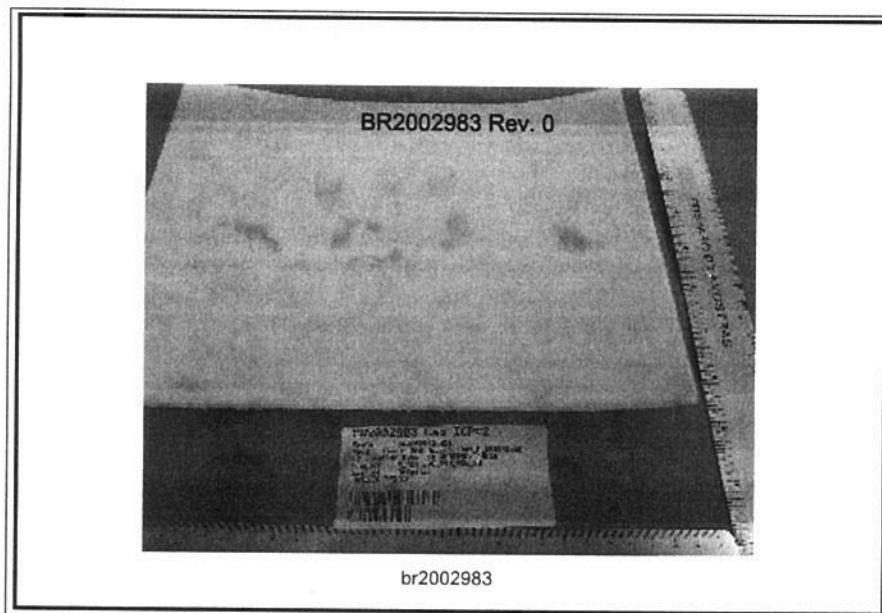
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Extractable Metals	DIN EN ISO 105-E04 (2013) in acid solution (1 hour extraction with 37°C) / DIN EN ISO 11885:2009 & DIN EN ISO 12846:2012.	PASS
Total Heavy Metals	Microwave digestion / DIN EN ISO 11885 (2009), analysis by ICP.	PASS
PVC (Polyvinyl chloride)	In House 2360/12, analysis was performed by FTIR and/or Beilstein test	PASS
Organotin Compounds	With reference to ISO 16179:2012, analysis was performed by GC-MS.	PASS
Phthalates	With reference to ISO 14389:2014; Analysis was performed by GC-MS/CPSC Method CPSC-CH-C1001.09.4:2018	PASS
Short Chained Chlorinated Paraffin (SCCP) and Medium Chained Chlorinated Paraffin (MCCP)	With reference to DIN EN ISO 18219:2016-02; analysis was performed by LC/MS-MS.	PASS
Nonylphenol (NP) and Octylphenol (OP)	Sample preparation by solvent extraction (EN ISO 21084:2019), analysis was performed by GC-MS.	PASS
Nonylphenol Ethoxylates (NPEOs) and Octylphenol Ethoxylates (OPEOs)	Sample preparation by solvent extraction (EN ISO 18254/16), analysis was performed by LC-MS.	PASS

Sample Photo :



SGS authenticate the photo on original report only

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Signed for and on behalf of  
SGS do Brasil Ltda.

Alessandra Shimizu  
Laboratory Manager CRQ 04245592

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Test Results :

### Test Part Description :

Item No.	SGS Sample ID	Description
1	BR2002983.001	FAMILIA TEXAIR

### PVC (Polyvinyl chloride)

Test Method : In House 2360/12, analysis was performed by FTIR and/or Beilstein test

Test Item(s)	CAS-NO.	Client Requeriment	MQL	Unit	Result
PVC	9002-86-2	Negative	-	-	Negative
Conclusion					PASS

### Extractable Metals

Test Method : DIN EN ISO 105-E04 (2013) in acid solution (1 hour extraction with 37°C) / DIN EN ISO 11885:2009 & DIN EN ISO 12846:2012.

Test Item(s)	CAS-NO.	Client Requeriment	MQL	Unit	Result
Cadmium (Cd)	7440-43-9	Max. 0.10	0.03	mg/kg	ND
Chromium (Cr)	7440-47-3	-	0.03	mg/kg	ND
Lead (Pb)	7439-92-1	-	0.03	mg/kg	ND
Mercury (Hg)	7439-97-6	Max. 0.02	0.02	mg/kg	ND
Conclusion					PASS

### Notes :

Specification: Lead (Pb): Infant Limit: 0.2 ppm/Adult Limit: 1.0 ppm; Chromium (Cr): Infant Limit: 1 ppm/Adult Limit: 2 ppm;

### Total Heavy Metals

Test Method : Microwave digestion / DIN EN ISO 11885 (2009), analysis by ICP.

Test Item(s)	CAS-NO.	Client Requeriment	MQL	Unit	Result
Lead (Pb)	7439-92-1	Max. 40.00	0.16	mg/kg	0.62
Cadmium (Cd)	7440-43-9	Max. 40.00	0.01	mg/kg	ND
Conclusion					PASS

### Organotin Compounds

Test Method : With reference to ISO 16179:2012, analysis was performed by GC-MS.

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<u>Test Item(s)</u>	<u>CAS-NO.</u>	<u>Client Requirement</u>	<u>MQL</u>	<u>Unit</u>	<u>Result</u> <u>001</u>
Monobutyl tin (MBT)	78763-54-9	Max. 1.00	0.01	mg/kg	ND
Monooctyl tin (MOT)	15231-57-9	Max. 1.00	0.01	mg/kg	ND
Dibutyl tin (DBT)	1002-53-5	Max. 1.00	0.01	mg/kg	ND
Dioctyl tin (DOT)	15231-44-4	Max. 1.00	0.01	mg/kg	ND
Trioctyltin (TOT)	869-59-0	Max. 1.00	0.01	mg/kg	ND
Tributyl tin (TBT)	688-73-3	ND	0.05	mg/kg	ND
Triphenyl tin (TPhT)	892-20-6	Max. 0.50	0.01	mg/kg	ND
<b>Conclusion</b>					<b>PASS</b>

### Phthalates

Test Method : With reference to ISO 14389:2014; Analysis was performed by GC-MS/CPSC Method CPSC-CH-C1001.09.4:2018

<u>Test Item(s)</u>	<u>CAS-NO.</u>	<u>Client Requirement</u>	<u>MQL</u>	<u>Unit</u>	<u>Result</u> <u>001</u>
Diisononyl Phthalate (DINP)	28553-12-0	-	60.00	mg/kg	ND
Di-n-octyl Phthalate (DNOP)	117-84-0	-	60.00	mg/kg	ND
Bis-(2-ethylhexyl) Phthalate (DEHP)	117-81-7	-	60.00	mg/kg	ND
Diisodecyl Phthalate (DIDP)	26761-40-0	-	60.00	mg/kg	ND
Benzylbutyl Phthalate (BBP)	85-68-7	-	60.00	mg/kg	ND
Dibutyl Phthalate (DBP)	84-74-2	-	60.00	mg/kg	ND
Diisobutyl Phthalate (DIBP)	84-69-5	-	60.00	mg/kg	ND
1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich (DIHP)	71888-89-6	-	60.00	mg/kg	ND
1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters (DHNUP)	68515-42-4	-	60.00	mg/kg	ND
Di-n-hexyl Phthalate (DnHP)	84-75-3	-	60.00	mg/kg	ND
Bis(2-methoxyethyl) Phthalate (DMEP)	117-82-8	-	60.00	mg/kg	ND
Dipentyl Phthalate (DPP)	131-18-0	-	60.00	mg/kg	ND
Dicyclohexyl Phthalate (DCHP)	84-61-7	-	60.00	mg/kg	ND
Diisopentyl Phthalate (DIPP)	605-50-5	-	60.00	mg/kg	ND
Diethyl Phthalate (DEP)	84-66-2	-	60.00	mg/kg	ND
Di-iso-hexylphthalate (DIHxP)	71850-09-4	-	60.00	mg/kg	ND
Sum		Max. 500.00	-	mg/kg	ND
<b>Conclusion</b>					<b>PASS</b>

### Short Chained Chlorinated Paraffin (SCCP) and Medium Chained Chlorinated Paraffin (MCCP)

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Test Method : With reference to DIN EN ISO 18219:2016-02; analysis was performed by LC/MS-MS.

<u>Test Item(s)</u>	<u>CAS-NO.</u>	<u>Client Requeriment</u>	<u>MQL</u>	<u>Unit</u>	<u>Result</u> <u>001</u>
Short Chained Chlorinated Paraffin (SCCP)	85535-84-8	Max. 1000	50	mg/kg	ND
<b>Conclusion</b>					<b>PASS</b>

### Nonylphenol (NP) and Octylphenol (OP)

Test Method : Sample preparation by solvent extration (EN ISO 21084:2019), analysis was performed by GC-MS.

<u>Test Item(s)</u>	<u>CAS-NO.</u>	<u>Client Requeriment</u>	<u>MQL</u>	<u>Unit</u>	<u>Result</u> <u>001</u>
Nonylphenol (NP)	25154-52-3	Max. 10.00	1.00	mg/kg	6.36
Octylphenol (OP)	27193-28-8	Max. 10.00	1.00	mg/kg	ND
<b>Conclusion</b>					<b>PASS</b>

### Nonylphenol Ethoxylates (NPEOs) and Octylphenol Ethoxylates (OPEOs)

Test Method : Sample preparation by solvent extration (EN ISO 18254/16), analysis was performed by LC-MS.

<u>Test Item(s)</u>	<u>CAS-NO.</u>	<u>Client Requeriment</u>	<u>MQL</u>	<u>Unit</u>	<u>Result</u> <u>001</u>
Nonylphenol ethoxylates (NPEO)	9016-45-9	-	1.00	mg/kg	ND
Octylphenol ethoxylates (OPEO)	9002-93-1	-	1.00	mg/kg	ND
Sum of (NP,OP, NPEO and OPEO )		Max. 100.00	1.00	mg/kg	6.36
<b>Conclusion</b>					<b>PASS</b>

#### Remarks :

- (1) MQL = Method Quantification Limit
- (2) ND = Not Detected ( < MQL )
- (3) "-" = Not Analyzed / Not Applicable
- (4) "--" = Analysis in Process
- (5) 1 mg/kg =0.0001%
- (6) mg/kg = ppm

#### Comments :

The reported results refer only to the samples submitted to the tests. SGS is not responsible for information regarding the composition of the sample and its manufacturing data. These are the sole responsibility of the customer and are not part of the service scope of SGS do Brasil LTDA.

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The test SCCP is not part of the scope of testing of this laboratory and was produced by a subcontracted laboratory. The outsourced test was performed by laboratory SGS Hong Kong Limited, report number SL12050306774801TX.

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WARNING: The opinions and interpretations expressed below are based on the results obtained from the item tested, applicable only to the tests where the specification parameters are included in this report.

\*\*\* End of Report \*\*\*

The assay were conducted in the laboratory in Brazil, located at the address cited at the bottom of this report.

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