



Laboratório de  
Ensaio  
Físico-químicos

Relatório de Ensaio  
Nº. 4255/21

Ordem de Serviço  
Nº. 1822/21

Folha  
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 COURASOFT 44".

**Amostragem:** a/c requisitante.

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

ENSAIOS	RESULTADOS			
	Númerico	Limite Quantificação	Unidade	Procedimento
<u>Amostra 1 /FQ 4255/21</u> ("FAMÍLIA COURASOFT 44")				
1 - Bisfenol A (BPA)	<1,00	1,00	mg/Kg	Método AFIRM - Bisfenol A (BPA)
2- Arsênio Solúvel	<0,50	0,50	mg/kg	EN 71-3:2019 / DIN EN-71-3:2019-08

**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.

  
Técnico Analista  
Guinter Schwingel  
CRQ 05201411

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 | institutossenai.org.br



## Test Report

No. BR2004338 Rev. 0

Date: Barueri, 30 Dec 2020

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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: Família Courasoft C 44 Branco

SGS Order No. : 40015941  
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 Courasoft C 44 Branco  
Finished Product Factory :  
Sample Description : Família Courasoft C 44 Branco  
Model Name : Família Courasoft C 44 Branco  
Country of Supplier : Brazil  
Buyers Name :  
Contact Person : Joana C. Amaral  
Material Name : Família Courasoft C 44 Branco  
Colour : Branco

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

Proposal Number : CRS PR20-160168 REV.01  
Sample Receiving Date : 10 Dec 2020  
Test Performing Period : 10 Dec 2020 - 30 Dec 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
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

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## Test Report

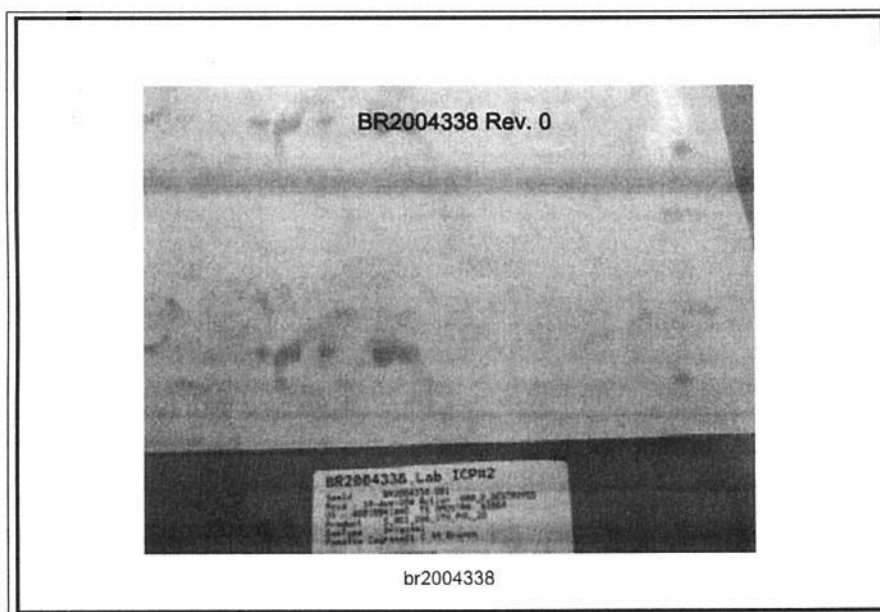
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Total Heavy Metals	Microwave digestion / DIN EN ISO 11885 (2009), analysis by ICP.	PASS
PVC (Polyvinyl chloride)	In House 2360/12, analysis was performed by FTIR and/or Beilstein test	PASS
Organotin Compounds	With reference to ISO 16179:2012, analysis 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	BR2004338.001	Familia Courasoft C 44 Branco

### PVC (Polyvinyl chloride)

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

Test Item(s)	CAS-NO.	Client Requirement	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 Requirement	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; Copper (Cu): Infant Limit: 25 ppm / Adult Limit: 50 ppm; Nickel (Ni): Infant Limit: 0.5 ppm / Adult Limit: 1.0 ppm; Cobalt (Co): Infant Limit: 1 ppm / Adult Limit: 4 ppm.

### Total Heavy Metals

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

Test Item(s)	CAS-NO.	Client Requirement	MQL	Unit	Result
Cadmium (Cd)	7440-43-9	Max. 40.00	0.01	mg/kg	ND
Lead (Pb)	7439-92-1	Max. 40.00	0.16	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 Requeriment</u>	<u>ML</u>	<u>Unit</u>	<u>Result 001</u>
Monobutyl tin (MBT)	78763-54-9	Max. 1.00	0.01	mg/kg	ND
Dibutyl tin (DBT)	1002-53-5	Max. 1.00	0.01	mg/kg	ND
Diocetyl tin (DOT)	15231-44-4	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
Monooctyl tin (MOT)	15231-57-9	Max. 1.00	0.01	mg/kg	ND
Triocetyl tin (TOT)	869-59-0	Max. 1.00	0.01	mg/kg	ND
Tri-substituted Organostannic Compounds		Max. 1000.00	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 Requeriment</u>	<u>ML</u>	<u>Unit</u>	<u>Result 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
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
Di-n-hexyl Phthalate (DnHP)	84-75-3	-	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>

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

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</u> <u>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
Conclusion					PASS

### 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</u> <u>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	ND
Octylphenol (OP)	27193-28-8	Max. 10.00	1.00	mg/kg	ND
Conclusion					PASS

### 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</u> <u>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	ND
Conclusion					PASS

#### 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 SL12050328434401TX.

**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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**SUMMARY**

<b>RSL Report</b>	R-0018708
<b>Overall Test Result</b>	Pass
<b>Non-compliances</b>	None
<b>Report Issue Date</b>	27-Aug-2020 15:07:26

**SUPPLIER INFORMATION**

<b>Supplier Name</b>	Boxflex Componente Para Calçado
<b>Supplier Location</b>	Boxflex Componente Para Calçado

**GENERAL INFORMATION****Brand Tested For**

<b>Product Type</b>	Footwear
<b>Licensee</b>	Not Added
<b>Testing Type</b>	Production-ready material
<b>Material Name</b>	Courasoft C/I 44 Branco
<b>Material Number</b>	R0000015066
<b>PDM Number</b>	Not Added
<b>Material ID</b>	CD0224-004
<b>Color Code</b>	Not Added
<b>Color Name</b>	Branco
<b>Color Way</b>	Not Added
<b>Sample Description</b>	Couraça termoplástica - Courasoft C/I 44 Branco
<b>Material Types</b>	PLASTICS, THERMOPLASTICS, POLYMERSEVA, PU, Rigid Plastic, TPU, Foam, Rubber - EVA materials SYNTHETIC FIBERS Nylon, PET - White
<b>Test Packages</b>	Alkylphenol Ethoxylates (NPEO, OPEO)

Formaldehyde  
Metals (Total)  
Solvents/Residuals - Formamide  
Solvents/Residuals - Dimethylformamide (DMFa)  
Solvents/Residuals - N-Methyl-2-pyrrolidone (NMP)  
Solvents/Residuals - Dimethylacetamide (DMAC)

LABORATORY INFORMATION

**Lab** SGS  
**Location** Sao Paulo SP - Brazil  
**Lab Reference Number** BR2002342

SAMPLE SUBMITTER INFORMATION

**Name** Joana Amaral  
**E-mail** joana@boxflex.com.br

TEST RESULTS BY CLASS

Alkylphenol Ethoxylates (NPEO, OPEO)	Pass
Formaldehyde	Pass
Metals (Total)	Pass
Solvents/Residuals - Dimethylformamide (DMFa)	Pass
Solvents/Residuals - Dimethylacetamide (DMAC)	Pass
Solvents/Residuals - N-Methyl-2-pyrrolidone (NMP)	Pass
Solvents/Residuals - Formamide	Pass

TEST RESULTS BY CHEMICAL							
Chemical Name	CAS Number	Specific Limit Description (age ranges, screening)	Required Laboratory Reporting Limit	Nike Limit	Unit of Measure	Result	Pass/Fail Nike RSL
TEST RESULTS BY CHEMICAL							
Chemical Name	CAS Number	Specific Limit Description (age ranges, screening)	Required Laboratory Reporting Limit	Nike Limit	Unit of Measure	Result	Pass/Fail Nike RSL
ALKYLPHENOL ETHOXYLATES (NPEO, OPEO)							
Nonylphenol Ethoxylate (NPEOs)	various		20	100 (groupSum)	ppm	40.11	Pass
Octylphenol Ethoxylate (OPEOs)	various		20	100 (groupSum)	ppm	Non Detected Pass	Non Detected
Sum of NPEO & OPEO	Sum_NPEO_OPEO		20	100 (groupSum)	ppm	40.11	Pass
FORMALDEHYDE							
Formaldehyde	50-00-0		16	16	ppm	Non Detected Pass	Non Detected
METALS (TOTAL)							
Arsenic (As)	7440-38-2		10	100	ppm	Non Detected Pass	Non Detected
Cadmium (Cd)	7440-43-9		5	40	ppm	Non Detected Pass	Non Detected

TEST RESULTS BY CHEMICAL							
Chemical Name	CAS Number	Specific Limit Description (age ranges, screening)	Required Laboratory Reporting Limit	Nike Limit	Unit of Measure	Result	Pass/Fail Nike RSL
Lead (Pb)	7439-92-1		10	90	ppm	Non Detected Pass	Non Detected
Mercury (Hg)	7439-97-6		0.1	0.5	ppm	Non Detected Pass	Non Detected
SOLVENTS/RESIDUALS - DIMETHYLFORMAMIDE (DMFA)							
Dimethylformamide (DMFa)	68-12-2		50	500	ppm	Non Detected Pass	Non Detected
SOLVENTS/RESIDUALS - DIMETHYLACETAMIDE (DMAC)							
Dimethylacetamide (DMAC)	127-19-5		50	1000	ppm	Non Detected Pass	Non Detected
SOLVENTS/RESIDUALS - N-METHYL-2-PYRROLIDONE (NMP)							
N-Methyl-2-pyrrolidone (NMP)	872-50-4		50	1000	ppm	Non Detected Pass	Non Detected
SOLVENTS/RESIDUALS - FORMAMIDE							
Formamide	75-12-7		50	1000	ppm	Non Detected Pass	Non Detected



SUMMARY	
<b>RSL Report</b>	R-0034203
<b>Overall Test Result</b>	Pass
<b>Non-compliances</b>	None
<b>Report Issue Date</b>	27-Aug-2021 12:47:24

SUPPLIER INFORMATION	
<b>Supplier Name</b>	Boxflex Componente Para Calcado
<b>Supplier Location</b>	Boxflex Componente Para Calcado

GENERAL INFORMATION	
<b>Brand Tested For</b>	
<b>Product Type</b>	Footwear
<b>Licensee</b>	Not Added
<b>Testing Type</b>	Production-ready material
<b>Material Name</b>	Courasoft C/I 44 Branco
<b>Material Number</b>	R0000015066
<b>PDM Number</b>	Not Added
<b>Material ID</b>	CD0224-004
<b>Color Code</b>	Not Added
<b>Color Name</b>	Branco
<b>Color Way</b>	Not Added
<b>Sample Description</b>	Couraça termoplástica - Courasoft C/I 44 Branco
<b>Material Types</b>	Plastics, Thermoplastics, Polymerseva, PU, Rigid Plastic, TPU, Foam, Rubber - EVA Materials
<b>Test Packages</b>	Alkylphenol Ethoxylates (NPEO, OPEO)
	Metals (Total)

Solvents/Residuals - Formamide  
 Solvents/Residuals - Dimethylformamide (DMFa)  
 Solvents/Residuals - Dimethylacetamide (DMAC)  
 Solvents/Residuals - N-Methyl-2-pyrrolidone (NMP)  
 Volatile Organic Compounds (VOCs)  
 Phthalates  
 Acetophenone and 2-Phenyl-2-Propanol

#### LABORATORY INFORMATION

**Lab** SGS  
**Location** Sao Paulo SP - Brazil  
**Lab Reference Number** BR2103364

#### SAMPLE SUBMITTER INFORMATION

**Name** Joana Amaral  
**E-mail** joana@boxflex.com.br

#### TEST RESULTS BY CLASS

Acetophenone and 2-Phenyl-2-Propanol	Pass
Alkylphenol Ethoxylates (NPEO, OPEO)	Pass
Metals (Total)	Pass
Phthalates	Pass
Volatile Organic Compounds (VOCs)	Pass
Solvents/Residuals - Dimethylformamide (DMFa)	Pass
Solvents/Residuals - Dimethylacetamide (DMAC)	Pass
Solvents/Residuals - N-Methyl-2-pyrrolidone (NMP)	Pass
Solvents/Residuals - Formamide	Pass

TEST RESULTS BY CHEMICAL							
Chemical Name	CAS Number	Specific Limit Description (age ranges, screening)	Required Laboratory Reporting Limit	Nike Limit	Unit of Measure	Result	Pass/Fail Nike RSL
TEST RESULTS BY CHEMICAL							
Chemical Name	CAS Number	Specific Limit Description (age ranges, screening)	Required Laboratory Reporting Limit	Nike Limit	Unit of Measure	Result	Pass/Fail Nike RSL
ACETOPHENONE AND 2-PHENYL-2-PROPANOL							
2-Phenyl-2-propanol	617-94-7		25	50	ppm	Non Detected Pass	Non Detected
Acetophenone	98-86-2		25	50	ppm	Non Detected Pass	Non Detected
ALKYLPHENOL ETHOXYLATES (NPEO, OPEO)							
Nonylphenol Ethoxylate (NPEOs)	various		20	100 (groupSum)	ppm	Non Detected Pass	Non Detected
Octylphenol Ethoxylate (OPEOs)	various		20	100 (groupSum)	ppm	Non Detected Pass	Non Detected
METALS (TOTAL)							
Arsenic (As)	7440-38-2		10	100	ppm	Non Detected Pass	Non Detected
Cadmium (Cd)	7440-43-9		5	40	ppm	Non Detected Pass	Non Detected

TEST RESULTS BY CHEMICAL							
Chemical Name	CAS Number	Specific Limit Description (age ranges, screening)	Required Laboratory Reporting Limit	Nike Limit	Unit of Measure	Result	Pass/Fail Nike RSL
Lead (Pb)	7439-92-1		10	90	ppm	Non Detected Pass	Non Detected
Mercury (Hg)	7439-97-6		0.1	0.5	ppm	Non Detected Pass	Non Detected
Tin (Sn)	7440-31-5		0.1	0.1	ppm	0.65	Info Only
PHTHALATES							
1,2-Benzenedicarboxylic acid, di-C6-10-alkyl esters or mixed decyl and hexyl and octyl diesters with e 0.3% of dihexyl phthalate; 1,2-Benzenedicarboxylic acid, mixed decyl and hexyl and octyl diesters; 1,2-Benzenedicarboxylic acid, di-C6-10-alkyl ester	68515-51-5; 68648-93-1		50	500 (each); 1000 (groupSum)	ppm	Non Detected Pass	Non Detected
1,2-benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich	71888-89-6		50	500 (each); 1000 (groupSum)	ppm	Non Detected Pass	Non Detected



TEST RESULTS BY CHEMICAL							
Chemical Name	CAS Number	Specific Limit Description (age ranges, screening)	Required Laboratory Reporting Limit	Nike Limit	Unit of Measure	Result	Pass/Fail Nike RSL
1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters (DHNUP)	68515-42-4		50	500 (each); 1000 (groupSum)	ppm	Non Detected Pass	Non Detected
1,2-Benzenedicarboxylic acid, dipentylester, branched + linear	84777-06-0		50	500 (each); 1000 (groupSum)	ppm	Non Detected Pass	Non Detected
Bis(2-methoxyethyl) phthalate	117-82-8		50	500 (each); 1000 (groupSum)	ppm	Non Detected Pass	Non Detected
Butylbenzylphthalate (BBP)	85-68-7		50	500 (each); 1000 (groupSum)	ppm	Non Detected Pass	Non Detected
Di(2-ethylhexyl)-phthalate (DEHP)	117-81-7		50	500 (each); 1000 (groupSum)	ppm	Non Detected Pass	Non Detected

TEST RESULTS BY CHEMICAL							
Chemical Name	CAS Number	Specific Limit Description (age ranges, screening)	Required Laboratory Reporting Limit	Nike Limit	Unit of Measure	Result	Pass/Fail Nike RSL
Dibutylphthalate (DBP)	84-74-2		50	500 (each); 1000 (groupSum)	ppm	Non Detected Pass	Non Detected
Dicyclohexyl phthalate (DCHP)	84-61-7		50	500 (each); 1000 (groupSum)	ppm	Non Detected Pass	Non Detected
Diethylphthalate (DEP)	84-66-2		50	500 (each); 1000 (groupSum)	ppm	Non Detected Pass	Non Detected
Di-hexylphthalate, branched and linear (DHxP)	68515-50-4		50	500 (each); 1000 (groupSum)	ppm	Non Detected Pass	Non Detected
Diisobutylphthalate (DIBP)	84-69-5		50	500 (each); 1000 (groupSum)	ppm	Non Detected Pass	Non Detected

TEST RESULTS BY CHEMICAL							
Chemical Name	CAS Number	Specific Limit Description (age ranges, screening)	Required Laboratory Reporting Limit	Nike Limit	Unit of Measure	Result	Pass/Fail Nike RSL
Diisodecylphthalate (DIDP)	26761-40-0		50	500 (each); 1000 (groupSum)	ppm	Non Detected Pass	Non Detected
Diisohexyl phthalate (DIHxP)	71850-09-4		50	500 (each); 1000 (groupSum)	ppm	Non Detected Pass	Non Detected
Di-Iso-nonylphthalate (DINP)	28553-12-0		50	500 (each); 1000 (groupSum)	ppm	Non Detected Pass	Non Detected
Diisooctyl phthalate (DIOP)	27554-26-3		50	500 (each); 1000 (groupSum)	ppm	Non Detected Pass	Non Detected
Diisopentylphthalate (DIPP)	605-50-5		50	500 (each); 1000 (groupSum)	ppm	Non Detected Pass	Non Detected

TEST RESULTS BY CHEMICAL							
Chemical Name	CAS Number	Specific Limit Description (age ranges, screening)	Required Laboratory Reporting Limit	Nike Limit	Unit of Measure	Result	Pass/Fail Nike RSL
Dimethylphthalate (DMP)	131-11-3		50	500 (each); 1000 (groupSum)	ppm	Non Detected Pass	Non Detected
Di-n-hexylphthalate (DnHP)	84-75-3		50	500 (each); 1000 (groupSum)	ppm	Non Detected Pass	Non Detected
Di-n-octylphthalate (DNOP)	117-84-0		50	500 (each); 1000 (groupSum)	ppm	Non Detected Pass	Non Detected
Di-n-pentyl phthalate (DPENP)	131-18-0		50	500 (each); 1000 (groupSum)	ppm	Non Detected Pass	Non Detected
Dipropyl phthalate (DPRP)	131-16-8		50	500 (each); 1000 (groupSum)	ppm	Non Detected Pass	Non Detected



TEST RESULTS BY CHEMICAL							
Chemical Name	CAS Number	Specific Limit Description (age ranges, screening)	Required Laboratory Reporting Limit	Nike Limit	Unit of Measure	Result	Pass/Fail Nike RSL
n-Pentyl-isopentylphthalate (nPIPP)	776297-69-9		50	500 (each); 1000 (groupSum)	ppm	Non Detected Pass	Non Detected
VOLATILE ORGANIC COMPOUNDS (VOCS)							
1,1,1,2-Tetrachloroethane	630-20-6		20	1000 (groupSum)	ppm	Non Detected Pass	Non Detected
1,1,1- Trichloroethane	71-55-6		20	1000 (groupSum)	ppm	Non Detected Pass	Non Detected
1,1,2,2-Tetrachloroethane	79-34-5		20	1000 (groupSum)	ppm	Non Detected Pass	Non Detected
1,1,2- Trichloroethane	79-00-5		20	1000 (groupSum)	ppm	Non Detected Pass	Non Detected
1,1-Dichloroethylene	75-35-4		20	1000 (groupSum)	ppm	Non Detected Pass	Non Detected
1,2-Dichloroethane	107-06-2		20	1000 (groupSum)	ppm	Non Detected Pass	Non Detected
Benzene	71-43-2		5	5	ppm	Non Detected Pass	Non Detected

TEST RESULTS BY CHEMICAL							
Chemical Name	CAS Number	Specific Limit Description (age ranges, screening)	Required Laboratory Reporting Limit	Nike Limit	Unit of Measure	Result	Pass/Fail Nike RSL
Carbon Disulfide	75-15-0		20	1000 (groupSum)	ppm	Non Detected Pass	Non Detected
Carbon tetrachloride	56-23-5		20	1000 (groupSum)	ppm	Non Detected Pass	Non Detected
Chloroform	67-66-3		20	1000 (groupSum)	ppm	Non Detected Pass	Non Detected
Cyclohexanone	108-94-1		20	1000 (groupSum)	ppm	Non Detected Pass	Non Detected
Ethylbenzene	100-41-4		20	1000 (groupSum)	ppm	Non Detected Pass	Non Detected
m-xylene	108-38-3		20	1000 (groupSum)	ppm	Not Tested	Not Tested
o-xylene	95-47-6		20	1000 (groupSum)	ppm	Not Tested	Not Tested
Pentachloroethane	76-01-7		20	1000 (groupSum)	ppm	Non Detected Pass	Non Detected
p-xylene	106-42-3		20	1000 (groupSum)	ppm	Not Tested	Not Tested

TEST RESULTS BY CHEMICAL							
Chemical Name	CAS Number	Specific Limit Description (age ranges, screening)	Required Laboratory Reporting Limit	Nike Limit	Unit of Measure	Result	Pass/Fail Nike RSL
Tetrachloroethylene (PER)	127-18-4		20	1000 (groupSum)	ppm	Non Detected Pass	Non Detected
Toluene	108-88-3		20	1000 (groupSum)	ppm	Non Detected Pass	Non Detected
Trichloroethylene	79-01-6		20	1000 (groupSum)	ppm	Non Detected Pass	Non Detected
Xylenes, mixed isomers	1330-20-7		20	1000 (groupSum)	ppm	Non Detected Pass	Non Detected
SOLVENTS/RESIDUALS - DIMETHYLFORMAMIDE (DMFA)							
Dimethylformamide (DMFa)	68-12-2		50	500	ppm	Non Detected Pass	Non Detected
SOLVENTS/RESIDUALS - DIMETHYLACETAMIDE (DMAC)							
Dimethylacetamide (DMAC)	127-19-5		50	1000	ppm	Non Detected Pass	Non Detected
SOLVENTS/RESIDUALS - N-METHYL-2-PYRROLIDONE (NMP)							
N-Methyl-2-pyrrolidone (NMP)	872-50-4		50	1000	ppm	Non Detected Pass	Non Detected
SOLVENTS/RESIDUALS - FORMAMIDE							

TEST RESULTS BY CHEMICAL							
Chemical Name	CAS Number	Specific Limit Description (age ranges, screening)	Required Laboratory Reporting Limit	Nike Limit	Unit of Measure	Result	Pass/Fail Nike RSL
Formamide	75-12-7		50	1000	ppm	Non Detected Pass	Non Detected





Laboratório de Ensaio	Relatório de Ensaio	Ordem de Serviço	Folha
Físico-químicos	Nº. 4289/21	Nº. 1841/21	Nº. 1/1

**Requisitante:** BOXFLEX COMPONENTES PARA CALÇADOS 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 COURASOFT 44".

**Amostragem:** a/c requisitante.

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

ENSAIOS	RESULTADOS			
	Numérico	Limite Quantificação	Unidade	Procedimento
<u>Amostra 1 /FQ 4289/21 ("FAMÍLIA COURASOFT 44")</u>				
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.  
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