



Laboratório de Ensaios 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			
	Numérico	Limite Quantificação	Unidade	Procedimento
<u>Amostra 1 /FQ 4255/21 ("FAMÍLIA COURASOFT 44")</u>				
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 METALMÉCANICA – 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 | 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.*



Test Report

No. BR2004338 Rev. 0

Date: Barueri, 30 Dec 2020

Page 1 of 7

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

This document is issued by the Company under its General Conditions of Service available on request and accessible at <http://www.sgsgroup.com.br/pt-br/terms-and-conditions>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained as a confirmed on proposal. This document cannot be reproduced except in full, without prior written approval of the Company.

Test Report

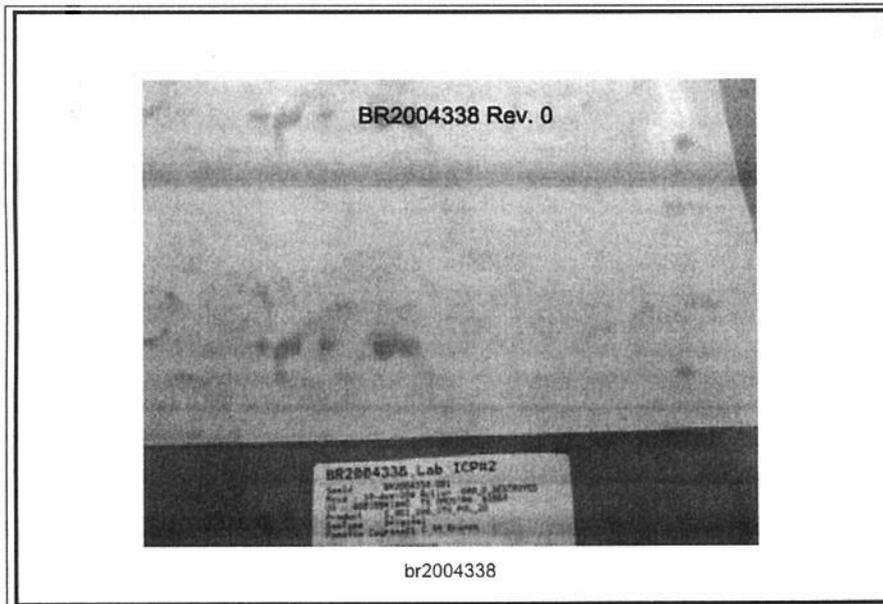
No. BR2004338 Rev. 0

Date: Barueri, 30 Dec 2020

Page 2 of 7

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

This document is issued by the Company under its General Conditions of Service available on request and accessible at <http://www.sgsgroup.com.br/pt-br/terms-and-conditions>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained as a confirmed on proposal. This document cannot be reproduced except in full, without prior written approval of the Company.



Test Report

No. BR2004338 Rev. 0

Date: Barueri, 30 Dec 2020

Page 3 of 7

Signed for and on behalf of
SGS do Brasil Ltda.

Alessandra Shimizu
Laboratory Manager CRQ 04245592

This document is issued by the Company under its General Conditions of Service available on request and accessible at <http://www.sgsgroup.com.br/pt-br/terms-and-conditions>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained as a confirmed on proposal. This document cannot be reproduced except in full, without prior written approval of the Company.

Test Report

No. BR2004338 Rev. 0

Date: Barueri, 30 Dec 2020

Page 4 of 7

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.

This document is issued by the Company under its General Conditions of Service available on request and accessible at <http://www.sgsgroup.com.br/pt-br/terms-and-conditions>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained as a confirmed on proposal. This document cannot be reproduced except in full, without prior written approval of the Company.

Test Item(s)	CAS-NO.	Client	MQL	Unit	Result
		Requeriment			001
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
Conclusion					PASS

Phthalates

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

Test Item(s)	CAS-NO.	Client	MQL	Unit	Result
		Requeriment			001
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
Conclusion					PASS

This document is issued by the Company under its General Conditions of Service available on request and accessible at <http://www.sgsgroup.com.br/pt-br/terms-and-conditions>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained as a confirmed on proposal. This document cannot be reproduced except in full, without prior written approval of the Company.

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 Requirement</u>	<u>MQL</u>	<u>Unit</u>	<u>Result</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 extraction (EN ISO 21084:2019), analysis was performed by GC-MS.

<u>Test Item(s)</u>	<u>CAS-NO.</u>	<u>Client Requirement</u>	<u>MQL</u>	<u>Unit</u>	<u>Result</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 extraction (EN ISO 18254/16), analysis was performed by LC-MS.

<u>Test Item(s)</u>	<u>CAS-NO.</u>	<u>Client Requirement</u>	<u>MQL</u>	<u>Unit</u>	<u>Result</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.

This document may not be reproduced, except in whole, without the prior written approval of SGS.

This document is issued by the Company under its General Conditions of Service available on request and accessible at <http://www.sgsgroup.com.br/pt-br/terms-and-conditions>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained as a confirmed on proposal. This document cannot be reproduced except in full, without prior written approval of the Company.



Test Report

No. BR2004338 Rev. 0

Date: Barueri, 30 Dec 2020

Page 7 of 7

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.

This document is issued by the Company under its General Conditions of Service available on request and accessible at <http://www.sgsgroup.com.br/pt-br/terms-and-conditions>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained as a confirmed on proposal. This document cannot be reproduced except in full, without prior written approval of the Company.

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

SUPPLIER INFORMATION	
Supplier Name	Boxflex Componente Para Calçado
Supplier Location	Boxflex Componente Para Calçado

GENERAL INFORMATION	
Brand Tested For	
Product Type	Footwear
Licensee	Not Added
Testing Type	Production-ready material
Material Name	Courasoft C/I 44 Branco
Material Number	R0000015066
PDM Number	Not Added
Material ID	CD0224-004
Color Code	Not Added
Color Name	Branco
Color Way	Not Added
Sample Description	Couraça termoplástica - Courasoft C/I 44 Branco
Material Types	PLASTICS, THERMOPLASTICS, POLYMERSEVA, PU, Rigid Plastic, TPU, Foam, Rubber - EVA materials
	SYNTHETIC FIBERS Nylon, PET - White
Test Packages	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

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

SUPPLIER INFORMATION

Supplier Name	Boxflex Componente Para Calçado
Supplier Location	Boxflex Componente Para Calçado

GENERAL INFORMATION**Brand Tested For**

Product Type	Footwear
Licensee	Not Added
Testing Type	Production-ready material
Material Name	Courasoft C/I 44 Branco
Material Number	R0000015066
PDM Number	Not Added
Material ID	CD0224-004
Color Code	Not Added
Color Name	Branco
Color Way	Not Added
Sample Description	Couraça termoplástica - Courasoft C/I 44 Branco
Material Types	Plastics, Thermoplastics, Polymerseva, PU, Rigid Plastic, TPU, Foam, Rubber - EVA Materials
Test Packages	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 Ensaios Físico-químicos Relatório de Ensaio Nº. 4289/21 Ordem de Serviço Nº. 1841/21 Folha 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 METALMÉCANICA – 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.*