

Requirer: BOXFLEX COMPONENTES PARA CALÇADOS LTDA.

Address: Avenida dos Municípios, 101 – Novo Hamburgo – RS.

Date of receipt of sample: 12/14/2021.

Sample characterization: 01 sample of material, identified by the customer as:
“FAMÍLIA ECOFORMA 56 LOTE 146433”.

Selection of samples: up to the requirer.

Sampling: up to the laboratory.



TEST	RESULTS				
	Results	MQL	Unit	Method	Evaluation
1 – Polyaromatic Hydrocarbons – PAHs	9.23	0.20	mg/kg	AFPS-GS-2019-01-PAK	Pass
2– Alkylphenols (NP/OP)	<10.0	10.0	mg/kg	ISO 18218-2:2019	Pass
3– Ethoxylates alkylphenols (NPEO/OPEO)	<10.0	10.0	mg/kg	ISO 18218-2:2019	Pass
4 – Residual Solvents	130	10.0	mg/kg	ISO/TS 16189:2013	Pass
5 – Total Lead	<2.0	2.0	mg/kg	CPSC-CH-E1002-08.3 (2012)	Pass
6 – Total Arsenic	<3.5	3.5	mg/kg	BS EN 16711-1:2015	Pass
7 – Total Mercury	<0.10	0.10	mg/kg	BS EN 16711-1:2015	Pass
8 – Total Cadmium	<3.5	3.5	mg/kg	BS EN 16711-1:2015	Pass
9 – Bisfenol A (BPA)	<1.0	1.0	mg/kg	Método AFIRM -Bisfenol A (BPA)	Pass
10 – Phtalates	<50.0	50.0	mg/kg	CPSC-CHC1001-09.4 (2018)	Pass
11 – Organotin	<0.10	0.10	mg/kg	ABNT ISO/TS 16179:2017	Pass

Note 1: Evaluation according to Veja Limits – Maximum Allowed Limits according VEJA Restricted Substances Policy – September/2021.

Note 2: mg/kg = ppm

Note 3: MQL = Method Quantification Limit.

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Phthalates	CAS Number	Results	VEJA Limits (Maximum allowable concentration)	Laboratory Limits (Method quantification limit)
Di-isononylphthalate (DINP)	28553-12-0	<50.0	Total: 1000 ppm 500 ppm (each)	50 ppm (each)
Di-n-octylphthalate (DNOP)	117-84-0	<50.0		
Di(2-ethylhexyl)-phthalate (DEHP)	117-81-7	<50.0		
Diisodecylphthalate (DIDP)	26761-40-0	<50.0		
Butylbenzylphthalate (BBP)	85-68-7	<50.0		
Dibutylphthalate (DBP)	84-74-2	<50.0		
Diisobutylphthalate (DIBP)	84-69-5	<50.0		
Di-n-hexylphthalate (DnHP)	84-75-3	<50.0		
Diethylphthalate (DEP)	84-66-2	<50.0		
Dimethylphthalate (DMP)	131-11-3	<50.0		
Di-n-pentyl phthalate (DPENP)	131-18-0	<50.0		
Dicyclohexyl phthalate (DCHP)	84-61-7	<50.0		
1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich	71888-89-6	<50.0		
Bis(2-methoxyethyl) phthalate	117-82-8	<50.0		
Diisopentyl phthalate (DIPP)	605-50-5	<50.0		
Dipropyl phthalate (DPRP)	131-16-8	<50.0		
Diisooctyl phthalate (DIOP)	27554-26-3	<50.0		
Diisoexyl phthalate (DIHxP)	71850-09-4	<50.0		
Di-hexyl phthalate, branched and linear (DnHP)	68515-50-4	<50.0		
1,2-Benzenedicarboxylic acid, di-C7-11- branched and linear alkyl esters (DHNUP)	68515-42-4	<50.0		
1,2-Benzenedicarboxylic acid	84777-06-0	<50.0		
1,2-Benzenedicarboxylic acid, di-C6-10-alkyl esters or mixed decyl and hexyl and octyl diesters with ≥ 0.3% of dihexyl phthalate; 1,2-Benzenedicarboxylic acid, mixed decyl and hexyl and octyl diesters; 1,2-Benzenedicarboxylic acid, di-C6-10-alkyl esters	68648-93-1 68515-51-5	<50.0		
n-Pentyl-isopentylphthalate (nPIPP)	776297-69-9	<50.0		

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Alkylphenols (AP), Alkylphenol Ethoxylates (APEOs) including all isomers	CAS Number	Results	VEJA Limits (Maximum allowable concentration)	Laboratory Limits (Method quantification limit)
Nonylphenol (NP), mixed isomers	Several	<10.0	Total: 100 ppm	10 ppm (each)
Octylphenol (OP), mixed isomers	Several	<10.0		
Nonylphenol Ethoxylates (NPEOs)	Several	<10.0	Total: 100 ppm	
Octylphenol Ethoxylates (OPEOs)	Several	<10.0		

Bisphenols	CAS Number	Result	VEJA Limits (Maximum allowable concentration)	Laboratory Limits (Method quantification limit)
Bisphenol-A (BPA)	80-05-7	<1.0	1 ppm	1 ppm

Heavy Metals	CAS Number	Results	VEJA Limits (Maximum allowable concentration)	Laboratory Limits (Method quantification limit)
Arsenic (As)	7440-38-2	<3.5	Extracted: 0,1 ppm Total: 10 ppm	Extracted: 0.05 ppm Total: 3.5 ppm Leather: 2.0 ppm
Cadmium (Cd)	7440-43-9	<3.5	Extracted: 0.1 ppm Total: 40 ppm	Extracted: 0.05 ppm Total: 3.5 ppm Leather: 2.0 ppm
Lead (Pb)	7439-92-1	<2.0	Extracted: 0.2 ppm Total: 90 ppm	Extracted: 0.05 ppm Total: 3.5 ppm Leather: 2.0 ppm
Mercury (Hg)	7439-97-6	<0.10	Extracted: 0.02 ppm Total: 0.5 ppm	Extracted: 0.005 ppm Total: 0.10 ppm

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Solvents/Residuals	CAS Number	Results	VEJA Limits (Maximum allowable concentration)	Laboratory Limits (Method quantification limit)
Dimethylformamide (DMFa)	68-12-2	<10.0	500 ppm	10 ppm
Formamide	75-12-7	<10.0	1000 ppm	
Dimethylacetamide (DMAC)	127-19-5	130		
N-Methyl-2-pyrrolidone (NMP)	872-50-4	<10.0		

Organotin Compounds	CAS Number	Results	VEJA Limits (Maximum allowable concentration)	Laboratory Limits (Method quantification limit)
Dibutyltin (DBT)	Several	<0.10	1 ppm (each)	0.10 ppm
Diocetyl tin (DOT)	Several	<0.10		
Monobutyltin (MBT)	Several	<0.10		
Tricyclohexyltin (TCyHT)	Several	<0.10		
Trimethyltin (TMT)	Several	<0.10		
Triocetyl tin (TOT)	Several	<0.10		
Tripropyltin (TPT)	Several	<0.10		
Triphenyltin (TPhT)	Several	<0.10	0.5 ppm	
Tributyltin (TBT)	Several	<0.10	0.1 ppm	

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Polycyclic Aromatic Hydrocarbons (PAHs)	CAS Number	Results	VEJA Limits (Maximum allowable concentration)	Laboratory Limits (Method quantification limit)
Acenaphthene	83-32-9	<0.20	No individual restriction	Total: 10 ppm
Acenaphthylene	208-96-8	<0.20		
Anthracene	120-12-7	3.21		
Benzo(g,h,i)perylene	191-24-2	<0.20		
Fluorene	86-73-7	<0.20		
Fluoranthene	206-44-0	<0.20		
Indeno(1,2,3-cd) pyrene	193-39-5	<0.20		
Naphthalene	91-20-3	6.02		
Phenanthrene	85-01-8	<0.20		
Pyrene	129-00-0	<0.20		
Benzo(a)anthracene	56-55-3	<0.20	0.5 ppm (each)	0.20 ppm
Benzo(a)pyrene	50-32-8	<0.20		
Benzo(b)fluoranthene	205-99-2	<0.20		
Benzo[e]pyrene	192-97-2	<0.20		
Benzo[j]fluoranthene	205-82-3	<0.20		
Benzo(k)fluoranthene	207-08-9	<0.20		
Chrysene	218-01-9	<0.20		
Dibenzo(a,h)anthracene	53-70-3	<0.20		

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EXAMINATION PERFORMED: 12/14/2021 to 01/22/2022.

TRACKING EQUIPMENT USED FOR TEST:

- NI 102 Balance, with calibration certificate RBC 006060/2021 emitted by INSTITUTO SENAI DE INOVAÇÃO EM METALMECÂNICA-CETEMP and valid until 05/2023.

Estância Velha, January 24th, 2022.

Laboratory Technical Manager
Débora Maria Bernardes
CRQ 05402469

**Revision 02
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