

Requirer: BERTEX PRODUTOS PARA CALCADOS LTDA

Address: ROD RS-239 4567– Novo Hamburgo – RS.

Date of receipt of sample: 05/24/2022.

Sample characterization: 01 sample of material, identified by the customer as:
“MATERIAL 1 - TJ 1479 + MATERIAL 2 - TJ 1499”.

Selection of samples: up to the requirer.

Sampling: up to the laboratory



TEST	RESULTS				
	Results	MLQ	Unit	Method	Evaluation
1 – AZO Amines	<5.0	5.0	mg/kg	ISO 14362-1:2017 and ISO 14362-3:2017	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 – Chlorotoluenes and Chlorobenzenes	<0.20	0.20	mg/kg	DIN EN 17137:2019	Pass
5 – Total Lead	<3.5	3.5	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 – Quinoline	<10.0	10.0	mg/kg	DIN 54321:2005	Pass
10 – Formaldehyde	1.15	0.50	mg/kg	ISO 14184-1:2011	Pass
11 – Soluble Cadmium	<0.05	0.05	mg/kg	BS EN 16711-2:2015	Pass
12 – Soluble Arsenic	<0.05	0.05	mg/kg	BS EN 16711-2:2015	Pass
13 – Soluble Selenium	<0.05	0.05	mg/kg	BS EN 16711-2:2015	Pass

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TEST	RESULTS				
	Results	MQL	Unit	Method	Evaluation
14 – Soluble Nickel	0.11	0.05	mg/kg	BS EN 16711-2:2015	Pass
15 – Soluble Mercury	<0.005	0.005	mg/kg	BS EN 16711-2:2015	Pass
16 – Soluble Copper	0.20	0.05	mg/kg	BS EN 16711-2:2015	Pass
17 – Soluble Cobalt	<0.05	0.05	mg/kg	BS EN 16711-2:2015	Pass
18 – Soluble Lead	<0.05	0.05	mg/kg	BS EN 16711-2:2015	Pass
19 – Soluble Barium	0.59	0.05	mg/kg	BS EN 16711-2:2015	Pass
20 – Soluble Antimony	0.97	0.05	mg/kg	BS EN 16711-2:2015	Pass
21 – Soluble Chromium	0.36	0.05	mg/kg	BS EN 16711-2:2015	Pass
22 – pH value	6.47	-	-	ISO 3071:2020	Pass
23 – Polyaromatic Hydrocarbons –PAHs	<0.20	0.20	mg/kg	AFPS-GS-2019-01-PAK	Pass
24 – Organotin Compounds	<0.10	0.10	mg/kg	ABNT ISO/TS 16179:2017	Pass
25 – Bisfenol A (BPA)	<1.0	1.0	mg/kg	Método AFIRM -Bisfenol A (BPA)	Pass
26 – Phtalates	<50.0	50.0	mg/kg	CPSC-CH-E1001-09.4	Pass
27 – Vinyl Chloride	<0.10	0.10	mg/kg	ISO 6401:2008	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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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	10.0 ppm (each)
Octylphenol (OP), mixed isomers	Several	<10.0		
Nonylphenol Ethoxylates (NPEOs)	Several	<10.0	Total: 100 ppm	
Octylphenol Ethoxylates (OPEOs)	Several	<10.0		

Quinoline	CAS Number	Result	VEJA Limits (Maximum allowable concentration)	Laboratory Limits (Method quantification limit)
Quinoline	91-22-5	<10.0	50 ppm	10.0 ppm

Formaldehyde	CAS Number	Result	VEJA Limits (Maximum allowable concentration)	Laboratory Limits (Method quantification limit)
Formaldehyde	50-00-0	1.15	All, except packaging: 16 ppm Packaging: 150 ppm	0.50 ppm

pH – Acidic & Alkaline Substances	CAS Number	Result	VEJA Limits (Maximum allowable concentration)	Laboratory Limits (Method quantification limit)
pH-value	Several	6.47	Textiles: 4.0–7.5 Leather: 3.5–7.0	-

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Azo-amines	CAS Number	Results	VEJA Limits (Maximum allowable concentration)	Laboratory Limits (Method quantification limit)
4-Aminobiphenyl	92-67-1	<5.0	20 ppm (each)	5.0 ppm (each)
Benzidine	92-87-5	<5.0		
4-Chlor-o-toluidine	95-69-2	<5.0		
2-Naphthylamine	91-59-8	<5.0		
o-Aminoazotoluene	97-56-3	<5.0		
2-Amino-4-nitrotoluene	99-55-8	<5.0		
p-Chloraniline	106-47-8	<5.0		
2,4-Diaminoanisoole	615-05-4	<5.0		
4,4'-Diaminodiphenylmethane	101-77-9	<5.0		
3,3'-Dichlorobenzidine	91-94-1	<5.0		
3,3'-Dimethoxybenzidine	119-90-4	<5.0		
3,3'-Dimethylbenzidine	119-93-7	<5.0		
3,3'-Dimethyl-4,4'-diaminodiphenylmethane	838-88-0	<5.0		
p-Cresidine	120-71-8	<5.0		
4,4'-Methylen-bis(2-chloraniline)	101-14-4	<5.0		
4,4'-Oxydianiline	101-80-4	<5.0		
4,4'-Thiodianiline	139-65-1	<5.0		
o-Toluidine	95-53-4	<5.0		
2,4-Toluylenediamine	95-80-7	<5.0		
2,4,5-Trimethylaniline	137-17-7	<5.0		
2,4 Xylidine	95-68-1	<5.0		
2,6 Xylidine	87-62-7	<5.0		
2-Methoxyaniline (= o-Anisidine)	90-04-0	<5.0		
p-Aminoazobenzene	60-09-3	<5.0		
4-Chloro-o-toluidinium Chloride	3165-93-3	<5.0		
2-Naphthylammoniumacetate	553-00-4	<5.0		
4-Methoxy-m-phenylene Diammonium Sulphate	39156-41-7	<5.0		
2,4,5-trimethylaniline hydrochloride	21436-97-5	<5.0		

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Heavy Metals	CAS Number	Results	VEJA Limits (Maximum allowable concentration)	Laboratory Limits (Method quantification limit)
Antimony (Sb)	7440-36-0	0.97	Extracted: 30 ppm	Extracted: 0.05 ppm
Arsenic (As)	7440-38-2	<0.05	Extracted: 0,1 ppm	Extracted: 0.05 ppm
		<3.5	Total: 10 ppm	Total: 3.5 ppm Leather: 2.0 ppm
Barium (Ba)	7440-39-3	0.59	Extracted: 1000 ppm	Extracted: 0.05 ppm
Cadmium (Cd)	7440-43-9	<0.05	Extracted: 0.1 ppm	Extracted: 0.05 ppm
		<3.5	Total: 40 ppm	Total: 3.5 ppm Leather: 2.0 ppm
Cobalt (Co)	7440-48-4	<0.05	Extracted: 1 ppm	Extracted: 0.05 ppm
Copper (Cu)	7440-50-8	0.20	Extracted: 25 ppm	Extracted: 0.05 ppm
Chromium (Cr)	7440-47-3	0.36	Extracted: Textiles:2 ppm Leather: 60 ppm	Extracted: 0.05 ppm
Lead (Pb)	7439-92-1	<0.05	Extracted: 0.2 ppm	Extracted: 0.05 ppm
		<3.5	Total: 90 ppm	Total: 3.5 ppm Leather: 2.0 ppm
Mercury (Hg)	7439-97-6	<0.005	Extracted: 0.02 ppm	Extracted: 0.005 ppm
		<0.10	Total: 0.5 ppm	Total: 0.10 ppm
Nickel (Ni)	7440-02-0	0.11	Extracted: 1 ppm	Extracted: 0.05 ppm
Selenium (Se)	7782-49-2	<0.05	Extracted: 500 ppm	Extracted: 0.05 ppm

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Chlorinated Benzenes and Toluenes	CAS Number	Results	VEJA Limits (Maximum allowable concentration)	Laboratory Limits (Method quantification limit)
2-Chlorotoluene	95-49-8	<0.20	Total: 1 ppm	0.20 ppm (each)
3-Chlorotoluene	108-41-8	<0.20		
4-Chlorotoluene	106-43-4	<0.20		
2,3-Dichlorotoluene	32768-54-0	<0.20		
2,4-Dichlorotoluene	95-73-8	<0.20		
2,5-Dichlorotoluene	19398-61-9	<0.20		
2,6-Dichlorotoluene	118-69-4	<0.20		
3,4-Dichlorotoluene	95-75-0	<0.20		
2,3,6-Trichlorotoluene	2077-46-5	<0.20		
2,4,5-Trichlorotoluene	6639-30-1	<0.20		
2,3,4,5-Tetrachlorotoluene	76057-12-0	<0.20		
2,3,4,6-Tetrachlorotoluene	875-40-1	<0.20		
2,3,5,6-Tetrachlorotoluene	1006-31-1	<0.20		
Pentachlorotoluene	877-11-2	<0.20		
1,3-Dichlorobenzene	541-73-1	<0.20		
1,4-Dichlorobenzene	106-46-7	<0.20		
1,2,3-Trichlorobenzene	87-61-6	<0.20		
1,2,4-Trichlorobenzene	120-82-1	<0.20		
1,3,5-Trichlorobenzene	108-70-3	<0.20		
1,2,3,4-Tetrachlorobenzene	634-66-2	<0.20		
1,2,3,5-Tetrachlorobenzene	634-90-2	<0.20		
1,2,4,5-Tetrachlorobenzene	95-94-3	<0.20		
Pentachlorobenzene	608-93-5	<0.20		
Hexachlorobenzene	118-74-1	<0.20		
p-Chlorobenzotrichloride	5216-25-1	<0.20		
Benzotrichloride	98-07-7	<0.20		
Benzyl Chloride	100-44-7	<0.20		
1,2-Dichlorobenzene	95-50-1	<0.20	10 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	<0.20		
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	<0.20		
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		

Monomers	CAS Number	Result	VEJA Limits (Maximum allowable concentration)	Laboratory Limits (Method quantification limit)
Vinyl Chloride	75-01-4	<0.10	1 ppm	0.10 ppm

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

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
Dioctyltin (DOT)	Several	<0.10		
Monobutyltin (MBT)	Several	<0.10		
Tricyclohexyltin (TCyHT)	Several	<0.10		
Trimethyltin (TMT)	Several	<0.10		
Trioctyltin (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	

EXAMINATION PERFORMED: 05/24/2022 to 06/13/2022.

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, June 14th, 2022

Technical Analyst
CRQ 05202050

Revision 01
BRC

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