



Test Report

No. BR2301077 Rev. 0

Date: Barueri, 13 Apr 2023

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ARTECOLA QUIMICA S.A.
ESTRADA RS 239
5801
CAMPO BOM, RS 93700000
BRAZIL

The following sample(s) was/were submitted and identified on behalf of the buyer as: ARTEFIRM ECO 1625 E

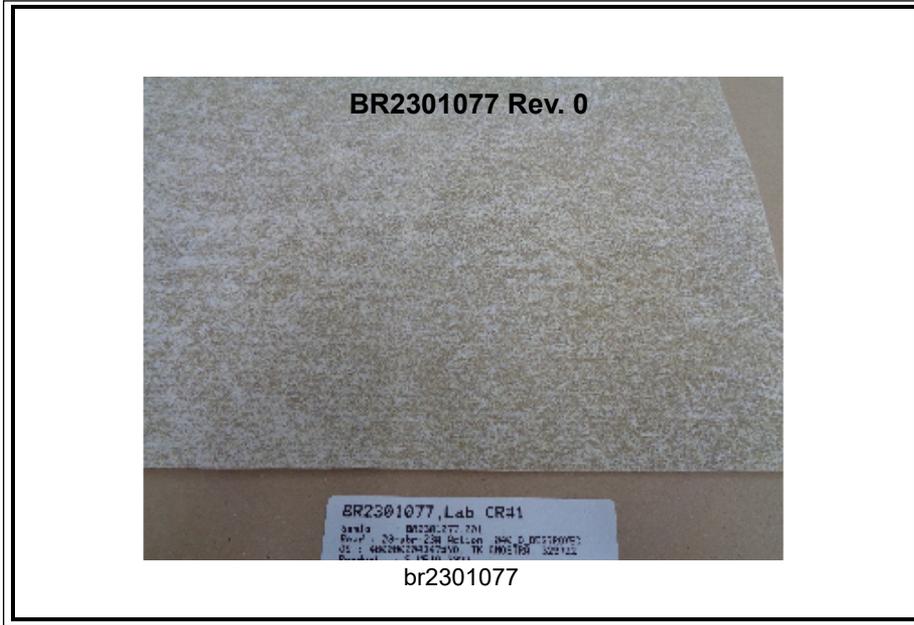
SGS Order No. : 400000004347
Total of Sample : 03 SAMPLES
Lot Number : 288240
Project : VEJA
Test Product : Other Foams, Plastics & Polymer
Mix : NO
Sample composed of fibers of plant origin : NO
Sample contains PVC or recycled material in the composition : YES
water repellent material : NO
Sample covered with paints or varnishes : NO
Sample based on PU : NO

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

Proposal Number : C&P PR23-326317 REV00
Sample Receiving Date : 03 Apr 2023
Test Performing Period : 04 Apr 2023 - 13 Apr 2023
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

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Sample Photo :



SGS authenticate the photo on original report only

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	BR2301077.001	ARTEFIRM ECO 1625 E

Nonylphenol (NP) and Octylphenol (OP)

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

Test Item(s)	CAS-NO.	Limit	RL	Unit	Result
Nonylphenol (NP)	25154-52-3	-	10.00	mg/kg	10.95
Octylphenol (OP)	27193-28-8	-	10.00	mg/kg	ND
Sum of NP and OP (AP)		Max. 100.00	10.00	mg/kg	10.95

Nonylphenol Ethoxylates (NPEOs) and Octylphenol Ethoxylates (OPEOs)

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

Test Item(s)	CAS-NO.	Limit	RL	Unit	Result
Nonylphenol ethoxylates (NPEO)	9016-45-9	-	20.00	mg/kg	ND
Octylphenol ethoxylates (OPEO)	9002-93-1	-	20.00	mg/kg	ND
Sum of NPEO and OPEO		Max. 100.00	-	mg/kg	ND

Determination of Bisphenol

Test Method : Extraction: 1 g sample / 20 ml
THF, sonication for 60 minutes at 60°C, analysis with LC/MS

Test Item(s)	CAS-NO.	Limit	RL	Unit	Result
Bisphenol A (BPA)	80-05-7	Max. 1.00	1.00	mg/kg	ND
Bisphenol-AF (BPAF)	1478-61-1	-	1.00	mg/kg	ND
Bisphenol-F (BPF)	620-92-8	-	1.00	mg/kg	ND
Bisphenol-S (BPS)	80-09-1	-	1.00	mg/kg	ND

Notes :

Bisphenol-S (BPS), Bisphenol-F (BPF) and Bisphenol-AF (BPAF) without restriction

Formaldehyde

Test Method : With reference to ISO 14184-1: 2011; analysis was performed by UV-Vis.

Test Item(s)	CAS-NO.	Limit	RL	Unit	Result
					001

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<u>Test Item(s)</u>	<u>CAS-NO.</u>	<u>Limit</u>	<u>RL</u>	<u>Unit</u>	Result 001
Formaldehyde	50-00-0	Max. 16.00	16.00	mg/kg	ND

Monomer - Vinyl Chloride

Test Method : With reference to EN ISO 6401:2008. Analysis was conducted by headspace GC-MS.

<u>Test Item(s)</u>	<u>CAS-NO.</u>	<u>Limit</u>	<u>RL</u>	<u>Unit</u>	Result 001
Vinyl Chloride	75-01-4	Max. 1	1	mg/kg	ND

Organotin Compounds

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

<u>Test Item(s)</u>	<u>CAS-NO.</u>	<u>Limit</u>	<u>RL</u>	<u>Unit</u>	Result 001
Dibutyl tin (DBT)	1002-53-5	Max. 1.00	0.10	mg/kg	ND
Diocetyl tin (DOT)	15231-44-4	Max. 1.00	0.10	mg/kg	ND
Monobutyl tin (MBT)	78763-54-9	Max. 1.00	0.10	mg/kg	ND
Tricyclohexyl tin (TCyHT)	892-20-6	Max. 1.00	0.10	mg/kg	ND
Trimethyltin (TMT)		Max. 1.00	0.10	mg/kg	ND
Triocetyl tin (TOT)	869-59-0	Max. 1.00	0.10	mg/kg	ND
Tripropyltin (TPT)		Max. 1.00	0.10	mg/kg	ND
Tributyl tin (TBT)	688-73-3	Max. 0.10	0.10	mg/kg	ND
Triphenyl tin (TPHT)	892-20-6	Max. 0.50	0.10	mg/kg	ND

Polycyclic aromatic hydrocarbons (PAH)

Test Method : With reference to AfPS GS 2019:01 PAK. Analysis was performed by GC-MS.

<u>Test Item(s)</u>	<u>CAS-NO.</u>	<u>Limit</u>	<u>RL</u>	<u>Unit</u>	Result 001
Acenaphthene (ANA)	83-32-9	-	0.20	mg/kg	ND
Acenaphthylene (ANY)	208-96-8	-	0.20	mg/kg	ND
Anthracene (ANT)	120-12-7	-	0.20	mg/kg	ND
Benzo(g,h,i)perylene (BPE)	191-24-2	-	0.20	mg/kg	ND
Fluorene (FLU)	86-73-7	-	0.20	mg/kg	ND
Fluoranthene (FLT)	206-44-0	-	0.20	mg/kg	ND
Indeno(1,2,3-c,d)pyrene (IPY)	193-39-5	-	0.20	mg/kg	ND
Naphthalene (NAP)	91-20-3	-	0.20	mg/kg	ND
Phenanthrene (PHE)	85-01-8	-	0.20	mg/kg	ND
Pyrene (PYR)	129-00-0	-	0.20	mg/kg	ND

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<u>Test Item(s)</u>	<u>CAS-NO.</u>	<u>Limit</u>	<u>RL</u>	<u>Unit</u>	<u>Result</u> 001
Benzo(a)anthracene (BaA)	56-55-3	Max. 0.50	0.20	mg/kg	ND
Benzo(a)pyrene (BaP)	50-32-8	Max. 0.50	0.20	mg/kg	ND
Benzo(b)fluoranthene (BbF)	205-99-2	Max. 0.50	0.20	mg/kg	ND
Benzo(e)pyrene (BeP)	192-97-2	Max. 0.50	0.20	mg/kg	ND
Benzo(j)fluoranthene (BjF)	205-82-3	Max. 0.50	0.20	mg/kg	ND
Benzo(k)fluoranthene (BkF)	207-08-9	Max. 0.50	0.20	mg/kg	ND
Chrysene (CHR)	218-01-9	Max. 0.50	0.20	mg/kg	ND
Dibenzo(a,h)anthracene (DBA)	53-70-3	Max. 0.50	0.20	mg/kg	ND
Sum of 18 PAHs		Max. 10.00	-	mg/kg	ND

Residual Solvent (ISO 16189/13)

Test Method : ISO 16189/13, extraction with organic solvent, analysis was performed by GC-MS.

<u>Test Item(s)</u>	<u>CAS-NO.</u>	<u>Limit</u>	<u>RL</u>	<u>Unit</u>	<u>Result</u> 001
Dimethylacetamida (DMAC)	127-19-5	Max. 1000.00	50.00	mg/kg	ND
Dimethylformamide (DMFA)	68-12-2	Max. 500.00	50.00	mg/kg	ND
Formamide	75-12-7	Max. 1000.00	50.00	mg/kg	ND
N-methyl-2-pyrrolidone (NMP)	872-50-4	Max. 1000.00	50.00	mg/kg	ND

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>Limit</u>	<u>RL</u>	<u>Unit</u>	<u>Result</u> 001
Diisononyl Phthalate (DINP)	28553-12-0	Max. 500.00	50.00	mg/kg	ND
Di-n-octyl Phthalate (DNOP)	117-84-0	Max. 500.00	50.00	mg/kg	ND
Bis-(2-ethylhexyl) Phthalate (DEHP)	117-81-7	Max. 500.00	50.00	mg/kg	111.72
Diisodecyl Phthalate (DIDP)	26761-40-0	Max. 500.00	50.00	mg/kg	ND
Benzylbutyl Phthalate (BBP)	85-68-7	Max. 500.00	50.00	mg/kg	ND
Dibutyl Phthalate (DBP)	84-74-2	Max. 500.00	50.00	mg/kg	ND
Diisobutyl Phthalate (DIBP)	84-69-5	Max. 500.00	30.00	mg/kg	35.71
Di-n-hexyl Phthalate (DnHP)	84-75-3	Max. 500.00	50.00	mg/kg	ND
Diethyl Phthalate (DEP)	84-66-2	Max. 500.00	50.00	mg/kg	ND
Dimethyl Phthalate (DMP)	131-11-3	Max. 500.00	50.00	mg/kg	ND
Di-n-pentyl Phthalate (DPENP)	131-18-0	Max. 500.00	50.00	mg/kg	ND
Dicyclohexyl Phthalate (DCHP)	84-61-7	Max. 500.00	50.00	mg/kg	ND
1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich (DIHP)	71888-89-6	Max. 500.00	50.00	mg/kg	ND
Bis(2-methoxyethyl) Phthalate (DMEP)	117-82-8	Max. 500.00	50.00	mg/kg	ND

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<u>Test Item(s)</u>	<u>CAS-NO.</u>	<u>Limit</u>	<u>RL</u>	<u>Unit</u>	Result <u>001</u>
Diisopentyl Phthalate (DIPP)	605-50-5	Max. 500.00	50.00	mg/kg	ND
Dipropyl phthalate (DPRP)	131-16-8	Max. 500.00	50.00	mg/kg	ND
Diisooctyl phthalate (DIOP)	27554-26-3	Max. 500.00	50.00	mg/kg	ND
1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters (DHNUP)	68515-42-4	Max. 500.00	50.00	mg/kg	ND
1,2-Benzenedicarboxylic acid, dipentyl ester, branched and linear	84777-06-0	Max. 500.000	50.000	mg/kg	ND
1,2-Benzenedicarboxylic acid, mixed decyl and hexyl and octyl diesters	68648-93-1	Max. 500.000	30.000	mg/kg	ND
1,2-Benzenedicarboxylic acid, di-C6-10-alkyl esters	68515-51-5	Max. 500.000	30.000	mg/kg	ND
N-pentyl-isopentyl Phthalate (NPIPP)	776297-69-9	Max. 500.00	30.00	mg/kg	ND
Di-hexylphthalate, branched and linear (DHxP)	68515-50-4	Max. 500.000	30.000	mg/kg	ND
Di-iso-hexylphthalate (DIHxP)	71850-09-4	Max. 500.00	30.00	mg/kg	ND
Sum		Max. 1000.00	-	mg/kg	147.43

Total Heavy Metals

Test Method : DIN EN 16711-1:2016, Analysis was conducted by ICP-MS

<u>Test Item(s)</u>	<u>CAS-NO.</u>	<u>Limit</u>	<u>RL</u>	<u>Unit</u>	Result <u>001</u>
Arsenic (As)	7440-38-2	Max. 100.00	10.00	mg/kg	ND
Cadmium (Cd)	7440-43-9	Max. 40.00	5.00	mg/kg	ND
Mercury (Hg)	7439-97-6	Max. 0.50	0.10	mg/kg	ND

Non-Metal Products

Test Method : With reference to CPSC-CH-E1002-08.3; analysis was performed by ICP-OES.

<u>Test Item(s)</u>	<u>Limit</u>	<u>RL</u>	<u>Unit</u>	Result <u>001</u>
Lead (Pb)	Max. 90.00	10.00	mg/kg	ND

Remarks :

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

Comments :

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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 Decision Rule defined by SGS states that the uncertainty of measurement will not be considered in the Verdict (declaration of conformity) when indicated in the test report.

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.

Summary of Test Result:

Test Parameter	Test Method	Evaluation
Monomer - Vinyl Chloride	With reference to EN ISO 6401:2008. Analysis was conducted by headspace GC-MS.	PASS
Total Heavy Metals	DIN EN 16711-1:2016, Analysis was conducted by ICP-MS	PASS
Non-Metal Products	With reference to CPSC-CH-E1002-08.3; analysis was performed by ICP-OES.	PASS
Nonylphenol (NP) and Octylphenol (OP)	Sample preparation by solvent extraction (EN ISO 21084: 2019), analysis performed by GC-MS.	PASS
Nonylphenol Ethoxylates (NPEOs) and Octylphenol Ethoxylates (OPEOs)	Sample preparation by solvent extraction (EN ISO 18254/16), analysis performed by LC-MS.	PASS
Determination of Bisphenol	Extraction: 1 g sample / 20 ml THF, sonication for 60 minutes at 60°C, analysis with LC/MS	PASS
Formaldehyde	With reference to ISO 14184-1: 2011; analysis was performed by UV-Vis.	PASS
Organotin Compounds	With reference to ISO 16179:2012, analysis was performed by GC-MS	PASS
Polycyclic aromatic hydrocarbons (PAH)	With reference to AfPS GS 2019:01 PAK. Analysis was performed by GC-MS.	PASS
Residual Solvent (ISO 16189/13)	ISO 16189/13, extration with organic solvent, 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

*** 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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