



Test Report

Customer: Staroplastic s.r.o.
Videnska 125a
64900 Brna
Czech Republic

Contact Person: Ms. Jelena Jagnjic

BV Order No.: 60978
Report No.: (25423)248-555707

Report Version: 2*

First Report Date: 22.08.2023

Supplementary Report Date: 05.09.2023

Sample Information

Testing Requirements: Tested according to "ordered" requirements

Sample Description: HDPE-plates

Sample Reception: 17.08.2023

Sampled By: client

Performance Date: 05.09.2023 - 05.09.2023

Country of Dest.: D, EU

* First amendment to the analytical report no. (25423)234-555707

The previous version of this report is invalid.

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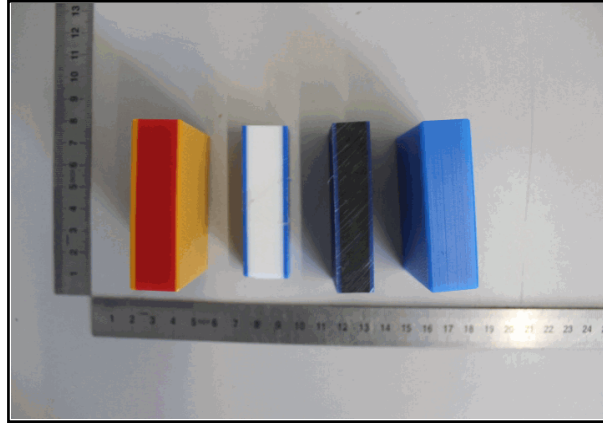


Deutsche
Akkreditierungsstelle
D-PL-12024-02-01

Report No.: (25423)248-555707

Submitted Samples

No. 1



Summary of Test Results

Tested according to "ordered" requirements

Tests required	Evaluation	Remark
Heavy metals, migration of certain elements - DIN EN 71-3:2021-06 (Screening Test), 2009/48/EC Heavy metals, also in accordance with EN 14350-2:2020-08 and EN 1400:2013+A2:2018	Pass	

Changes:

According to customers request the sample description has been changed.

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D-PL-12024-02-01

Report No.: (25423)248-555707

Tested Samples

Article No	Sample ID	Sample description
	555707-01	1) HDPE plate blue- HDPE – Play-Staro monocolor
	555707-02	2) HDPE plate yellow-red– Play-Staro bicolor
	555707-03	3) HDPE plate blue-black– Eco-Staro – bicolor – recycled inner black core - post-industrial
	555707-04	4) HDPE plate blue-white– Eco Staro – bicolor – post-consumer

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D-PL-12024-02-01

Report No.: (25423)248-555707

Test Results

Tested according to "ordered" requirements

Sample Description:	1) HDPE plate blue- HDPE – Play-Staro monocolor		Lab Reference No:	555707-01
Test Method / Standard:	Heavy metals, migration of certain elements - scraped off toy material: DIN EN 71-3:2021-06 (Screening Test), 2009/48/EC Heavy metals, reporting limits: Cr III / Cr VI: 0.05 mg/kg, Hg / organic tin: 0.1 mg/kg, As / Ba / Cd / Co / Mn / Ni / Pb / Sb / Se / Sn / Sr : 1 mg/kg, Al / B / Cu / Zn: 10 mg/kg; special case: Hg: 0.02 mg/kg			
Test Location:	Parameter has been analyzed at accredited BVCPs laboratory Schwerin.			
Parameter	Limit	Value	Evaluation	
Aluminium (Al)	≤ 28130 mg/kg	<10 mg/kg	Pass	
Antimony (Sb)	≤ 560 mg/kg	<1 mg/kg	Pass	
Arsenic (As)	≤ 47 mg/kg	<1 mg/kg	Pass	
Barium (Ba)	≤ 18750 mg/kg	<1 mg/kg	Pass	
Boron (B)	≤ 15000 mg/kg	<10 mg/kg	Pass	
Cadmium (Cd)	≤ 17 mg/kg	<1 mg/kg	Pass	
Chromium (Cr)	≤ 460 mg/kg	<0.05 mg/kg	Pass	
Chromium III	≤ 460 mg/kg	Test not necessary	-	
Chromium VI	≤ 0.053 mg/kg	Test not necessary	-	
Cobalt (Co)	≤ 130 mg/kg	<1 mg/kg	Pass	
Copper (Cu)	≤ 7700 mg/kg	<10 mg/kg	Pass	
Lead (Pb)	≤ 23 mg/kg	<1 mg/kg	Pass	
Manganese (Mn)	≤ 15000 mg/kg	<1 mg/kg	Pass	
Mercury (Hg)	≤ 94 mg/kg	<0.1 mg/kg	Pass	
Nickel (Ni)	≤ 930 mg/kg	<1 mg/kg	Pass	
Organic tin	≤ 12 mg/kg	Test not necessary	-	
Selenium (Se)	≤ 460 mg/kg	<5 mg/kg	Pass	
Strontium (Sr)	≤ 56000 mg/kg	<1 mg/kg	Pass	
Tin (Sn)	≤ 180000 mg/kg	<1 mg/kg	Pass	
Zinc (Zn)	≤ 46000 mg/kg	<10 mg/kg	Pass	

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Report No.: (25423)248-555707

Sample Description:	2) HDPE plate yellow-red– Play-Staro bicolor		Lab Reference No:	555707-02
Test Method / Standard:	Heavy metals, migration of certain elements - scraped off toy material: DIN EN 71-3:2021-06 (Screening Test), 2009/48/EC Heavy metals, reporting limits: Cr III / Cr VI: 0.05 mg/kg, Hg / organic tin: 0.1 mg/kg, As / Ba / Cd / Co / Mn / Ni / Pb / Sb / Se / Sn / Sr : 1 mg/kg, Al / B / Cu / Zn: 10 mg/kg; special case: Hg: 0.02 mg/kg			
Test Location:	Parameter has been analyzed at accredited BVCPS laboratory Schwerin.			
Parameter	Limit	Value	Evaluation	
Aluminium (Al)	≤ 28130 mg/kg	<10 mg/kg	Pass	
Antimony (Sb)	≤ 560 mg/kg	<1 mg/kg	Pass	
Arsenic (As)	≤ 47 mg/kg	<1 mg/kg	Pass	
Barium (Ba)	≤ 18750 mg/kg	<1 mg/kg	Pass	
Boron (B)	≤ 15000 mg/kg	<10 mg/kg	Pass	
Cadmium (Cd)	≤ 17 mg/kg	<1 mg/kg	Pass	
Chromium (Cr)	≤ 460 mg/kg	<0.05 mg/kg	Pass	
Chromium III	≤ 460 mg/kg	Test not necessary	-	
Chromium VI	≤ 0.053 mg/kg	Test not necessary	-	
Cobalt (Co)	≤ 130 mg/kg	<1 mg/kg	Pass	
Copper (Cu)	≤ 7700 mg/kg	<10 mg/kg	Pass	
Lead (Pb)	≤ 23 mg/kg	<1 mg/kg	Pass	
Manganese (Mn)	≤ 15000 mg/kg	<1 mg/kg	Pass	
Mercury (Hg)	≤ 94 mg/kg	<0.1 mg/kg	Pass	
Nickel (Ni)	≤ 930 mg/kg	<1 mg/kg	Pass	
Organic tin	≤ 12 mg/kg	Test not necessary	-	
Selenium (Se)	≤ 460 mg/kg	<5 mg/kg	Pass	
Strontium (Sr)	≤ 56000 mg/kg	<1 mg/kg	Pass	
Tin (Sn)	≤ 180000 mg/kg	<1 mg/kg	Pass	
Zinc (Zn)	≤ 46000 mg/kg	<10 mg/kg	Pass	

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Sample Description:	3) HDPE plate blue-black- Eco-Staro – bicolor – recycled inner black core - post-industrial		Lab Reference No:	555707-03
Test Method / Standard:	Heavy metals, migration of certain elements - scraped off toy material: DIN EN 71-3:2021-06 (Screening Test), 2009/48/EC Heavy metals, reporting limits: Cr III / Cr VI: 0.05 mg/kg, Hg / organic tin: 0.1 mg/kg, As / Ba / Cd / Co / Mn / Ni / Pb / Sb / Se / Sn / Sr : 1 mg/kg, Al / B / Cu / Zn: 10 mg/kg; special case: Hg: 0.02 mg/kg			
Test Location:	Parameter has been analyzed at accredited BVCPS laboratory Schwerin.			
Parameter	Limit	Value	Evaluation	
Aluminium (Al)	≤ 28130 mg/kg	<10 mg/kg	Pass	
Antimony (Sb)	≤ 560 mg/kg	<1 mg/kg	Pass	
Arsenic (As)	≤ 47 mg/kg	<1 mg/kg	Pass	
Barium (Ba)	≤ 18750 mg/kg	<1 mg/kg	Pass	
Boron (B)	≤ 15000 mg/kg	<10 mg/kg	Pass	
Cadmium (Cd)	≤ 17 mg/kg	<1 mg/kg	Pass	
Chromium (Cr)	≤ 460 mg/kg	<0.05 mg/kg	Pass	
Chromium III	≤ 460 mg/kg	Test not necessary	-	
Chromium VI	≤ 0.053 mg/kg	Test not necessary	-	
Cobalt (Co)	≤ 130 mg/kg	<1 mg/kg	Pass	
Copper (Cu)	≤ 7700 mg/kg	<10 mg/kg	Pass	
Lead (Pb)	≤ 23 mg/kg	<1 mg/kg	Pass	
Manganese (Mn)	≤ 15000 mg/kg	<1 mg/kg	Pass	
Mercury (Hg)	≤ 94 mg/kg	<0.1 mg/kg	Pass	
Nickel (Ni)	≤ 930 mg/kg	<1 mg/kg	Pass	
Organic tin	≤ 12 mg/kg	Test not necessary	-	
Selenium (Se)	≤ 460 mg/kg	<5 mg/kg	Pass	
Strontium (Sr)	≤ 56000 mg/kg	<1 mg/kg	Pass	
Tin (Sn)	≤ 180000 mg/kg	<1 mg/kg	Pass	
Zinc (Zn)	≤ 46000 mg/kg	<10 mg/kg	Pass	

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Report No.: (25423)248-555707

Sample Description:	4) HDPE plate blue-white– Eco Staro – bicolor – post-consumer		Lab Reference No:	555707-04
Test Method / Standard:	Heavy metals, migration of certain elements - scraped off toy material: DIN EN 71-3:2021-06 (Screening Test), 2009/48/EC Heavy metals, reporting limits: Cr III / Cr VI: 0.05 mg/kg, Hg / organic tin: 0.1 mg/kg, As / Ba / Cd / Co / Mn / Ni / Pb / Sb / Se / Sn / Sr : 1 mg/kg, Al / B / Cu / Zn: 10 mg/kg; special case: Hg: 0.02 mg/kg			
Test Location:	Parameter has been analyzed at accredited BVCPS laboratory Schwerin.			
Parameter	Limit	Value	Evaluation	
Aluminium (Al)	≤ 28130 mg/kg	<10 mg/kg	Pass	
Antimony (Sb)	≤ 560 mg/kg	<1 mg/kg	Pass	
Arsenic (As)	≤ 47 mg/kg	<1 mg/kg	Pass	
Barium (Ba)	≤ 18750 mg/kg	<1 mg/kg	Pass	
Boron (B)	≤ 15000 mg/kg	<10 mg/kg	Pass	
Cadmium (Cd)	≤ 17 mg/kg	<1 mg/kg	Pass	
Chromium (Cr)	≤ 460 mg/kg	<0.05 mg/kg	Pass	
Chromium III	≤ 460 mg/kg	Test not necessary	-	
Chromium VI	≤ 0.053 mg/kg	Test not necessary	-	
Cobalt (Co)	≤ 130 mg/kg	<1 mg/kg	Pass	
Copper (Cu)	≤ 7700 mg/kg	<10 mg/kg	Pass	
Lead (Pb)	≤ 23 mg/kg	<1 mg/kg	Pass	
Manganese (Mn)	≤ 15000 mg/kg	<1 mg/kg	Pass	
Mercury (Hg)	≤ 94 mg/kg	<0.1 mg/kg	Pass	
Nickel (Ni)	≤ 930 mg/kg	<1 mg/kg	Pass	
Organic tin	≤ 12 mg/kg	Test not necessary	-	
Selenium (Se)	≤ 460 mg/kg	<5 mg/kg	Pass	
Strontium (Sr)	≤ 56000 mg/kg	<1 mg/kg	Pass	
Tin (Sn)	≤ 180000 mg/kg	<1 mg/kg	Pass	
Zinc (Zn)	≤ 46000 mg/kg	<10 mg/kg	Pass	

The test results relate only to the received and tested item. Without the written consent of Bureau Veritas Consumer Products Services Germany GmbH excerpts of this report shall not be reproduced. If the standard or the customer defines no decision rule, the laboratory applies a decision rule following the "Binary Statement for Simple Acceptance Rule (w=0)" (chapter 4.2.1) of ILAC Guidelines on Decision Rules and Statements of Conformity (ILAC-G8:09/2019). The results in this test report are reported in a simplified way (et al. without measurement uncertainty).

The measurement uncertainties underlying each procedure can be viewed [here](#).

The testing of mixed samples is carried out at the customer's explicit request and may imply a deviation from the testing standard. Please note the following: results that are above the limit for the composite sample may be below the limit if the individual samples contained in the composite sample are tested separately. In these cases separate testing of the samples is recommended.

Dr. Christian Dobbe
Lab Manager Chromatography

No results printed beyond this point in the report

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Report No.: (25423)248-555707

Parameters & CAS No.

Heavy metals, migration of certain elements - scraped off toy material	(CAS No.)
Aluminium (Al) (7429-90-5)	
Lead (Pb) (7439-92-1)	
Manganese (Mn) (7439-96-5)	
Mercury (Hg) (7439-97-6)	
Nickel (Ni) (7440-02-0)	
Strontium (Sr) (7440-24-6)	
Tin (Sn) (7440-31-5)	
Antimony (Sb) (7440-36-0)	
Arsenic (As) (7440-38-2)	
Barium (Ba) (7440-39-3)	
Boron (B) (7440-42-8)	
Cadmium (Cd) (7440-43-9)	
Chromium (Cr) (7440-47-3)	
Cobalt (Co) (7440-48-4)	
Copper (Cu) (7440-50-8)	
Zinc (Zn) (7440-66-6)	
Selenium (Se) (7782-49-2)	

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