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Plastitalia S.p.A
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Italy

Die Akkreditierung gilt für die in der Urkundenanlage D-PL-11217-03-00 aufgeführten Prüfverfahren.

Test report PB2025001885

Client:	Plastitalia S.p.A
Date:	4 Jul 2025
Purpose of test:	Examination of material according to KTW-BWGL (23 August 2024)
Certificate number [a]:	KIWA-23-DW-10361-1
Material [a]:	Borealis BorSafe HE3490-LS-HP
Sample was taken by [a]:	Giuseppe Mondello (Kiwa)
Date of sample receipt:	3 Jun 2025
Date of analysis:	3 Jun 2025 to 4 Jul 2025
Place of testing:	Kiwa GmbH Produktprüfung 18059 Rostock, Tannenweg 22 m
This report was created by:	Ines Krüger

i.V. Dipl.-Chem. Astrid Schwaneberg
Stellv. Laborleitung / Deputy Head of Laboratory
Environment - Analytics – Products

A. Schwaneberg

1 Examined product

Trade name [a)]:	PE100 fittings, Cap d.63, surface area: 32300 mm²
Base material:	Borealis BorSafe HE3490-LS-HP
Manufacturer [a)]:	Plastitalia S.p.A.
Production location [a)]:	98061 Brolo, Italy
Intended use of the product:	Drinking water distribution
Sampling from:	Storage
Production date [a)]:	Apr 2024
Lot / Batch number [a)]:	compound batch 2400009910
Sampling date [a)]:	20 May 2025
Date of sample receipt:	3 Jun 2025
Material photograph:	
Certificate number [a)]:	KIWA-23-DW-10361-1
Inspector [a)]:	Giuseppe Mondello (Kiwa)

2 Recipe evaluation

The recipe evaluation does not form part of this test report. The recipe is registered under R20889.

3 Result of the testing

3.1 Basic, material and formulation specific requirements

The conditions of the performed migration tests, the (raw) data of the migration water and information concerning the applied methods of analysis are laid down and in accordance with several relevant European standards described in detail in annex 1 of this test report.

The test conditions and final results of all tests are summarized and presented in Table 1.

Table 1: The test conditions and final test results at 23°C

Parameter	Migration test	Method of analysis	Results of the 3rd migration period	Threshold value (migration at 23°C)
Threshold Odour Number (TON)	DIN EN 1420: 2016-05	DIN EN 1622: 2006-10	<2 TON	≤ 2 TON
Turbidity	DIN EN 1420: 2016-05	DIN EN ISO 7027-1 (C21): 2016-11	<0,1 FNU	≤ 0,5 FNU
Colour (410 nm)	DIN EN 1420: 2016-05	DIN EN ISO 7887 (C 1): 2012-04	3 mg/l Pt	≤ 10 mg/l Pt
Foaming	DIN EN 1420: 2016-05	visually	nsa	nsa
Parameter	**Migration test**	**Method of analysis**	**C_{Tap}** conversion factor = 2	**MTC_{tap} (migration at 23°C)**
Total Organic Carbon (TOC)	DIN EN 12873-1: 2014-09	DIN EN 1484: 2019-04	<0,027 mg/l	0,5 mg/l

nsa = not significantly affected

Opinions and Interpretations:

The examined sample submitted for testing by Plastitalia S.p.A manufactured from Borealis BorSafe HE3490-LS-HP meets the Basic requirements mentioned in point 5.3.2 to 5.3.5 of the KTW-BWGL of the UBA (23 August 2024) for product group 'Ancillaries (P1)' at 23°C.

3.2 Requirements for the testing of the growth of microorganisms

The enhancement of microbial growth acc. DIN EN 16421 (method B) was not tested by Kiwa GmbH and is not part of the hygienic assessment.

Annex 1: Information about the migration tests, the (raw) data and the applied methods of analysis

Table 2: Conditions of the migration tests at 23°C

Aspect	Information concerning the samples				Dates concerning the migration tests						
	Number of test pieces used together in the Migration test	Surface (dm²)	Volume of migration water (dm³)	S/V ratio (dm^{-1})	Pretreatment of 24 h	1st migration period		2nd migration period		3rd migration period	
						Start	Completion	Start	Completion	Start	Completion
Organoleptic [1)]	each one piece	3,23	2,15	1,5	16/06/25 - 17/06/25	17/06/25	20/06/25	20/06/25	23/06/25	23/06/25	26/06/25
Toxicological [2)]	each one piece	3,23	0,646	5	16/06/25 - 17/06/25	17/06/25	20/06/25	20/06/25	23/06/25	23/06/25	26/06/25

Procedural blanks: Glass was used as blank sample.
1) Organoleptic = Threshold Odour Number (TON), Turbidity, Colour (410 nm), Foaming
2) Toxicological = Total Organic Carbon (TOC)

Basic requirements

Table 3 Results of the analysis of the migration water (raw data) and the calculated migration rates or results of the periods at 23°C

Organoleptic Parameter	Raw data							Calculated migration rate or result			
	1st migration period		2nd migration period		3rd migration period		Unit	migration period			Unit
	blank water	migration water	blank water	migration water	blank water	migration water		1st	2nd	3rd	
Threshold Odour Number (TON) A/B	<2/<2	<2/<2	<2/<2	<2/<2	<2/<2	<2/<2	TON	<2	<2	<2	TON
Turbidity A/B	<0,1/<0,1	<0,1/<0,1	<0,1/<0,1	<0,1/<0,1	<0,1/<0,1	<0,1/0,12	FNU	<0,1	<0,1	<0,1	FNU
Colour (410 nm) A/B	<2/<2	<2/<2	<2/<2	<2/<2	<2/<2	2/3	mg/l Pt	<2	<2	3	mg/l Pt
Foaming A/B	nsa/nsa	nsa/nsa	nsa/nsa	nsa/nsa	nsa/nsa	nsa/nsa	-	nsa	nsa	nsa	-

Table 3a: Specialized table of test results (toxicological) at 23°C

Parameter/ Parameter group	TOC					
	1st migration period		2nd migration period		3rd migration period	
a_n^T	0,59 mg/l	0,43 mg/l	<0,20 mg/l	<0,20 mg/l	<0,20 mg/l	0,35 mg/l
$\bar{a}_n^T$	0,51 mg/l		<0,20 mg/l		0,22 mg/l	
b_n^T	<0,20 mg/l	<0,20 mg/l	<0,20 mg/l	<0,20 mg/l	<0,20 mg/l	<0,20 mg/l
$\bar{b}_n^T$	<0,20 mg/l		<0,20 mg/l		<0,20 mg/l	
$\bar{c}_n^T = \bar{a}_n^T \cdot \bar{b}_n^T$	0,41 mg/l		<0,20 mg/l		<0,20 mg/l	
$C\bar{T}ap_n^T$	0,055 mg/l		<0,027 mg/l		<0,027 mg/l	

Conversion factor = 2

Additional requirements

There are no additional requirements.

Material specific requirements for individual substances acc. point 5.4 of the KTW-BWGL of the UBA (7 March 2022)

There are no material specific requirements.

Formulation specific requirements for individual substances acc. point 5.5 of the KTW-BWGL of the UBA (7 March 2022)

There are no formulation specific requirements.

Table 4 Information concerning the methods of analysis applied at the migration water

Parameter	Pretreatment of the migration water	Migration test	Method of analysis	Detection limit	Intra laboratory reproducibility (%)	Location	Accreditation
Threshold Odour Number (TON)	dilution	DIN EN 1420: 2016-05	DIN EN 1622: 2006-10	2 TON	n.a.	12	yes
Turbidity	no	DIN EN 1420: 2016-05	DIN EN ISO 7027-1 (C21): 2016-11	0,1 FNU	0,54 (concentration level: 20 FNU)	12	yes
Colour (410 nm)	no	DIN EN 1420: 2016-05	DIN EN ISO 7887 (C 1): 2012-04	2 mg/l Pt	3,1 (concentration level: 11 mg/l Pt)	12	yes
Foaming	no	DIN EN 1420: 2016-05	visually	-	n.a.	12	yes
Total Organic Carbon (TOC)	acidify	DIN EN 12873-1: 2014-09	DIN EN 1484: 2019-04	0,2 mg/l	2,7 (concentration level: 2,2 mg/l)	12	yes

n.a. not applicable

Locations of Analysis:
12 Rostock

Annex 2: Explanation of the terms

a_n^T	measured concentration of a substance in migration water, mg/l or µg/l
b_n^T	measured concentration of a substance in blank water, mg/l or µg/l
$\bar{c}_n^T$	measured concentration of a substance, mg/l or µg/l
$CTap_n^T$	Maximum expected concentration of a migrating substance on the tap, mg/l
n	number of the migration period

- End of test report -