

Test Report **No.: 70.431.21.17195.01**
Dated: 2022-01-27



Applicant: POLYCONCEPT GBS
Address: 4/F., HONGQIAO RONGGUANG BLDG., 11 CHANGSHUN ROAD SHANGHAI,
200051, PR CHINA
Product Name: Cooler backpack
Model No.: 12061801 White/Grey / 12061821 Red/Grey
12061853 Royal /Grey / 12061890 Black/Grey
PO/Order No.: #651247
Manufacturer: #10461
Factory Code: #3023
Country of Origin: China
Country of Destination: EU
Receipt Date of Sample: 2021-12-09
Date of Testing: 2021-12-09 to 2022-01-27
Sample Submitted: The sample(s) was (were) submitted by applicant and identified.
Test Result: Refer to the data listed in following pages

Test Item	Conclusion
1. Polycyclic Aromatic Hydrocarbons (PAHs) Content in Annex XVII, Item 72 of the REACH Regulation (EC) No 1907/2006 with its Amendments	Pass
2. Total Cadmium Content Requirement in Annex XVII, Item 23 of the REACH Regulation(EC) No 1907/2006 with its Amendments	Pass
3. Azocolourants Content Requirement in Annex XVII, Item 43 of the REACH Regulation(EC) No 1907/2006 with its Amendment	Pass
4. Azo Dyes Content Requirement in Annex XVII, Item 72 of the REACH Regulation (EC) No 1907/2006 with its Amendments	Pass
5. Total Lead Content Requirement in Annex XVII, Item 63 of the REACH Regulation (EC) No 1907/2006 with its Amendments	Pass
6. Dimethylformamide, N,N-dimethylacetamide (DMAC), N-Methyl-2-pyrrolidone Content Requirement in Annex XVII, Item 72 of the REACH Regulation (EC) No 1907/2006 with its Amendments	Pass
7. Formaldehyde Content Requirement in Annex XVII, Item 72 of the REACH Regulation (EC) No 1907/2006 with its Amendments	Pass
8. Dyestuff Content Requirement in Annex XVII, Item 72 of the REACH Regulation(EC) No 1907/2006 with its Amendments	Pass
9. Phthalates content in Annex XVII, Item 72 of the REACH Regulation (EC) No 1907/2006 with its Amendments	Pass
10. Alkanes C10-C13, chloro (short-chain chlorinated paraffins) (SCCPs) Content - European Parliament and Council Regulation (EU) 2019/1021 on Persistent Organic Pollutants (POPs)	Pass
11. Benzene Content Requirement in Annex XVII, Item 72 of the REACH Regulation(EC) No 1907/2006 with its Amendments	Pass

Test Item	Conclusion
12. 2-benzotriazol-2-yl-4,6-di-tert-butylphenol (UV-320), 2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328), 2,4-di-tert-butyl-6-(5-chlorobenzotriazol-2-yl)phenol (UV-327) and 2-(2H-benzotriazol-2-yl)-4-(tert-butyl)-6-(sec-butyl)phenol (UV-350) Content - in Substances of Very High Concern (SVHC) published by European Chemicals Agency (ECHA)	<0.1%(W/W)
13. Tris(2-chloroethyl) phosphate (TCEP) Content - in Substances of Very High Concern (SVHC) published by European Chemicals Agency (ECHA)	<0.1%(W/W)
14. Extractable heavy metals content in Annex XVII, Item 72 of the REACH Regulation(EC) No 1907/2006 with its Amendments	Pass
15. Total Bisphenol A (BPA) Content	Pass
16. Quinoline Content Requirement in Annex XVII, Item 72 of the REACH Regulation(EC) No 1907/2006 with its Amendments	Pass
17. EU-Commission Regulation (EU) 2020/1245 amending Regulation (EU) No 10/2011 and its amendments - Overall Migration	Pass
18. EU- Commission Regulation (EU) 2020/1245 amending Regulation (EU) No 10/2011 and its amendments -Specific Migration of Heavy Metals	Pass
19. EU- Commission Regulation (EU) 2020/1245 amending Regulation (EU) No 10/2011 and its amendments -Specific Migration of Bisphenol A	Pass
20. EU-Commission Regulation (EU) 2020/1245 amending Regulation (EU) No 10/2011 and its amendments -Special Migration of Phthalates	Pass
21. EU- Commission Regulation (EU) 2020/1245 amending Regulation (EU) No 10/2011 and its amendments -Specific Migration of Primary Aromatic Amine	Pass
22. EU- Commission Regulation (EU) 2020/1245 amending Regulation (EU) No 10/2011 and its amendments -Specific Migration of Primary Aromatic Amine (29)	Pass
23. Specific Migration of Polycyclic Aromatic Hydrocarbons (PAHs)	Pass*
24. Germany-German Food & Feed Acts LFGB Section 31 and BfR Recommendation-Sensory Test	Pass
25. EU-Regulation (EU) No. 10/2011-Phthalates Content	Pass

Remarks: 1. MDL = Method Detection Limit
2. ND = Not Detected (<MDL)
3. <= Less than
4. 1 mg/kg = 1 ppm = 0.0001%
5. mg/dm² = milligram per square decimeter
6. *= Conclusion was drawn according to client's specification
7. The migration results in this report were tested and expressed based on repeated use articles.
8. The testing approach, the testing methods, and the reported results in this report demonstrate compliance or non-compliance to the client's requirements which were mutually agreed at the contract review and stipulated in the quotation. The testing approach, the testing methods, and the reported results may not or only partially fulfil the associated requirements of the applicable regulations.

**TÜV SÜD Certification and Testing (China) Co.,Ltd. Shanghai Branch
Testing Center**

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Note:

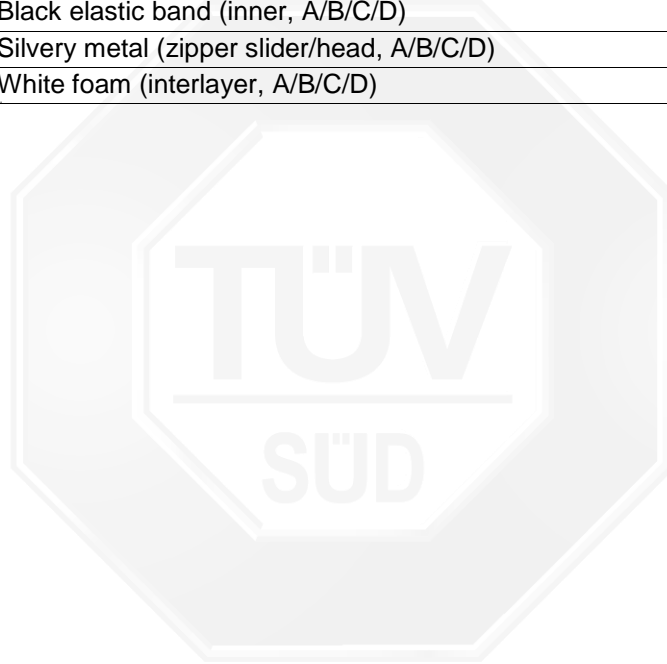
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Please note, every test method has a measurement uncertainty which has been evaluated by the laboratory according to ISO/IEC 17025 requirements. By taking measurement uncertainties into account it might happen that measured values can neither be assessed as Pass nor as Fail.

Description of the Tested Subject

Sample	Description	Photo
A	Cooler backpack 12061821 Red/Grey	
B	Cooler backpack 12061890 Black/Grey	
C	Cooler backpack 12061853 Royal /Grey	
D	Cooler backpack 12061801 White/Grey	



T. No	Sample	Description
T1	001	Deep grey PEVA lining (A/B/C/D)
T2	002	Red fabric with backing (A)
T3	003	Black fabric with backing (B)
T4	004	Blue fabric with backing (C)
T5	005	White fabric with backing (D)
T6	006	Light grey fabric with backing (A/B/C/D)
T7	007	Black fabric (zipper tape, A/B/C/D)
T8	008	White fabric (lining, A/B/C/D)
T9	009	White mesh fabric (inner, A/B/C/D)
T10	010	Black webbing belt (outer binding, A/B/C/D)
T11	011	Black webbing belt (adjust belt, A/B/C/D)
T12	012	Black plastic (zipper teeth, A/B/C/D)
T13	013	Black plastic (buckle, A/B/C/D)
T14	014	Black elastic band (inner, A/B/C/D)
T15	015	Silvery metal (zipper slider/head, A/B/C/D)
T16	016	White foam (interlayer, A/B/C/D)



Test Results

1. Polycyclic Aromatic Hydrocarbons (PAHs) Content in Annex XVII, Item 72 of the REACH Regulation (EC) No 1907/2006 with its Amendments

Test with reference to AfPS GS 2019:01, determination by GC-MS.

Parameter	CAS No.	Unit	MDL	Limit	Result(s)	
					002+003+004	005+006
Benzo[b]fluoranthene (BbFA)	205-99-2	mg/kg	0.1	<1	ND	ND
Benzo[a]anthracene (BaA)	56-55-3	mg/kg	0.1	<1	ND	ND
Benzo[a]pyrene (BaP)	50-32-8	mg/kg	0.1	<1	ND	ND
Benzo[e]pyrene (BeP)	192-97-2	mg/kg	0.1	<1	ND	ND
Benzo[j]fluoranthene (BjFA)	205-82-3	mg/kg	0.1	<1	ND	ND
Benzo[k]fluoranthene (BkFA)	207-08-9	mg/kg	0.1	<1	ND	ND
Chrysene (CHR)	218-01-9	mg/kg	0.1	<1	ND	ND
Dibenzo[a,h]anthracene (DBAhA)	53-70-3	mg/kg	0.1	<1	ND	ND
Conclusion					Pass	Pass

2. Total Cadmium Content Requirement in Annex XVII, Item 23 of the REACH Regulation(EC) No 1907/2006 with its Amendments

Test with reference to Acid digestion and EN 1122:2001 Method B, determination by ICP-OES/ICP-MS.

Sample	Unit	MDL	Limit	Result(s)	Conclusion
001	mg/kg	5	<100	<5.0	Pass
002+003+004	mg/kg	5	<100	<5.0	Pass
005+006	mg/kg	5	<100	<5.0	Pass
007+008+009	mg/kg	5	<100	<5.0	Pass
010+011	mg/kg	5	<100	<5.0	Pass
012+013	mg/kg	5	<100	<5.0	Pass
014	mg/kg	5	<100	<5.0	Pass
016	mg/kg	5	<100	<5.0	Pass

3. Azocolourants Content Requirement in Annex XVII, Item 43 of the REACH Regulation(EC) No 1907/2006 with its Amendment

Test with reference to EN ISO 14362-1:2017, determination by GC-MS/HPLC.

No.	Prohibited Amines	CAS No.	MDL [mg/kg]	Limit [mg/kg]	Result(s) [mg/kg]	
					002+003+004	005+006
1	4-aminobiphenyl	92-67-1	5.0	<30	<5.0	<5.0
2	Benzidine	92-87-5	5.0	<30	<5.0	<5.0
3	4-chloro-o-toluidine	95-69-2	5.0	<30	<5.0	<5.0
4	2-naphthylamine	91-59-8	5.0	<30	<5.0	<5.0
5	o-aminoazotoluene	97-56-3	5.0	<30	<5.0	<5.0
6	5-nitro-o-toluidine	99-55-8	5.0	<30	<5.0	<5.0
7	4-chloroaniline	106-47-8	5.0	<30	<5.0	<5.0
8	2,4-diaminoanisole	615-05-4	5.0	<30	<5.0	<5.0
9	4,4'-diaminodiphenylmethane	101-77-9	5.0	<30	<5.0	<5.0
10	3,3'-dichlorobenzidine	91-94-1	5.0	<30	<5.0	<5.0
11	3,3'-Dimethoxybenzidine	119-90-4	5.0	<30	<5.0	<5.0
12	3,3'-dimethylbenzidine	119-93-7	5.0	<30	<5.0	<5.0
13	4,4'-methylenedi-o-toluidine	838-88-0	5.0	<30	<5.0	<5.0
14	p-cresidine	120-71-8	5.0	<30	<5.0	<5.0
15	4,4'-methylene-bis-(2-chloro-aniline)	101-14-4	5.0	<30	<5.0	<5.0
16	4,4'-oxydianiline	101-80-4	5.0	<30	<5.0	<5.0
17	4,4'-thiodianiline	139-65-1	5.0	<30	<5.0	<5.0
18	o-toluidine	95-53-4	5.0	<30	<5.0	<5.0
19	2,4-toluenediamine	95-80-7	5.0	<30	<5.0	<5.0
20	2,4,5-trimethylaniline	137-17-7	5.0	<30	<5.0	<5.0
21	2-methoxyaniline	90-04-0	5.0	<30	<5.0	<5.0
22	2,4-xylidine	95-68-1	5.0	<30	<5.0	<5.0
23	2,6-xylidine	87-62-7	5.0	<30	<5.0	<5.0
24	4-aminoazobenzene	60-09-3	5.0	<30	<5.0	<5.0
Conclusion					Pass	Pass

Interpretation of test results:

- (1) In the case of the measured value per amine component ≤ 30 mg/kg and according to the analysis carried out, the azo colourants banned under the Annex XVII of Regulation (EC) No. 1907/2006, REACH are not detected in the article submitted.
- (2) Banned AZO dyes in accordance to REACH regulation (EC) No. 1907/2006 and Amendment No. 552/2009 Annex XVII Item 43 (formerly known as 2002/61/EC)

4. **Azo Dyes Content Requirement in Annex XVII, Item 72 of the REACH Regulation (EC) No 1907/2006 with its Amendments**

Test with reference to EN ISO 14362-1:2017, determination by GC-MS/HPLC.

Parameter	CAS No.	Unit	MDL	Limit	Result(s)	
					002+003+004	005+006
4-chloro-o-toluidinium chloride	3165-93-3	mg/kg	5	30	ND	ND
2-Naphthylammoniumacetate	553-00-4	mg/kg	5	30	ND	ND
2,4-diaminoanisoole sulphate	39156-41-7	mg/kg	5	30	ND	ND
2,4,5-trimethylaniline hydrochloride	21436-97-5	mg/kg	5	30	ND	ND
Conclusion					Pass	Pass

5. **Total Lead Content Requirement in Annex XVII, Item 63 of the REACH Regulation (EC) No 1907/2006 with its Amendments**

Test with reference to in house method, determination by ICP-OES/ICP-MS.

Sample	Unit	MDL	Limit	Result(s)	Conclusion
001	mg/kg	10.0	500	<10.0	Pass
002+003+004	mg/kg	10.0	500	<10.0	Pass
005+006	mg/kg	10.0	500	<10.0	Pass
007+008+009	mg/kg	10.0	500	<10.0	Pass
010+011	mg/kg	10.0	500	<10.0	Pass
012+013	mg/kg	10.0	500	<10.0	Pass
014	mg/kg	10.0	500	<10.0	Pass
015	mg/kg	10.0	500	18	Pass

6. **Dimethylformamide, N,N-dimethylacetamide (DMAC), N-Methyl-2-pyrrolidone Content Requirement in Annex XVII, Item 72 of the REACH Regulation (EC) No 1907/2006 with its Amendments**

Test with reference to DIN CEN ISO/TS 16189:2013, determination by GC-MS.

Compound	CAS No.	Unit	MDL	Limit	Result
					002+003+004
Dimethylformamide	68-12-2	mg/kg	10	<3000	<10
N,N-dimethylacetamide (DMAC)	127-19-5	mg/kg	10	<3000	<10
N-Methyl-2-pyrrolidone	--	mg/kg	10	<3000	<10
Conclusion					Pass

Compound	CAS No.	Unit	MDL	Limit	Result
					005+006
Dimethylformamide	68-12-2	mg/kg	10	<3000	<10
N,N-dimethylacetamide (DMAC)	127-19-5	mg/kg	10	<3000	<10
N-Methyl-2-pyrrolidone	--	mg/kg	10	<3000	<10
Conclusion					Pass

7. Formaldehyde Content Requirement in Annex XVII, Item 72 of the REACH Regulation (EC) No 1907/2006 with its Amendments

Test with reference to EN ISO 14184-1:2011, determination by UV-Vis.

Sample	Unit	MDL	Limit	Result(s)	Conclusion
002	mg/kg	16	<300	89	Pass
003	mg/kg	16	<300	38	Pass
004	mg/kg	16	<300	94	Pass
005+006	mg/kg	16	<300	35	Pass

8. Dyestuff Content Requirement in Annex XVII, Item 72 of the REACH Regulation(EC) No 1907/2006 with its Amendments

Test with reference to DIN 54231:2005, determination by LC-MS.

Compounds	CAS No	Unit	MDL	Limit	Results	
					002+003+004	005+006
C.I. Basic Red 9	569-61-9	mg/kg	7.5	<50	<7.5	<7.5
C.I. Disperse Blue 1	2475-45-8	mg/kg	7.5	<50	<7.5	<7.5
Basic Violet 3	548-62-9	mg/kg	7.5	<50	<7.5	<7.5
Conclusion					Pass	Pass

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9. Phthalates content in Annex XVII, Item 72 of the REACH Regulation (EC) No 1907/2006 with its Amendments

Test with reference to EN ISO 14389:2014, determination by GC-MS.

Parameter	CAS No.	Unit	MDL	Limit	Result(s)	
					002+003+004	005+006
Bis (2-ethylhexyl) phthalate (DEHP)	117-81-7	mg/kg	50	-	ND	ND
Dibutyl phthalate (DBP)	84-74-2	mg/kg	50	-	ND	ND
Benzyl butyl phthalate (BBP)	85-68-7	mg/kg	50	-	ND	ND
Bis-(2-methoxyethyl)-phthalate (DMEP)	117-82-8	mg/kg	50	-	ND	ND
Diisobutylphthalate, (DIBP)	84-69-5	mg/kg	50	-	ND	ND
1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters (DHNUP)	68515-42-4	mg/kg	50	-	ND	ND
1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich (DIHP)	71888-89-6	mg/kg	50	-	ND	ND
Di-n-hexyl phthalate (DnHP/DHP/DHEXP)	84-75-3	mg/kg	50	-	ND	ND
1,2-Benzenedicarboxylic acid, dipentylester branched and linear	84777-06-0	mg/kg	50	-	ND	ND
Diisopentylphthalate (DIPP)	605-50-5	mg/kg	50	-	ND	ND
N-Pentyl-isopentylphthalate	776297-69-9	mg/kg	50	-	ND	ND
Diamyl phthalate/Dipentyl phthalate (DPP/DPENP)	131-18-0	mg/kg	50	-	ND	ND
1,2-Benzenedicarboxylic acid, dihexylester, branched and linear	68515-50-4	mg/kg	50	-	ND	ND
Dicyclohexyl phthalate (DCHP)	84-61-7	mg/kg	50	-	ND	ND
Sum of detected phthalates	-	mg/kg	50	<1000	ND	ND
Conclusion					Pass	Pass

10. Alkanes C10-C13, chloro (short-chain chlorinated paraffins) (SCCPs) Content - European Parliament and Council Regulation (EU) 2019/1021 on Persistent Organic Pollutants (POPs)

Test with reference to in house method, determination by GC-MS-NCl.

Parameter	CAS No.	Unit	MDL	Limit	Result(s)	
					001	002+003+004
SCCP	85535-84-8	mg/kg	100	<1500	<100	<100
Conclusion					Pass	Pass

Parameter	CAS No.	Unit	MDL	Limit	Result(s)
					005+006
SCCP	85535-84-8	mg/kg	100	<1500	<100
Conclusion					Pass

11. Benzene Content Requirement in Annex XVII, Item 72 of the REACH Regulation(EC) No 1907/2006 with its Amendments

Test with reference to in house method, determination by HS-GC-MS.

Compound	CAS No.	Unit	MDL	Limit	Result
					002+003+004
Benzene	71-43-2	mg/kg	1	5	<1
Conclusion					Pass

Compound	CAS No.	Unit	MDL	Limit	Result
					005+006
Benzene	71-43-2	mg/kg	1	5	<1
Conclusion					Pass

12. 2-benzotriazol-2-yl-4,6-di-tert-butylphenol (UV-320), 2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328), 2,4-di-tert-butyl-6-(5-chlorobenzotriazol-2-yl)phenol (UV-327) and 2-(2H-benzotriazol-2-yl)-4-(tert-butyl)-6-(sec-butyl)phenol (UV-350) Content - in Substances of Very High Concern (SVHC) published by European Chemicals Agency (ECHA)

Test with reference to in house method and determination by LC-MS.

Compound	CAS No.	Unit	MDL	Limit	Result(s) [%]
					001+002+003+004+005+006+010+011+013
2-benzotriazol-2-yl-4,6-di-tert-butylphenol (UV-320)	3846-71-7	%	0.01	<0.1	<0.01
2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328)	25973-55-1	%	0.01	<0.1	<0.01
2,4-di-tert-butyl-6-(5-chlorobenzotriazol-2-yl)phenol (UV-327)	3864-99-1	%	0.01	<0.1	<0.01
2-(2H-benzotriazol-2-yl)-4-(tert-butyl)-6-(sec-butyl)phenol (UV-350)	36437-37-3	%	0.01	<0.1	<0.01

13. Tris(2-chloroethyl) phosphate (TCEP) Content - in Substances of Very High Concern (SVHC) published by European Chemicals Agency (ECHA)

Test with reference to in house method and determination by LC-MS.

Compound	CAS No.	Unit	MDL	Limit	Result(s) [%]
					001+002+003+004+005+006
Tris (2-chloroethyl) phosphate	115-96-8	%	0.01	<0.1	<0.01

14. Extractable heavy metals content in Annex XVII, Item 72 of the REACH Regulation (EC) No 1907/2006 with its Amendments

Test with reference to EN 16711-2:2015, determination by ICP-OES/ICP-MS.

Test Item	Limit [mg/kg]	MDL [mg/kg]	Result(s) [mg/kg]		
			002+003	004+005	006
Cadmium As (Cd)	1	0.1	<0.1	<0.1	<0.1
Arsenic As (As)	1	0.2	<0.2	<0.2	<0.2
Chromium VI (Cr VI)*	1	0.5	<0.5	<0.5	<0.5
Lead As (Pb)	1	0.2	<0.2	<0.2	<0.2
Conclusion			Pass	Pass	Pass

Remark: 1. * = Chromium VI was determined by screening of chromium

15. Total Bisphenol A (BPA) Content

With reference to in-house method, determination by LC-MS-MS.

Compound	CAS No.	Unit	MDL	Limit	Result
					001
Bisphenol A	80-05-7	mg/kg	0.1	<0.1	<0.1
Conclusion					Pass

Remark: 1. Limit was according to client's requirement

16. Quinoline Content Requirement in Annex XVII, Item 72 of the REACH Regulation(EC) No 1907/2006 with its Amendments

Test with reference to DIN 54231:2005, determination by LC-MS.

Compound	CAS No.	Unit	MDL	Limit	Result
					002+003+004
Quinoline	91-22-5	mg/kg	10	<50	<10
Conclusion					Pass

Compound	CAS No.	Unit	MDL	Limit	Result
					005+006
Quinoline	91-22-5	mg/kg	10	<50	<10
Conclusion					Pass

17. EU-Commission Regulation (EU) 2020/1245 amending Regulation (EU) No 10/2011 and its amendments - Overall Migration

- With reference to EN1186-1:2002 for selection of test methods;
EN1186-13: 2002 Method B -adsorption by modified polyphenylene oxide;
- Sample 001 Migration ratio: 4.0g/1.00dm²

Simulant(s) Used	Test Condition	Overall Migration Result(s) [mg/dm ²]			Maximum Permissible Limit [mg/dm ²]	Conclusion
		001 1 st Migration	001 2 nd Migration	001 3 rd Migration		
MPPO	40°C for 10 days	<3.0	<3.0	<3.0	10	Pass

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18. EU- Commission Regulation (EU) 2020/1245 amending Regulation (EU) No 10/2011 and its amendments - Specific Migration of Heavy Metals

- With reference to EN 13130-1:2004, followed by ICP-MS.
- Test condition: MPPO, 40°C for 24 hours
- Sample 001 Migration ratio: 150ml/1.00dm²

Test Item(s)	MDL [mg/kg]	Result(s) [mg/kg]			Limit [mg/kg]	Conclusion
		001 1 st Migration	001 2 nd Migration	001 3 rd Migration		
Iron (Fe)	1.0	ND	ND	ND	48	Pass
Zinc (Zn)	1.0	ND	ND	ND	5	Pass
Copper (Cu)	0.5	ND	ND	ND	5	Pass
Manganese (Mn)	0.05	ND	ND	ND	0.6	Pass
Cobalt (Co)	0.05	ND	ND	ND	0.05	Pass
Barium (Ba)	0.1	ND	ND	ND	1	Pass
Lithium (Li)	0.1	ND	ND	ND	0.6	Pass
Aluminium (Al)	0.1	ND	ND	ND	1	Pass
Nickel (Ni)	0.01	ND	ND	ND	0.02	Pass
Antimony (Sb)	0.01	ND	ND	ND	0.04	Pass
Arsenic (As)	0.01	ND	ND	ND	0.01	Pass
Cadmium (Cd)	0.002	ND	ND	ND	0.002	Pass
Chromium (Cr)	0.01	ND	ND	ND	0.01	Pass
Lead (Pb)	0.01	ND	ND	ND	0.01	Pass
Mercury (Hg)	0.01	ND	ND	ND	0.01	Pass
Europium	0.01	ND	ND	ND	Sum 0.05	Pass
Gadolinium	0.01	ND	ND	ND		Pass
Lanthanum	0.01	ND	ND	ND		Pass
Terbium	0.01	ND	ND	ND		Pass

19. EU- Commission Regulation (EU) 2020/1245 amending Regulation (EU) No 10/2011 and its amendments -Specific Migration of Bisphenol A

- With reference to EN 13130-1:2004, followed by LC/MS/MS
- Test condition: MPPO, 40°C for 24 hours
- Sample 001 Migration ratio: 4.0g/1.00dm²

Test Item(s)	Result(s) [mg/kg]	Method Detection Limit [mg/kg]	Maximum Permissible Limit [mg/kg]	Conclusion
	001			
Specific migration of BPA - 1 st Migration	ND	0.02	0.05	Pass
Specific migration of BPA - 2 nd Migration	ND	0.02	0.05	Pass
Specific migration of BPA - 3 rd Migration	ND	0.02	0.05	Pass

20. EU-Commission Regulation (EU) 2020/1245 amending Regulation (EU) No 10/2011 and its amendments -Special Migration of Phthalates

- With reference to EN 13130-1:2004, followed by GC-MS
- Test condition: MPPO, 40°C for 24 hours
- Sample 001 Migration ratio: 4.0g/1.00dm²

Test Items	CAS No.	MDL [mg/kg]	Maximum Permissible Limit [mg/kg]	Test Result [mg/kg]			Conclusion
				001 1 st Migration	001 2 nd Migration	001 3 rd Migration	
Benzylbutyl Phthalate (BBP)	85-68-7	0.5	30	<0.5	<0.5	<0.5	Pass
Dibutyl Phthalate (DBP)	84-74-2	0.1	0.3	<0.1	<0.1	<0.1	Pass
Di(2-ethylhexyl) phthalate (DEHP)	117-81-7	0.5	1.5	<0.5	<0.5	<0.5	Pass
Diisononyl Phthalate (DINP)	68515-48-0	0.5	Total 9	<0.5	<0.5	<0.5	Pass
Diisodecyl phthalate (DIDP)	26761-40-0	0.5		<0.5	<0.5	<0.5	
Adipic acid, bis(2-ethylhexyl) Ester (DEHA)	103-23-1	0.5	18	<0.5	<0.5	<0.5	Pass
Diallyl phthalate (DAP)	131-17-9	0.01	0.01	<0.01	<0.01	<0.01	Pass



21. EU- Commission Regulation (EU) 2020/1245 amending Regulation (EU) No 10/2011 and its amendments - Specific Migration of Primary Aromatic Amine

- With reference to EN 13130-1:2004, followed by Kunststoffe im Lebensmittelverkehr, Book 2, Teil B II,XXI
- Test condition: MPPO, 40°C for 24 hours
- Sample 001 Migration ratio: 150ml/1.00dm²

Test Item(s)	Result(s) [mg/kg]	Method Detection Limit [mg/kg]	Maximum Permissible Limit [mg/kg]	Conclusion
	001			
Specific migration of primary aromatic amines – 1 st Migration	ND	0.01	ND	Pass
Specific migration of primary aromatic amines – 2 nd Migration	ND	0.01	ND	Pass
Specific migration of primary aromatic amines – 3 rd Migration	ND	0.01	ND	Pass



22. EU- Commission Regulation (EU) 2020/1245 amending Regulation (EU) No 10/2011 and its amendments - Specific Migration of Primary Aromatic Amine (29)

- With reference to EN 13130-1:2004.
- Test condition: MPPO, 40°C for 24 hours
- Sample 001 Migration ratio: 150ml/1.00dm²

No.	Prohibited Amines	CAS No.	MDL [mg/kg]	Limit [mg/kg]	Result(s) [mg/kg]		
					001 1 st Migration	001 2 nd Migration	001 3 rd Migration
1	4-Aminobiphenyl	92-67-1	0.002	0.002	ND	ND	ND
2	4,4'-Benzidine	92-87-5	0.002	0.002	ND	ND	ND
3	4-Chloro-2-methylaniline	95-69-2	0.002	0.002	ND	ND	ND
4	2-Naphthylamine	91-59-8	0.002	0.002	ND	ND	ND
5	o-Aminoazotoluene	97-56-3	0.002	0.002	ND	ND	ND
6	5-Nitro-o-toluidine	99-55-8	0.002	0.002	ND	ND	ND
7	4-Chloroaniline	106-47-8	0.002	0.002	ND	ND	ND
8	4-Methoxy-1,3-phenylenediamine	615-05-4	0.002	0.002	ND	ND	ND
9	Bis-(4-aminophenyl) methane	101-77-9	0.002	0.002	ND	ND	ND
10	3,3'-Dichlorobenzidine	91-94-1	0.002	0.002	ND	ND	ND
11	3,3'-Dimethoxybenzidine	119-90-4	0.002	0.002	ND	ND	ND
12	o-Tolidine	119-93-7	0.002	0.002	ND	ND	ND
13	3,3'-Dimethyl-4,4'-diaminodiphenylmethane	838-88-0	0.002	0.002	ND	ND	ND
14	2-Methoxy-5-methylaniline	120-71-8	0.002	0.002	ND	ND	ND
15	4,4'-Methylene bis(o-chloroaniline)	101-14-4	0.002	0.002	ND	ND	ND
16	4,4'-Oxydianiline	101-80-4	0.002	0.002	ND	ND	ND
17	4,4'-Thiodianiline	139-65-1	0.002	0.002	ND	ND	ND
18	o-Toluidine	95-53-4	0.002	0.002	ND	ND	ND
19	2,4-Diaminotoluene	95-80-7	0.002	0.002	ND	ND	ND
20	2,4,5-Trimethylaniline	137-17-7	0.002	0.002	ND	ND	ND
21	o-Anisidine	90-04-0	0.002	0.002	ND	ND	ND
22	4-Amino-azobenzene	60-09-3	0.002	0.002	ND	ND	ND
23	1,3-Phenylenediamine	108-45-2	0.002	0.002	ND	ND	ND
24	2,4-Dimethylaniline	95-68-1	0.002	0.002	ND	ND	ND
25	2,6-Dimethylaniline	87-62-7	0.002	0.002	ND	ND	ND
26	Aniline	62-53-3	0.002	0.002	ND	ND	ND
27	1,4-Phenylenediamine	106-50-3	0.002	0.002	ND	ND	ND
28	1,5-Diaminonaphthalene	2243-62-1	0.002	0.002	ND	ND	ND
29	2,6-toluenediamine	823-40-5	0.002	0.002	ND	ND	ND
Conclusion					Pass	Pass	Pass

23. Specific Migration of Polycyclic Aromatic Hydrocarbons (PAHs)

- With reference to EN 13130-1:2004.
- Test condition: MPPO, 40°C for 24 hours
- Sample 001 Migration ratio: 4.0g/1.00dm²

Compounds	MDL [mg/kg]	Limit [mg/kg]	Result(s) [mg/kg]
			001
Naphthalene	0.01	ND	ND
Acenaphthylene	0.01	ND	ND
Acenaphthene	0.01	ND	ND
Fluorene	0.01	ND	ND
Phenanthrene	0.01	ND	ND
Anthracene	0.01	ND	ND
Fluoranthene	0.01	ND	ND
Pyrene	0.01	ND	ND
Chrysene	0.01	ND	ND
Benzo[a]anthracene	0.01	ND	ND
Benzo[b]fluoranthene	0.01	ND	ND
Benzo[j]fluoranthene	0.01	ND	ND
Benzo[k]fluoranthene	0.01	ND	ND
Benzo[e]pyrene	0.01	ND	ND
Benzo[a]pyrene	0.01	ND	ND
Indeno[1,2,3-cd]pyrene	0.01	ND	ND
Dibenzo[ah]anthracene	0.01	ND	ND
Benzo[ghi]perylene	0.01	ND	ND
Conclusion			Pass

Note: 1. Limit was according to client's requirement

24. Germany-German Food & Feed Acts LFGB Section 31 and BfR Recommendation-Sensory Test

- With reference to DIN 10955:2004
- Test condition: Distilled water, 40°C for 24 hours

Sample(s)	Testing Parameter	Grading result(s)	Recommended level	Conclusion
A/B/C/D	Transfer of taste	1	<3	Pass
	Transfer of smell	1	<3	Pass

Note: Available grading are listed as follow:
 Grading 0: No perceptible taste/smell deviation
 1: Just perceptible taste/smell deviation
 2: Weak taste/smell deviation
 3: Clear taste/smell deviation
 4: Strong taste/smell deviation

25. EU-Regulation (EU) No. 10/2011- Phthalates Content

Test with reference to Solvent extraction, analysis was performed by GC-MS.

Parameter	CAS No.	Unit	MDL	Limit	Result(s)
					001
Dibutyl phthalate, (DBP)	84-74-2	%	0.005	<0.05	ND
Benzyl butyl phthalate, (BBP)	85-68-7	%	0.005	<0.1	ND
Bis (2-ethylhexyl) phthalate, (DEHP)	117-81-7	%	0.005	<0.1	ND
Di-isononyl phthalate, (DINP)	28553-12-0 , 68515-48-0	%	0.005	<0.1	ND
Di-isodecyl phthalate, (DIDP)	26761-40-0 , 68515-49-1	%	0.005	<0.1	ND
Conclusion					Pass

- End of Test Report -