

Report No.: **158300816a 001**

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Client: DEPESCHE VERTRIEB GMBH & CO. KG

Contact Information: Vierlander Strasse 14, 21502 Geesthacht, Germany

Test item(s): Non toys

**Identification/
Model No(s):** TOPModel BFF Necklace Set
Item no: 0013655A, 0413655A
Order no: 13655/A

Sample obtaining method: Sending by customer

Condition at delivery: Test item complete and undamaged.

Sample Receiving date: 2024-11-19, 2024-11-27

Testing Period: 2024-11-21 to 2024-12-04

Place of testing: Chemical laboratory Hong Kong, Toys laboratory Hong Kong

Test Specification:

Please refer to "Test Result Summary List" on page 2 for details

Other information:

Country of Destination: Germany & Europe

The provided age grade of the item(s) : Not Provided

The appropriate age grade of the item(s) : Not Requested (by client)

The item(s) was/ were tested for the age of over 3 years.

Packaging provided: Yes

The selection of the tested materials and parameters is based on testing experience according to the principles of proportionally considering technological probabilities. The analyses are focused on expected harmful substances caused by nature of materials and production conditions.

For and on behalf of
TÜV Rheinland Hong Kong Ltd.



Amenda Yung/
Senior CS Manager

2024-12-06

Date

Name/Position



Wong Yiu Tong , Tommy/
Senior Lab Manager

2024-12-06

Date

Name/Position

Sample information is provided by customer. Test result is drawn according to the kind and extent of tests performed.

This test report relates to the above mentioned test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any safety mark on this or similar products.

"Decision Rule" document announced in our website (<https://www.tuv.com/landingpage/en/qm-gcn/>) describes the statement of conformity and its rule of enforcement for test results are applicable throughout this test report.

Test Result Summary :

Test Specification:

- 1 - Physical and Mechanical Test
 - General Product Labeling
 - Flammability Test

Test result:

PASS
Refer to result page
PASS

The above test(s) are tested per requested by applicant for "The General Product Safety Regulation (GPSR): (EU) 2023/988"

- | | | |
|---|--|----------------------|
| 2 | Total Cadmium Content - according to REACH regulation (EC) No. 1907/2006 Annex XVII Entry 23 and its amendments | PASS |
| | Total Lead Content - REACH Regulation (EC) No. 1907/2006 Annex XVII Entry 63 and its amendments | PASS |
| 3 | Despesche requirement:
Total Lead Content | PASS |
| 4 | Packaging Waste Total Heavy Metal Content - 94/62/EC | PASS |
| 5 | Polycyclic aromatic hydrocarbons (PAHs) - REACH regulation (EC) No. 1907/2006 with Amendment No. 552/2009 Annex XVII Item No. 50 and (EU) No.1272/2013 | Refer to result page |
| 6 | Polycyclic aromatic hydrocarbons (PAHs) - according to GS Specification - AfPS GS 2019:01 PAK | Refer to result page |
| 7 | Despesche requirement:
Phthalates content | PASS |
| 8 | Nickel Release - REACH Regulation (EC) No. 1907/2006 and amendment (EC) No. 552/2009 Annex XVII Item 27 (formerly known as 94/27/EC and 2004/96/EC) | PASS |

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Material List:

Item: TOPModel BFF Necklace Set
 Item no: 0013655A, 0413655A
 Order no: 13655/A

Material No.	Material	Color	Location
M001	Whole Product	Multicolor	[#13655 Golden]-Whole Product;[#13655 Silvery]-Whole Product
M002	Coating	Hot pink w/ Iridescent glitter	[#13655 Golden]-Heart pendant
M003	Coating	Pink w/ Iridescent glitter	[#13655 Golden]-Heart pendant
M004	Coating	Purple w/ Iridescent glitter	[#13655 Silvery]-Heart pendant
M005	Coating	Lilac w/ Iridescent glitter	[#13655 Silvery]-Heart pendant
M006	Metal	Goldem	[#13655 Golden]-Lobster hook
M007	Metal	Silvery	[#13655 Silvery]-Lobster hook
M008	Metal	Goldem	[#13655 Golden]-Heart pendant
M009	Metal	Goldem	[#13655 Golden]-BFF pendant
M010	Metal	Goldem	[#13655 Golden]-Large o-ring
M011	Metal	Goldem	[#13655 Golden]-Small o-ring
M012	Metal	Goldem	[#13655 Golden]-Main chain
M013	Metal	Goldem	[#13655 Golden]-Extension chain
M014	Metal	Silvery	[#13655 Silvery]-Heart pendant
M015	Metal	Silvery	[#13655 Silvery]-BFF pendant
M016	Metal	Silvery	[#13655 Silvery]-Large o-ring
M017	Metal	Silvery	[#13655 Silvery]-Small o-ring
M018	Metal	Silvery	[#13655 Silvery]-Main chain
M019	Metal	Silvery	[#13655 Silvery]-Extension chain
M020	Metal	Goldem	[#13655 Golden]-BFF pendant
M021	Metal	Goldem	[#13655 Golden]-Main chain
M022	Metal	Goldem	[#13655 Golden]-Extension chain w/ Small o-ring
M023	Metal	Goldem	[#13655 Golden]-Lobster hook w/ Small o-ring
M024	Metal	Silvery	[#13655 Silvery]-BFF pendant
M025	Metal	Silvery	[#13655 Silvery]-Main chain

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M026	Metal	Silvery	[#13655 Silvery]-Extension chain w/ Small o-ring
M027	Metal	Silvery	[#13655 Silvery]-Lobster hook w/ Small o-ring
M028	Metal + coating	Goldem + Hot pink w/ Iridescent glitter	[#13655 Golden]-Heart pendant
M029	Metal + coating	Goldem + Pink w/ Iridescent glitter	[#13655 Golden]-Heart pendant
M030	Metal + coating	Silvery + Purple w/ Iridescent glitter	[#13655 Silvery]-Heart pendant
M031	Metal + coating	Silvery + Lilac w/ Iridescent glitter	[#13655 Silvery]-Heart pendant
M032	Plastic	Translucent	[#13655 Golden]-Fastener - Packaging; [#13655 Silvery]-Fastener - Packaging
M033	Plastic + adhesive	Transparent	[#13655 Golden]-Circle sticker - Packaging;[#13655 Silvery]-Circle sticker - Packaging
M034	Plastic + printing	Transparent + Multicolor	[#13655 Golden]-Laminated of box - Packaging;[#13655 Silvery]-Laminated of box - Packaging

1.GPSR - General Product Safety Regulation
Result:
1. Physical and Mechanical Test

Test No.	Material No.	Description	Test Method	Result
T001	M001	Requirement for sharp points	Reference to EN71 Part 1	PASS
		Requirement for sharp edges	Reference to EN71 Part 1	PASS

2. General Product Labeling

Test No.	Material No.	Description	Result
T001	M001	Address of manufacturer or responsible trading company	Present
		Definite identification of the article	Present

These labeling shall be indicated on the products, or where that is not possible, on its packaging or in documents accompanying the products.

3. Flammability Test

Test No.	Material No.	Description	Test Method	Result
T001	M001	General requirements	Reference to EN71 Part 2	PASS

2.Total Lead and Cadmium Content

Test Method: Acid digestion, analyzed by ICP-OES

Test result:

Test No.	Material No.	Test Parameter	Unit	RL	Test Result
T001	M002 + M003	Lead	mg/kg	10	< RL
		Cadmium	mg/kg	10	< RL
T002	M004 + M005	Lead	mg/kg	10	< RL
		Cadmium	mg/kg	10	< RL
T003	M006	Lead	mg/kg	10	< RL
		Cadmium	mg/kg	10	< RL
T004	M007	Lead	mg/kg	10	< RL
		Cadmium	mg/kg	10	< RL
T005	M008 + M009 + M010	Lead	mg/kg	10	< RL
		Cadmium	mg/kg	10	< RL
T006	M011 + M012 + M013	Lead	mg/kg	10	< RL
		Cadmium	mg/kg	10	< RL
T007	M014 + M015 + M016	Lead	mg/kg	10	< RL
		Cadmium	mg/kg	10	< RL
T008	M017 + M018 + M019	Lead	mg/kg	10	< RL
		Cadmium	mg/kg	10	< RL

Abbreviation: < = less than
 RL = Reporting Limit
 mg/kg = milligram per kilogram
 1% = 10000 mg/kg

Remark:

- * Requirements for Cadmium content according to Annex XVII Entry 23 of Regulation (EC) No 1907/2006 (REACH) and its amendments
- Mixtures and articles produced from plastic material < 0.01 % (100 mg/kg)
 - Coated / painted articles < 0.1 % (1000 mg/kg)
 - Jewellery components < 0.01 % (100 mg/kg)
 - Paints and varnishes (excluding the applicable exemptions) < 0.01 % (100 mg/kg)
- Swiss requirements for cadmium content according to the Switzerland Chemikalien-Risikoreduktions-Verordnung- ChemRRV, 814.81
- Mixtures and articles produced from plastic material < 0.01 % (100 mg/kg)
 - Articles / objects treated with paints / coating with cadmium is prohibited
 - Paints and varnishes < 0.01 % (100 mg/kg)
- ** Requirements for Lead content according to Annex XVII Entry 63 of Regulation (EC) No. 1907/2006 (REACH) and its amendments:
- Jewellery, imitation jewellery, hair accessories, bracelets, necklaces , rings, piercing jewellery, wrist watches, wrist-wear, brooches and cufflinks and parts used for jewellery-making < 0.05%
 - Articles supplied to the general public during normal or reasonably foreseeable conditions of use, be placed in the mouth by children < 0.05%. The limit shall not apply where it can be demonstrated that the rate of lead release from such an article or any such accessible part of an article, whether coated or uncoated, does not exceed 0,05 µg/cm² per hour (equivalent to 0,05 µg/g/h), and, for coated articles, that the coating is sufficient to ensure that this release rate is not exceeded for a period of at least two years of normal or reasonably foreseeable conditions of use of the article.

3.Total Lead

Test Method: Acid digestion, analyzed by ICP-OES / AAS

Test result:

Test No.	Material No.	Test Parameter	Unit	RL	Customer's Requirement	Test Result
T001	M002 + M003	Lead Content	mg/kg	10	100	< RL
T002	M004 + M005	Lead Content	mg/kg	10	100	< RL
T003	M006	Lead Content	mg/kg	10	100	< RL
T004	M007	Lead Content	mg/kg	10	100	< RL
T005	M008 + M009 + M010	Lead Content	mg/kg	10	100	< RL
T006	M011 + M012 + M013	Lead Content	mg/kg	10	100	< RL
T007	M014 + M015 + M016	Lead Content	mg/kg	10	100	< RL
T008	M017 + M018 + M019	Lead Content	mg/kg	10	100	< RL

Abbreviation: < = less than
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 mg/kg = milligram per kilogram

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4.Packaging Waste Total Heavy Metal Content - 94/62/EC

Test Method: Sample digestion, analyzed by ICP-OES / Ultraviolet Visible Spectrophotometer (UV-Vis)

Result:

Test No.	Material No.	Test Parameters	Unit	RL	Regulatory Requirement	Result	Conclusion
T001	M032	Pb	mg/kg	10	-	< RL	-
		Cd	mg/kg	10	-	< RL	-
		Cr (VI)	mg/kg	10	-	< RL	-
		Hg	mg/kg	10	-	< RL	-
		Sum of Pb, Cd, Cr(VI) and Hg	mg/kg	10	100	<RL	Pass
T002	M033	Pb	mg/kg	10	-	< RL	-
		Cd	mg/kg	10	-	< RL	-
		Cr (VI)	mg/kg	10	-	< RL	-
		Hg	mg/kg	10	-	< RL	-
		Sum of Pb, Cd, Cr(VI) and Hg	mg/kg	10	100	<RL	Pass
T003	M034	Pb	mg/kg	10	-	< RL	-
		Cd	mg/kg	10	-	< RL	-
		Cr (VI)	mg/kg	10	-	< RL	-
		Hg	mg/kg	10	-	< RL	-
		Sum of Pb, Cd, Cr(VI) and Hg	mg/kg	10	100	<RL	Pass

Abbreviation: < = less than
 RL = Reporting Limit
 mg/kg = milligram per kilogram

Remark:

- ** According to "European Parliament and Council Directive 94/62/EC of 20 December 1994"; the maximum permissible limit of the sum of the concentration of Lead, Cadmium, Mercury and Hexavalent Chromium is 100ppm.
- *** Single element with an amount of less than reporting limit were not considered by the calculation of the sum. In the case of all elements were less than reporting limit, the result is stated < RL.

5. Polycyclic aromatic hydrocarbons (PAHs)

Test Method: Organic solvent extraction, GCMS

				Test No.	T001(*1)	T002(*1)	T003(*1)
				Material No.	M002	M003	M004
Test Parameter	CAS NO	Unit	RL	Result	Result	Result	Result
Benzo[a]anthracene (BaA)	56-55-3	mg/kg	0.2	-	-	-	-
Benzo[a]pyrene (BaP)	50-32-8	mg/kg	0.2	-	-	-	-
Benzo[b]fluoranthene (BbFA)	205-99-2	mg/kg	0.2	-	-	-	-
Benzo[k]fluoranthene (BkFA)	207-08-9	mg/kg	0.2	-	-	-	-
Benzo[j]fluoranthene (BjFA)	205-82-3	mg/kg	0.2	-	-	-	-
Benzo[e]pyrene (BeP)	192-97-2	mg/kg	0.2	-	-	-	-
Chrysene (CHR)	218-01-9	mg/kg	0.2	-	-	-	-
Dibenzo[a,h]anthracene (DBAhA)	53-70-3	mg/kg	0.2	-	-	-	-

				Test No.	T004(*1)
				Material No.	M005
Test Parameter	CAS NO	Unit	RL	Result	Result
Benzo[a]anthracene (BaA)	56-55-3	mg/kg	0.2	-	-
Benzo[a]pyrene (BaP)	50-32-8	mg/kg	0.2	-	-
Benzo[b]fluoranthene (BbFA)	205-99-2	mg/kg	0.2	-	-
Benzo[k]fluoranthene (BkFA)	207-08-9	mg/kg	0.2	-	-
Benzo[j]fluoranthene (BjFA)	205-82-3	mg/kg	0.2	-	-
Benzo[e]pyrene (BeP)	192-97-2	mg/kg	0.2	-	-
Chrysene (CHR)	218-01-9	mg/kg	0.2	-	-
Dibenzo[a,h]anthracene (DBAhA)	53-70-3	mg/kg	0.2	-	-

Abbreviation: < = less than
 RL = Reporting Limit
 NA = Not Applicable
 mg/kg = milligram per kilogram

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Remark:

* Requirement according to REACH regulation (EC) No. 1907/2006 with Amendment No. 552/2009 Annex XVII Item No. 50 and (EU) No.1272/2013, are summarized as below:

Scope	Parameter	Unit	Maximum permissible limit
Articles with direct as well as prolonged or short-term repetitive contact with the human skin or the oral cavity, under normal or reasonably foreseeable conditions of use ,made of plastic and rubber shall follow below limit:			
Such articles include amongst others: ---sport equipment such as bicycles, golf clubs, racquets ---household utensils, trolleys, walking frames --- tools for domestic use --- clothing, footwear, gloves and sportswear ---watch-straps, wrist-bands, masks, head-bands	Each of 8 listed PAHs	mg/kg	1
Toys, including activity toys, and childcare articles	Each of 8 listed PAHs	mg/kg	0.5

*1 The weight of test portion was less than 50mg, so the test was not performed.

6. Polycyclic aromatic hydrocarbons (PAHs) according to GS Specification - AfPS GS 2019:01 PAK

Test Method: AfPS GS 2019:01 PAK

Test Result:

Test No.				T001(*1)	T002(*1)	T003(*1)
Material No.				M002	M003	M004
Test Parameter	CAS NO	Unit	RL	Result	Result	Result
Anthracene	120-12-7	mg/kg	0.2	-	-	-
Benzo[a]anthracene	56-55-3	mg/kg	0.2	-	-	-
Benzo[a]pyrene(BaP)	50-32-8	mg/kg	0.2	-	-	-
Benzo[b]fluoranthene	205-99-2	mg/kg	0.2	-	-	-
Benzo[k]fluoranthene	207-08-9	mg/kg	0.2	-	-	-
Benzo[j]fluoranthene	205-82-3	mg/kg	0.2	-	-	-
Benzo[g,h,i]perylene	191-24-2	mg/kg	0.2	-	-	-
Benzo[e]pyrene	192-97-2	mg/kg	0.2	-	-	-
Chrysene	218-01-9	mg/kg	0.2	-	-	-
Dibenzo[a,h]anthracene	53-70-3	mg/kg	0.2	-	-	-
Fluoranthene	206-44-0	mg/kg	0.2	-	-	-
Indeno[1,2,3-cd]pyrene	193-39-5	mg/kg	0.2	-	-	-
Naphthalene	91-20-3	mg/kg	0.2	-	-	-
Phenanthrene	85-01-8	mg/kg	0.2	-	-	-
Pyrene	129-00-0	mg/kg	0.2	-	-	-
Sum of, Anthracene, Fluoranthene, Phenanthrene, Pyrene	-	mg/kg	0.2	-	-	-
Sum of 15 PAHs	-	mg/kg	0.2	-	-	-
Category*	-	--	-	2a	2a	2a

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Test No.				T004(*1)
Material No.				M005
Test Parameter	CAS NO	Unit	RL	Result
Anthracene	120-12-7	mg/kg	0.2	-
Benzo[a]anthracene	56-55-3	mg/kg	0.2	-
Benzo[a]pyrene(BaP)	50-32-8	mg/kg	0.2	-
Benzo[b]fluoranthene	205-99-2	mg/kg	0.2	-
Benzo[k]fluoranthene	207-08-9	mg/kg	0.2	-
Benzo[j]fluoranthene	205-82-3	mg/kg	0.2	-
Benzo[g,h,i]perylene	191-24-2	mg/kg	0.2	-
Benzo[e]pyrene	192-97-2	mg/kg	0.2	-
Chrysene	218-01-9	mg/kg	0.2	-
Dibenzo[a,h]anthracene	53-70-3	mg/kg	0.2	-
Fluoranthene	206-44-0	mg/kg	0.2	-
Indeno[1,2,3-cd]pyrene	193-39-5	mg/kg	0.2	-
Naphthalene	91-20-3	mg/kg	0.2	-
Phenanthrene	85-01-8	mg/kg	0.2	-
Pyrene	129-00-0	mg/kg	0.2	-
Sum of, Anthracene, Fluoranthene, Phenanthrene, Pyrene	-	mg/kg	0.2	-
Sum of 15 PAHs	-	mg/kg	0.2	-
Category*	-	--	-	2a

Abbreviation: < = less than
 RL = Reporting Limit
 NA = Not Applicable
 mg/kg = milligram per kilogram

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Remark:

- * PAH maximum permissible limits requirement from the GS-Mark Approval published by the German Federal Institute for Occupational Safety and Health (BAuA)

Parameter	Unit	Category 1	Category 2		Category 3	
		Materials intended to be placed into the mouth, or Materials in toys or articles for children up to 3 years of age with intended long-term skin contact (more than 30 s)	Materials that do not fall into Category 1 with intended or foreseeable long-term skin contact (more than 30 s) or repeated short-term skin contact		Materials not covered by category 1 or 2, with foreseeable short term contact (shorter than 30 s)	
		-	Cat. 2a Use by children	Cat. 2b Other consumer products	Cat. 3a Use by children	Cat. 3b Other consumer products
Benzo[a]pyrene(BaP)	mg/kg	<0.2	<0.2	<0.5	<0.5	<1
Benzo[e]pyrene	mg/kg	<0.2	<0.2	<0.5	<0.5	<1
Benzo[a]anthracene	mg/kg	<0.2	<0.2	<0.5	<0.5	<1
Benzo[b]fluoranthene	mg/kg	<0.2	<0.2	<0.5	<0.5	<1
Benzo[j]fluoranthene	mg/kg	<0.2	<0.2	<0.5	<0.5	<1
Benzo[k]fluoranthene	mg/kg	<0.2	<0.2	<0.5	<0.5	<1
Chrysene	mg/kg	<0.2	<0.2	<0.5	<0.5	<1
Dibenzo[a,h]anthracene	mg/kg	<0.2	<0.2	<0.5	<0.5	<1
Benzo[g,h,i]perylene	mg/kg	<0.2	<0.2	<0.5	<0.5	<1
Indeno[1,2,3-cd]pyrene	mg/kg	<0.2	<0.2	<0.5	<0.5	<1
Naphthalene	mg/kg	<1	<2	<2	<10	<10
Sum of Anthracene Fluoranthene Phenanthrene Pyrene	mg/kg	<1	<5	<10	<20	<50
Sum of 15 PAHs	mg/kg	<1	<5	<10	<20	<50

Limit: Specific evaluation required according to type of foreseeable use.

The definition of "child" means persons before the age of 14 years. "Use by children" includes both active and passive direct contact by children.

- ** Single components with an amount of <0.2 mg/kg were not considered by the calculation of the sum. In the case of all 15 PAHs were not detected, the result is stated < RL
- *1 The weight of test portion was less than 50mg, so the test was not performed.

7. Phthalates content

Test Method: Ref. to CPSC-CH-C1001-09.4

Test Result:

Test Parameter	CAS NO	Unit	RL	Test No.	T001	T002	T003
				Material No.	M002 + M003	M004 + M005	M032
Test Parameter	CAS NO	Unit	RL	Result	Result	Result	Result
Diethylhexyl phthalate (DEHP)	117-81-7	%	0.01	< RL	< RL	< RL	< RL
Dibutyl phthalate (DBP)	84-74-2	%	0.01	< RL	< RL	< RL	< RL
Benzylbutyl phthalate (BBP)	85-68-7	%	0.01	< RL	< RL	< RL	< RL
Diisobutyl phthalate (DIBP)	84-69-5	%	0.01	< RL	< RL	< RL	< RL
Sum (DEHP+DBP+BBP+DIBP)	-	%	0.01	<RL	<RL	<RL	<RL
Diisononyl phthalate (DINP)	28553-12-0, 68515-48-0	%	0.01	< RL	< RL	< RL	< RL
Diisodecyl phthalate (DIDP)	26761-40-0, 68515-49-1	%	0.01	< RL	< RL	< RL	< RL
Di-n-octyl phthalate (DNOP)	117-84-0	%	0.01	< RL	< RL	< RL	< RL
Sum (DINP+ DIDP+ DNOP)	--	%	0.01	<RL	<RL	<RL	<RL
Di-n-pentyl phthalate (DnPP)	131-18-0	%	0.01	< RL	< RL	< RL	< RL
Di-n-hexyl phthalate (DnHP)	84-75-3	%	0.01	< RL	< RL	< RL	< RL
Dicyclohexyl phthalate (DCHP)	84-61-7	%	0.01	< RL	< RL	< RL	< RL
Diisopentyl phthalate (DiPP)	605-50-5	%	0.01	< RL	< RL	< RL	< RL
n-Pentyl-isopentyl phthalate	776297-69-9	%	0.01	< RL	< RL	< RL	< RL
Di(methoxyethyl) phthalate (DMEP)	117-82-8	%	0.01	< RL	< RL	< RL	< RL
1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich (DIHP)	71888-89-6	%	0.01	< RL	< RL	< RL	< RL
1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters (DHNUP)	68515-42-4	%	0.01	< RL	< RL	< RL	< RL
1,2-Benzenedicarboxylic acid, dipentylester, branched and linear	84777-06-0	%	0.01	< RL	< RL	< RL	< RL
1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear	68515-50-4	%	0.01	< RL	< RL	< RL	< RL
1,2-benzenedicarboxylic acid, di-C6-10-alkyl esters; 1,2-benzenedicarboxylic acid, mixed decyl and hexyl and octyl diesters with ≥ 0.3% of dihexyl phthalate (CAS No.: 84-75-3)	68515-51-5 68648-93-1	%	0.01	< RL	< RL	< RL	< RL
Conclusion: Customer's requirement				Pass	Pass	Pass	Pass

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Test Parameter	CAS NO	Test No.		T004	T005
		Unit	RL	M033	M034
Material No.				Result	Result
Diethylhexyl phthalate (DEHP)	117-81-7	%	0.01	< RL	< RL
Dibutyl phthalate (DBP)	84-74-2	%	0.01	< RL	< RL
Benzylbutyl phthalate (BBP)	85-68-7	%	0.01	< RL	< RL
Diisobutyl phthalate (DIBP)	84-69-5	%	0.01	< RL	< RL
Sum (DEHP+DBP+BBP+DIBP)	-	%	0.01	<RL	<RL
Diisononyl phthalate (DINP)	28553-12-0, 68515-48-0	%	0.01	< RL	< RL
Diisodecyl phthalate (DIDP)	26761-40-0, 68515-49-1	%	0.01	< RL	< RL
Di-n-octyl phthalate (DNOP)	117-84-0	%	0.01	< RL	< RL
Sum (DINP+ DIDP+ DNOP)	--	%	0.01	<RL	<RL
Di-n-pentyl phthalate (DnPP)	131-18-0	%	0.01	< RL	< RL
Di-n-hexyl phthalate (DnHP)	84-75-3	%	0.01	< RL	< RL
Dicyclohexyl phthalate (DCHP)	84-61-7	%	0.01	< RL	< RL
Diisopentyl phthalate (DiPP)	605-50-5	%	0.01	< RL	< RL
n-Pentyl-isopentyl phthalate	776297-69-9	%	0.01	< RL	< RL
Di(methoxyethyl) phthalate (DMEP)	117-82-8	%	0.01	< RL	< RL
1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich (DIHP)	71888-89-6	%	0.01	< RL	< RL
1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters (DHNUP)	68515-42-4	%	0.01	< RL	< RL
1,2-Benzenedicarboxylic acid, dipentylester, branched and linear	84777-06-0	%	0.01	< RL	< RL
1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear	68515-50-4	%	0.01	< RL	< RL
1,2-benzenedicarboxylic acid, di-C6-10-alkyl esters; 1,2-benzenedicarboxylic acid, mixed decyl and hexyl and octyl diesters with ≥ 0.3% of dihexyl phthalate (CAS No.: 84-75-3)	68515-51-5 68648-93-1	%	0.01	< RL	< RL
Conclusion: Customer's requirement				Pass	Pass

Abbreviation: < = less than
 RL = Reporting Limit
 % = percentage

Remark:

- According to customer instruction, the maximum permissible limits of phthalates are as follows:

Parameter	Unit	Maximum Permissible Limit
Sum of Dibutyl phthalate (DBP), Benzylbutyl phthalate (BBP), Diethylhexyl phthalate (DEHP) and Diisobutyl phthalate (DIBP)	%	0.1
Sum of Di-n-octyl phthalate (DNOP), Diisodecyl phthalate (DIDP) and Diisononyl phthalate (DINP)	%	0.1
Di-n-pentyl phthalate (DnPP)	%	0.1
Di-n-hexyl phthalate (DnHP)	%	0.1
Dicyclohexyl phthalate (DCHP)	%	0.1
Diisopentyl phthalate (DiPP)	%	0.1
n-Pentyl-isopentyl phthalate	%	0.1
Di(methoxyethyl) phthalate (DMEP)	%	0.1
1,2-benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich (DIHP)	%	0.1
1,2-Benzenedicarboxylic acid, di-C7-11 branched and linear alkyl ester (DHNUP)	%	0.1
1,2-Benzenedicarboxylic acid, dipentylester, branched and linear	%	0.1
1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear	%	0.1
1,2-benzenedicarboxylic acid, di-C6-10-alkyl esters; 1,2-benzenedicarboxylic acid, mixed decyl and hexyl and octyl diesters with $\geq 0.3\%$ of dihexyl phthalate	%	0.1

- Single component with an amount below reporting limit was not considered by the calculation of the sum.

8. Nickel Release

Test Method: Nickel - According to EN 12472:2020 & EN 1811:2023
The tests have been performed in succession.

Test Result :

Test No.	Material No.	Trial	Surface area (cm ²)	Test solution volume (ml)	Dilution volume (ml)	Nickel released (µg·cm ⁻² ·week ⁻¹)	RL (µg·cm ⁻² ·week ⁻¹)
T001	M020	1	1.56	2	5	< RL	0.05
		2	1.56	2	5	< RL	0.05
		3	1.56	2	5	< RL	0.05
		4	1.56	2	5	< RL	0.05
		5	1.56	2	5	< RL	0.05
		6	1.56	2	5	< RL	0.05
T002	M021	1	1.35	2	5	< RL	0.05
		2	1.35	2	5	< RL	0.05
		3	1.35	2	5	< RL	0.05
		4	1.35	2	5	< RL	0.05
		5	1.35	2	5	< RL	0.05
		6	1.35	2	5	< RL	0.05
T003	M022	1	3.11	4	10	< RL	0.05
		2	3.11	4	10	< RL	0.05
		3	3.11	4	10	< RL	0.05
		4	3.11	4	10	< RL	0.05
		5	3.11	4	10	< RL	0.05
		6	3.11	4	10	< RL	0.05
T004	M023	1	0.58	1	5	< RL	0.05
		2	0.58	1	5	< RL	0.05
		3	0.58	1	5	< RL	0.05
		4	0.58	1	5	0.15	0.05
		5	0.58	1	5	0.13	0.05
		6	0.58	1	5	0.13	0.05
T005	M024	1	1.56	2	5	< RL	0.05
		2	1.56	2	5	< RL	0.05
		3	1.56	2	5	< RL	0.05
		4	1.56	2	5	< RL	0.05
		5	1.56	2	5	< RL	0.05
		6	1.56	2	5	< RL	0.05

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T006	M025	1	1.35	2	5	< RL	0.05
		2	1.35	2	5	< RL	0.05
		3	1.35	2	5	< RL	0.05
		4	1.35	2	5	0.06	0.05
		5	1.35	2	5	< RL	0.05
		6	1.35	2	5	0.06	0.05
T007	M026	1	3.11	4	10	< RL	0.05
		2	3.11	4	10	< RL	0.05
		3	3.11	4	10	< RL	0.05
		4	3.11	4	10	< RL	0.05
		5	3.11	4	10	< RL	0.05
		6	3.11	4	10	< RL	0.05
T008	M027	1	0.58	1	5	< RL	0.05
		2	0.58	1	5	< RL	0.05
		3	0.58	1	5	0.47	0.05
		4	0.58	1	5	0.14	0.05
		5	0.58	1	5	0.12	0.05
		6	0.58	1	5	0.14	0.05
T009	M028	1	0.72	1	5	< RL	0.05
		2	0.72	1	5	0.06	0.05
		3	0.72	1	5	< RL	0.05
		4	0.72	1	5	0.33	0.05
		5	0.72	1	5	0.31	0.05
		6	0.72	1	5	0.24	0.05
T010	M029	1	0.72	1	5	< RL	0.05
		2	0.72	1	5	< RL	0.05
		3	0.72	1	5	< RL	0.05
		4	0.72	1	5	0.26	0.05
		5	0.72	1	5	0.28	0.05
		6	0.72	1	5	0.24	0.05
T011	M030	1	0.72	1	5	< RL	0.05
		2	0.72	1	5	< RL	0.05
		3	0.72	1	5	< RL	0.05
		4	0.72	1	5	0.20	0.05
		5	0.72	1	5	0.24	0.05
		6	0.72	1	5	0.27	0.05

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T012	M031	1	0.72	1	5	< RL	0.05
		2	0.72	1	5	< RL	0.05
		3	0.72	1	5	< RL	0.05
		4	0.72	1	5	0.26	0.05
		5	0.72	1	5	0.22	0.05
		6	0.72	1	5	0.24	0.05

Abbreviation: < = less than
 RL = Reporting Limit
 ml = milliliters
 cm² = square centimeters
 µg·cm⁻²·week⁻¹ = micrograms per square centimeter per week (µg/cm²/week)

Remark:

Directive	Item	Maximum Permissible Limit (µg/cm ² /week of nickel migration)
REACH Regulation (EC) No. 1907/2006 and amendment (EC) No. 552/2009 Annex XVII Item 27 (formerly known as 94/27/EC and 2004/96/EC)	Products intended to come into direct and prolonged contact with skin	0.5
	All post assemblies which are inserted into pierced ears and other pierced parts of the human body	0.2

- *1 The sample of trial 1, 2 and 3 were tested according to EN 1811:2023
- *2 The sample of trial 4, 5 and 6 were tested according to EN 12472:2020 & EN 1811:2023

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Sample Photos



- END -

