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Client: ZHEJIANG JIANLI PLASTICS SCIENCE AND TECHNOLOGY CO., LTD
No.326 Wangdao Road Yiwu City Zhejiang China

**Identification/
Model No(s):** CONNECTOR
PP SHEET
POWDER COATED WIRE

Sample Receiving date: 2016-09-23

Testing Period: 2016-09-23 - 2016-09-28

Test Specification:	Test result:
Customer's requirement:	
1. Polycyclic aromatic hydrocarbons (PAHs) - according to GS Specification, AfPS GS 2014:01 PAK	PASS
2. Total Lead Content	PASS
3. Total Cadmium Content	PASS
4. BBP, DBP, DEHP content and DNOP, DINP, DIDP content requirements of REACH regulation (EC) No. 1907/2006 and amendment no. 552/2009 Annex XVII Item 51 & 52 respectively (formerly known as 2005/84/EC)	PASS

For and on behalf of
TÜV Rheinland (Shanghai) Co., Ltd.



2016-10-08 Ryan Chen / Project Engineer

Date Name/Position

*Test result is drawn according to the kind and extent of tests performed.
This test report relates to the a. m. 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.*

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Material List:

Item: CONNECTOR
PP SHEET
POWDER COATED WIRE

Material No.	Material	Color	Location
M001	Plastic	black	ABS
M002	Plastic	white	ABS
M003	Plastic	white	PP
M004	Plastic	white/transparent	PP
M005	Plastic	black/transparent	PP
M006	Coating	white	COATING
M007	Coating	black	COATING

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1. Polycyclic aromatic hydrocarbons (PAHs)

Test Method: AfPS GS 2014:01 PAK

Test Result:

Test No.				T001	T002	T003
Material No.				M001 + M002	M003 + M004 + M005	M006 + M007
Test Parameter	CAS NO	Unit	RL	Result	Result	Result
Acenaphthene	83-32-9	mg/kg	0.2	n.d.	n.d.	n.d.
Acenaphthylene	208-96-8	mg/kg	0.2	n.d.	n.d.	n.d.
Anthracene	120-12-7	mg/kg	0.2	n.d.	n.d.	n.d.
Benzo[a]anthracene	56-55-3	mg/kg	0.2	n.d.	n.d.	n.d.
Benzo[a]pyrene(BaP)	50-32-8	mg/kg	0.2	n.d.	n.d.	n.d.
Benzo[b]fluoranthene	205-99-2	mg/kg	0.2	n.d.	n.d.	n.d.
Benzo[k]fluoranthene	207-08-9	mg/kg	0.2	n.d.	n.d.	n.d.
Benzo[j]fluoranthene	205-82-3	mg/kg	0.2	n.d.	n.d.	n.d.
Benzo[g,h,i]perylene	191-24-2	mg/kg	0.2	n.d.	n.d.	n.d.
Benzo[e]pyrene	192-97-2	mg/kg	0.2	n.d.	n.d.	n.d.
Chrysene	218-01-9	mg/kg	0.2	n.d.	n.d.	n.d.
Dibenzo[a,h]anthracene	53-70-3	mg/kg	0.2	n.d.	n.d.	n.d.
Fluoranthene	206-44-0	mg/kg	0.2	0.2	n.d.	n.d.
Fluorene	86-73-7	mg/kg	0.2	n.d.	n.d.	n.d.
Indeno[1,2,3-cd]pyrene	193-39-5	mg/kg	0.2	n.d.	n.d.	n.d.
Naphthalene	91-20-3	mg/kg	0.2	0.2	n.d.	1.8
Phenanthrene	85-01-8	mg/kg	0.2	n.d.	n.d.	n.d.
Pyrene	129-00-0	mg/kg	0.2	0.8	0.2	n.d.
Sum of Acenaphthylene, Acenaphthene, Anthracene, Fluoranthene, Fluorene, Phenanthrene, Pyrene	-	mg/kg	-	1.0	0.2	n.d.
Sum of 18 PAHs	-	mg/kg	-	1.2	0.2	1.8
Category*	-	-	-	3	3	3

Abbreviation: n.d. = not detected (< Reporting Limit)

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 put into the mouth or materials of toy for children with long term intended skin contact (longer than 30 s)	Materials not covered by category 1, with foreseeable long term skin contact (longer than 30 s) or repeated short-term skin contact		Materials not covered by category 1 or 2, with foreseeable short term contact (shorter than 30s)	
		-	Toys according to directive 2009/48/EC	Other products according to ProdSG	Toys according to directive 2009/48/EC	Other products according to ProdSG
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 Acenaphthylene Acenaphthene Anthracene Fluoranthene Fluorene Phenanthrene Pyrene	mg/kg	<1	<5	<10	<20	<50
Sum of 18 PAHs	mg/kg	<1	<5	<10	<20	<50

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

- ** Single components with an amount of <0.2 mg/kg were not considered by the calculation of the sum. In the case of all 18 PAHs were not detected, the result is stated n.d.

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2.Total Lead Content

 Test Method: CPSC-CH-E1001-08.3, CPSC-CH-E1002-08.3 and CPSC-CH-E1003-09.1
 (Microwave method)

Test result:

Test No.	Material No.	Test Parameter	Unit	RL	Regulatory Requirement	Test Result
T001	M001 + M002	Lead Content	%	0.001	0.05	n.d.
T002	M003 + M004 + M005	Lead Content	%	0.001	0.05	n.d.
T003	M006 + M007	Lead Content	%	0.001	0.05	n.d.

Abbreviation: n.d. = not detected (< Reporting Limit)
 RL = Reporting Limit
 % = percentage

Remark:

* Regulation on Lead:

Country	Legislation	Maximum Permissible Limit
EU	Paragraph 1-6 of Entry 63 of Annex XVII, REACH Regulation (EC) No. 1907/2006	For 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% (by weight of the individual part)
	Paragraph 7-10 of Entry 63 of Annex XVII, REACH Regulation (EC) No. 1907/2006	Articles supplied to the general public during normal or reasonably foreseeable conditions of use, be placed in the mouth by children 0.05% (by weight of the individual part) 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/cm ² 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.

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3.Total Cadmium Content

Test Method: For plastic: EN 1122:2001 (method B)
For metal and other material: Acid digestion, analyzed by AAS/ ICP-OES

Test Result:

Test No.	Material No.	Test Parameter	Unit	RL	Regulatory Requirement	Test Result
T001	M001 + M002	Trial 1	mg/kg	10	100	n.d.
		Trial 2	mg/kg	10	100	n.d.
		Average	mg/kg	10	100	n.d.
T002	M003 + M004 + M005	Trial 1	mg/kg	10	100	n.d.
		Trial 2	mg/kg	10	100	n.d.
		Average	mg/kg	10	100	n.d.
T003	M006 + M007	Trial 1	mg/kg	10	100	n.d.
		Trial 2	mg/kg	10	100	n.d.
		Average	mg/kg	10	100	n.d.

Abbreviation: n.d. = not detected (< Reporting Limit)

RL = Reporting Limit

mg/kg = milligram per kilogram

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Remark:

*Regulations on Cadmium

		Maximum Permissible Limit				
EU	Legislation	Plastic materials	Paint (wet state)	Paint on the painted articles	Paint (high zinc content)	Metal parts of jewellery and imitation jewellery articles and hair accessories
EC	REACH regulation (EC) No. 1907/2006 Annex XVII Item 23 and its amendments (EC) No. 552/2009, (EU) No. 494/2011, (EU) No. 835/2012 and (EU) No. 217/2016.	100mg/kg	100mg/kg	1000mg/kg	1000mg/kg	100mg/kg

		Maximum Permissible Limit
Country	Legislation	Paint, plastic, plating/ coating of surface treatment
Germany	Germany Chemikalien-Verbotsverordnung - ChemVerbotsV, Anhang Abschnitt 18, Okt 1993	100mg/kg
Switzerland	Switzerland Chemikalien-Risikoreduktions-Verordnung-ChemRRV, 814.81, 18 May 2005	100mg/kg

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4. Phthalates

Test Method: Organic solvent extraction, analyzed by GCMS

Test Result:

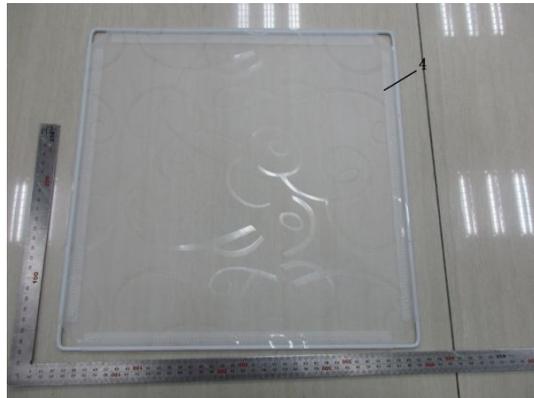
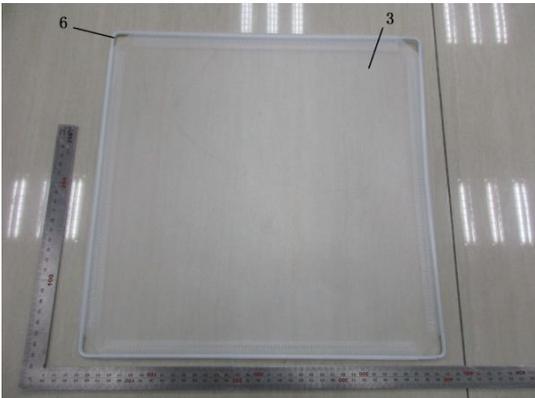
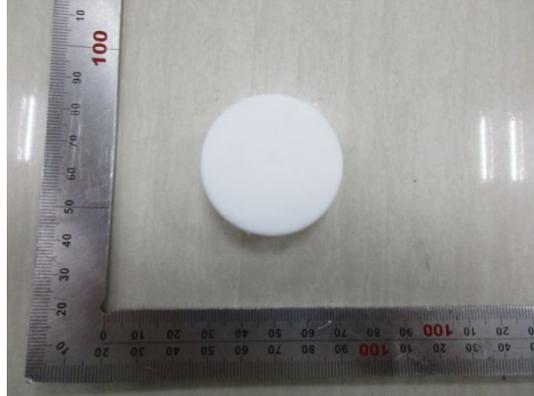
					Test No.	T001
					Material No.	M006 + M007
Test Parameter	CAS NO	Unit	RL	Regulatory Requirement	Result	
Dibutyl phthalate (DBP)	84-74-2	%	0.005	--	n.d.	
Benzylbutyl phthalate (BBP)	85-68-7	%	0.005	--	n.d.	
Diethylhexyl phthalate (DEHP)	117-81-7	%	0.005	--	n.d.	
Sum (DBP+BBP+DEHP)	-	%	NA	0.1	n.d.	
Di-n-octyl phthalate (DNOP)	117-84-0	%	0.005	--	n.d.	
Diisodecyl phthalate (DIDP)	26761-40-0, 68515-49-1	%	0.005	--	n.d.	
Diisononyl phthalate (DINP)	28553-12-0, 68515-48-0	%	0.005	--	n.d.	
Sum (DNOP+DIDP +DINP)	-	%	NA	0.1	n.d.	

Abbreviation: n.d. = not detected (< RL)
 RL = Reporting Limit
 NA = Not Applicable
 % = percentage

Remark:

- * Single component with an amount below reporting limit was not considered by the calculation of the sum. In the case of all Phthalates were not detected, the result is stated n.d.
- ** REACH regulation (EC) No. 1907/2006 and amendment no. 552/2009 Annex XVII Item 51 (formerly known as 2005/84/EC) on BBP, DBP and DEHP and Item 52 (formerly known as 2005/84/EC) on DNOP, DIDP and DINP are employed.

Sample Photos



- END -