

**Test Report**

Number: SZHH01439256

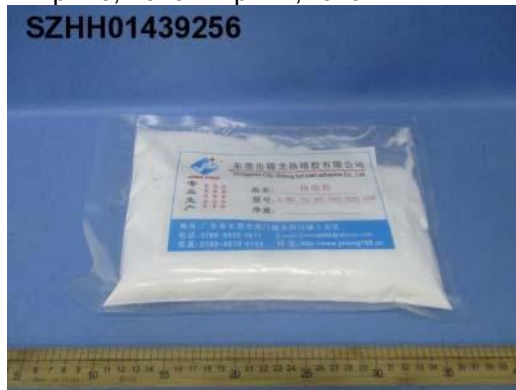
Applicant: TaoTech Digital Technology  
CO., LTD  
SHALANG TOWN.ZHONGSHAN CITY,  
GUANGDONG PROVINCE,JINHUA ZHONG  
ROAD  
WEST DISTRICT  
Attn: HETAO

Date: Apr 17 , 2020

Sample Description:

One (1) submitted sample said to be **Thermoplastic Polyurethane Elastomer Hot Melt Powder** (中文: 热熔粉).

Item No. : **JL-880, 7012, 770, 660, 5100, 5120.**  
Date Sample Received : Apr 10, 2020.  
Testing Period : Apr 10, 2020 ~ Apr 17, 2020.



Tests conducted:

As requested by the applicant, refer to attached page(s) for details.

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Conclusion:

<u>Tested Sample</u>	<u>Test Item</u>	<u>Result</u>
Tested component of submitted sample	Nonylphenol Ethoxylates (NPEO) and Octylphenol Ethoxylates (OPEO) Content	See test conducted
	<u>Standard</u>	
	Organotin Content Requirement in Annex XVII Item 20 of the REACH Regulation (EC) No. 1907/2006 and amendment (EU) No. 552/2009 and (EU) No. 276/2010	Pass
	Phthalates Content Requirement in Annex XVII Entry 51 & 52 of the REACH Regulation (EC) No 1907/2006 and Amendment (EC) No 552/2009	Pass
	Phthalates Content Requirement in Annex XVII Entry 51 & 52 of the REACH Regulation (EC) No 1907/2006 and Amendment (EC) No 552/2009 and (EU) 2018/2005. [(EU) 2018/2005 is applicable to products including toys and childcare articles placed on the market after 7 July 2020]	Pass
	<u>Test Item</u>	
	Mattel QSOP No. 3600 Rev. 8.00 clause 2.3.1 on heavy elements test	Pass

Authorized by:  
For Intertek Testing Services  
Shenzhen Ltd.



Rachel L. Guo  
General Manager

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**Intertek Testing Services Shenzhen Ltd.**  
深圳天祥质量技术服务有限公司

West Side of 1/F and 3,4,5/F of Bldg. 1, 1-5/F of Bldg. 3, Yuanzheng Science and Technology Industrial Park, No.4012, Wuhe Ave. North, Bantian Street, Longgang District, Shenzhen  
深圳市龙岗区坂田街道五和大道北 4012 号元征科技工业园 1 号楼 3、4、5 层及 1 楼西侧半层和 3 号楼整栋 1-5 层

Tel:+86755 26020111  
Fax:+86755 35377118/9  
[www.intertek.com.cn](http://www.intertek.com.cn)  
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## Tests Conducted

1 Nonylphenol (NP), Octylphenol (OP), Nonylphenol Ethoxylates (NPEO) and Octylphenol Ethoxylates (OPEO) Content

By solvent extraction and followed by Gas Chromatographic - Mass Spectrometric (GC-MS) or Liquid Chromatographic - Mass Spectrometric (LC-MS) analysis.

Test item	Result (mg/kg)	Reporting limit (mg/kg)
	Tested component	
	(1)	
Nonylphenol Ethoxylates (NPEO)	ND	10
Octylphenol Ethoxylates (OPEO)	ND	10

ND = Not detected (less than reporting limit)

Tested Component(s): (1) White powder.

2 Organotin Content

With reference to ISO/TS 16179:2012, organotin content was determined by Gas Chromatography Mass Spectrometry (GC-MS) analysis.

EEC Regulated Organotins

Test item	Result (%) of Tin	Reporting limit (%) of Tin	Limit (%) of Tin
	Tested component		
	(1)		
Tri-substituted organotin <sup>^</sup>	ND	0.0001	0.1
Dibutyl Tin (DBT)	ND	0.0001	0.1
Dioctyl Tin (DOT)	ND	0.0001	0.1

The above limit was quoted according to Annex XVII Items 20 of the REACH Regulation (EC) no. 1907/2006 & amendment (EU) No. 552/2009 & (EU) No. 276/2010 for organotin content.

ND = Not detected (less than reporting limit)

<sup>^</sup> = The reported value was calculated by summation of the values of Tri-butyltin, Tri-phenyltin, Tri-methyltin, Tri-octyltin, Tri-cyclohexyltin

Tested Components: (1) White powder.

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## Tests Conducted

3 Phthalate Content

With reference to International Standard ISO 8124-6:2018, and phthalate content was determined by Gas Chromatographic-Mass Spectrometric (GC-MS).

Test Item	CAS No.	Result (%)	Reporting Limit (%)	Limit (%)
		Tested component (1)		
Dibutyl phthalate (DBP)	84-74-2	ND	0.005	--
Di-(2-ethyl hexyl) phthalate (DEHP)	117-81-7	ND	0.005	--
Benzyl butyl phthalate (BBP)	85-68-7	ND	0.005	--
Diisobutyl phthalate (DIBP)	84-69-5	ND	0.005	--
Sum of DBP, DEHP, BBP and DIBP	--	ND	--	0.1
Di-iso-nonyl phthalate (DINP)	28553-12-0/ 68515-48-0	ND	0.005	--
Di-n-octyl phthalate(DNOP)	117-84-0	ND	0.005	--
Di-iso-decyl phthalate (DIDP)	26761-40-0/ 68515-49-1	ND	0.005	--
Sum of DINP, DNOP and DIDP	--	ND	--	0.1

The limit was quoted according to Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) and Amendment (EC) No 552/2009 and (EU) 2018/2005, Annex XVII Entry 51 & 52 on Phthalate Content.

For toys and childcare articles, combination of DIBP to current limit (sum of DBP, DEHP and BBP) was quoted from Commission Regulation (EU) 2018/2005 effective from 7 July 2020.

For non-toys and non-childcare articles, the limit (sum of DBP, DEHP, BBP and DIBP) was quoted from Commission Regulation (EU) 2018/2005 effective from 7 July 2020.

ND = Not detected (less than reporting limit)

Tested Component(s): (1) White powder.

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## Tests Conducted

4 Heavy Elements Analysis

(For surface coating of all products except jewelry and wearing apparel and cosmetics and accessories or peripherals intended for use by adults)

As per Mattel Quality and Safety Operating Procedure No. 3600 Rev. 8.00 clause 2.3.1, acid digestion was used and heavy elements content were determined by Inductively Coupled Argon Plasma Spectrometry.

Element	Result (ppm)		Reporting Limit (ppm)	Limit (ppm)		
	Tested Component			Tot.	Soluble Method 1	Soluble Method 2
	(1)					
Tot. Barium (Ba)	ND		5	--	1000	1000
Tot. Lead (Pb)	ND		5	40	23	--
Tot. Cadmium (Cd)	ND		5	75	17	1000
Tot. Antimony (Sb)	ND		5	--	60	1000
Tot. Selenium (Se)	ND		5	--	460	1000
Tot. Chromium (Cr)	ND		5	--	60	--
Tot. Mercury (Hg)	ND		5	10	--	--
Tot. Arsenic (As)	ND		5	--	25	1000
Tot. Aluminum (Al)	12		10	--	70000	--
Tot. Boron (B)	115		10	--	15000	--
Tot. Cobalt (Co)	ND		10	--	130	--
Tot. Copper (Cu)	ND		10	--	7700	--
Tot. Manganese (Mn)	ND		10	--	15000	--
Tot. Nickel (Ni)	ND		10	10000	930	--
Tot. Strontium (Sr)	ND		10	--	56000	--
Tot. Tin (Sn)	11		4	--	180000	--
Tot. Zinc (Zn)	228		10	--	46000	--

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<u>Element</u>	<u>Result (ppm) θ</u> <u>Soluble Method 1</u>	<u>Reporting</u> <u>Limit</u> <u>(ppm)</u>	<u>Limit (ppm)</u>
	<u>Tested Component</u>		<u>Soluble Method</u>
	<u>Soluble</u> <u>Method</u>		
	<u>(1)</u>		
Sol. Tin (Sn)	ND	2	180000

ND = Not detected (less than reporting limit)

ppm = parts per million = mg/kg

Tot. = Total

Sol. = Soluble

Soluble = ASTM F963 / EN71-3 soluble

Tested component(s): (1) White powder.

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End of report

*The statements of conformity reported have considered the decision rule agreed, namely that Intertek have taken account of measurement uncertainty as calculated by Intertek, and applied according to ILAC-G8/09:2019 (Non-binary acceptance based on guard band w = U) except designation from the customer, regulation or test specification.*

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