



**BUREAU
VERITAS**

CONSUMER PRODUCTS SERVICES DIVISION

TOA-UNION PAINT (THAILAND) CO.,LTD.

Technical Report: (2217)313-0001
Date Received: November 9, 2017

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Page 1 of 4

TOA-UNION PAINT (THAILAND) CO.,LTD.
104 SOI PUKMIT MOO 1, SAMRONGTAI,
PHRAPRADAENG, SAMUTPRAKARN,
10130 THAILAND

Sample Description:	UNION POLYURETHANE		
Manufacturer:	TOA-UNION PAINT (THAILAND) CO.,LTD.	PO No.:	/
Buyer:	/	Style:	/
Country of Origin:	THAILAND	Country of Destination:	/
Color:	/	SKU No.:	/
Test Requested:	HEAVY METALS CONTENT	Material:	/
Previous Report No.:	/	Lot No.:	/

EXECUTIVE SUMMARY:

The sample(s) is rated as **PASS** for the following requirement(s):

- Heavy Metals Content

BUREAU VERITAS CONSUMER PRODUCT SERVICES (THAILAND) LTD.

Administrative Inquiries: Pakaporn Dissayachodsakul Tel: 02-0170650 ext 304
email: Pakaporn_Dissayachodsakul@th.bureauveritas.com

PREPARED BY:

APPROVED BY:

UTHAI NGAMLERTSIRICHAJ
SENIOR ANALYTICAL CHEMIST

Wannapa B.
WANNAPA BOONTA
SOFTLINES MANAGER

Bureau Veritas
Consumer Products Services (Thailand) Ltd.
383 Soi Soonvijai 4 (Rama 9 Soi 13) Rama 9 Rd.,
Bangkapi, Huai Khwang, Bangkok 10310
Tel: 66-2-0170650 Fax: 66-2-0170699
website: cps.bureauveritas.com

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TEST RESULT

Migration of Certain Elements - European Standard EN 71 Part 3: 2013 with Amendment A2: 2017

Test Method : European Standard EN 71 Part 3: 2013 with Amendment A2: 2017, Section 8.

Test Item(s)	Item / Component Description(s)	Location(s)	Style(s)
I001	Paint	-	-
See Soluble Element (Parameter) and its corresponding Maximum Allowable Limit (Req.) in Result Table	Type I	Dry, brittle, powder-like or pliable toy material	
	Type II	Liquid or sticky toy material	
	Type III	Scraped-off toy material	
-	Unit	Req.	Result
Test Item(s)	-	-	I001
Type	-	II	II
Parameter	-	-	-
Aluminium (Al)	mg/kg	1406	ND
Antimony (Sb)	mg/kg	11.3	ND
Arsenic (As)	mg/kg	0.9	ND
Barium (Ba)	mg/kg	375	ND
Boron (B)	mg/kg	300	ND
Cadmium (Cd)	mg/kg	0.3	ND
Chromium III (Cr III)	mg/kg	9.4	ND
Chromium VI (Cr VI)	mg/kg	0.005	ND
Cobalt (Co)	mg/kg	2.6	ND
Copper (Cu)	mg/kg	156	ND
Lead (Pb)	mg/kg	3.4	ND
Manganese (Mn)	mg/kg	300	ND
Mercury (Hg)	mg/kg	1.9	ND
Nickel (Ni)	mg/kg	18.8	ND
Selenium (Se)	mg/kg	9.4	ND
Strontium (Sr)	mg/kg	1125	ND
Tin (Sn)	mg/kg	3750	ND
Organic tin	mg/kg	0.2	ND
Zinc (Zn)	mg/kg	938	ND
Conclusion	-	-	PASS*

Note / Key :

“<” = Less than
 NR = Not requested
 mg/kg = milligram(s) per kilogram = ppm = part(s) per million
 [] = Detection Limit by In House Ion Chromatography Analysis
 { } = Detection Limit by test method with reference to EN 71 Part 3: 2013 with Amendment A2: 2017, Annex G

ND = Not detected
 INCON. = Inconclusive
 Req. = Requirement



Detection Limit (mg/kg) :

For Type I - Al : 562.5 ; Sb : 4.5 ; As : 0.38 ; Ba : 150 ; B : 120 ; Cd : 0.13 ; Cr III : 3.75 ; Cr VI : 0.005 [0.002] ;
Co : 1.05 ; Cu : 62.25 ; Pb : 0.2 ; Mn : 120 ; Hg : 0.75 ; Ni : 7.5 ; Se : 3.75 ; Sr : 450 ; Sn : 1 500 ;
Organic tin : 0.09 { 0.04 } ; Zn : 375

**For Type II - Al : 140.6 ; Sb : 1.13 ; As : 0.09 ; Ba : 37.5 ; B : 30 ; Cd : 0.03 ; Cr III : 0.94 ;
Cr VI : 0.005 [0.002] ; Co : 0.26 ; Cu : 15.6 ; Pb : 0.05 ; Mn : 30 ; Hg : 0.19 ; Ni : 1.88 ;
Se : 0.94 ; Sr : 112.5 ; Sn : 375 ; Organic tin : 0.02 { 0.04 } ; Zn : 93.8**

For Type III - Al : 7 000 ; Sb : 56 ; As : 4.7 ; Ba : 1 875 ; B : 1 500 ; Cd : 1.7 ; Cr III : 46 ; Cr VI : 0.02 [0.002] ;
Co : 13 ; Cu : 770 ; Pb : 2.3 ; Mn : 1 500 ; Hg : 9.4 ; Ni : 93 ; Se : 46 ; Sr : 5 600 ; Sn : 18 000 ;
Organic tin : 1.2 { 2 } ; Zn : 4 600

Remark :

- 1 Results of Cr III and Cr VI were reported as sum of soluble chromium content unless further verified.
- 2 Result(s) of organic tin was (were) calculated by assuming the soluble tin content was wholly contributed from tributyltin (TBT) cation unless further specified.
- 3 Samples **1001** with result (*) has Soluble Tin Content exceeded "Threshold of Tin Content in Terms of Tributyltin" and confirmation of Organic Tin content has been conducted.

SUBMITTED SAMPLE IMAGE

