



Test Report

Report No: CX/2018/50099

Date: 2018/06/05

SUNITA TELECOM CO., LTD.
4E23, NO. 5, HSIN YI ROAD, SEC-5, TAIPEI, TAIWAN, R.O.C.

The following sample(s) was/were submitted and identified by/on behalf of the applicant as :

Sample Submitted By	:	SUNITA TELECOM CO., LTD.
Sample Description	:	3 in 1 OTG USB FLASH DRIVE
Style/Item No.	:	TC303
Sample Receiving Date	:	2018/05/15
Testing Period	:	2018/05/15 to 2018/06/05

Test Result(s) : Please refer to next page(s).

Conclusion : Based on the performed tests on submitted samples, the test results comply with the limits as set by RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU.

Wendy Wei
 Wendy Wei, Supervisor
 Signed for and on behalf of
 SGS TAIWAN LTD.
 Chemical Laboratory - Taipei




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1. Material Fraction Composition

Table 1 The results of screening and chemical test

No.	Type of Components	Description	Figure	MDL Category	Screening		UV	ICP-AES	GC-MS	GC-MS	Note
					Element	Data	Cr (VI)	Pb/Cd/Hg	PBB/PBDE	Phthalate	
1	FLASH DRIVE	1.1 SILVERY METALLIC TUBE		Metals	Pb	n.d.	n.d.	---	---	---	*5
					Cd	n.d.		---			
					Hg	n.d.		---			
					Cr	8410		---			
					Br	n.d.		---			
					Cr(VI)	---		---			
					PBB	---		---			
					PBDE	---		---			
					DIBP	---		---			
	DBP	---	---								
	BBP	---	---								
	DEHP	---	---								
	IRON-GRAY METALLIC CLIP		Metals	Pb	n.d.	---	---	---	---	---	
				Cd	n.d.		---				
				Hg	n.d.		---				
				Cr	n.d.		---				
				Br	n.d.		---				
				Cr(VI)	---		---				
PBB				---	---						
PBDE				---	---						
DIBP				---	---						
DBP	---	---									
BBP	---	---									
DEHP	---	---									
IRON-GRAY METALLIC HOUSING		Metals	Pb	n.d.	---	---	---	---	---		
			Cd	n.d.		---					
			Hg	n.d.		---					
			Cr	n.d.		---					
			Br	n.d.		---					
			Cr(VI)	---		---					
			PBB	---		---					
			PBDE	---		---					
			DIBP	---		---					
DBP	---	---									
BBP	---	---									
DEHP	---	---									

No.	Type of Components	Description		Figure	MDL Category	Screening		UV	ICP-AES	GC-MS	GC-MS	Note	
						Element	Data	Cr (VI)	Pb/Cd/Hg	PBB/PBDE	Phthalate		
1	FLASH DRIVE	1.4	SILVERY METALLIC FRAME		Metals	Pb	n.d.	---	---	---	---	---	
						Cd	n.d.						
						Hg	n.d.						
						Cr	260						
						Br	n.d.						
						Cr(VI)	---						
						PBB	---						
						PBDE	---						
	DIBP	---	---										
	DBP	---	---										
	BBP	---	---										
	DEHP	---	---										
		1.5	BLUE PLASTIC HOUSING		Polymers	Pb	n.d.	---	---	---	---	---	
						Cd	n.d.						
						Hg	n.d.						
						Cr	n.d.						
Br						61400							
Cr(VI)						---							
PBB						n.d.							
PBDE						n.d.							
DIBP	---	---											
DBP	---	---											
BBP	---	---											
DEHP	---	---											
	1.6	SILVERY METALLIC FRAME		Metals	Pb	n.d.	---	---	---	---	---		
					Cd	n.d.							
					Hg	n.d.							
					Cr	n.d.							
					Br	n.d.							
					Cr(VI)	---							
					PBB	---							
					PBDE	---							
DIBP	---	---											
DBP	---	---											
BBP	---	---											
DEHP	---	---											
	1.7	BLUE PLASTIC HOUSING		Polymers	Pb	n.d.	---	---	---	---	---		
					Cd	n.d.							
					Hg	n.d.							
					Cr	n.d.							
					Br	79200							
					Cr(VI)	---							
					PBB	n.d.							
					PBDE	n.d.							
DIBP	n.d.	---											
DBP	n.d.	---											
BBP	n.d.	---											
DEHP	n.d.	---											

No.	Type of Components	Description		Figure	MDL Category	Screening		UV	ICP-AES	GC-MS	GC-MS	Note	
						Element	Data	Cr (VI)	Pb/Cd/Hg	PBB/PBDE	Phthalate		
1	FLASH DRIVE	1.8	BLACK PLASTIC HOUSING		Polymers	Pb	n.d.	---	---	---	---	---	
						Cd	n.d.						
						Hg	n.d.						
						Cr	n.d.						
						Br	103000						
						Cr(VI)							
						PBB							
						PBDE							
						DIBP	n.d.						
						DBP	n.d.						
						BBP	n.d.						
						DEHP	n.d.						
						Pb	n.d.						
						Cd	n.d.						
						Hg	n.d.						
	Cr	123000											
	Br	n.d.											
	Cr(VI)												
	PBB												
	PBDE												
	DIBP	---											
	DBP	---											
	BBP	---											
	DEHP	---											
	Pb	n.d.											
	Cd	n.d.											
	Hg	n.d.											
	Cr	n.d.											
	Br	n.d.											
	Cr(VI)												
PBB													
PBDE													
DIBP	n.d.												
DBP	n.d.												
BBP	n.d.												
DEHP	n.d.												



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Test Item	MDL (mg/kg)			Screening threshold	Test method	
	Category Substance	Polymers	Composite Material			Metals
Screening	Pb	50	100	100	500	With reference to IEC 62321-3-1 (2013)
	Cd	50	50	50		
	Hg	50	100	100		
	Cr	50	100	100		
	Br	50	100	n.a.		
	DIBP		500		500	With reference to IEC 62321-8: 2017 (modify)
	DBP		500		500	
	BBP		500		500	
	DEHP		500		500	

Test Item (s)	Test method	MDL	Unit
Cr(VI)	With reference to IEC 62321-7-2 (2017) and performed by UV-VIS. (For Polymers and Electronics)	8	mg/kg
	With reference to IEC 62321-7-1 (2015) and performed by UV-VIS. (For Coatings on Metals) (#2)	0.1	µg/cm ²
Pb/Cd	With reference to IEC 62321-5 (2013) and performed by ICP-AES.	2	mg/kg
Hg	With reference to IEC 62321-4 (2013) and performed by ICP-AES.	2	mg/kg

Test Item (s)	Unit	Method	MDL (mg/kg)	
PBBs				
Monobromobiphenyl	mg/kg	With reference to IEC 62321-6 (2015) and performed by GC/MS.	5	
Dibromobiphenyl	mg/kg		5	
Tribromobiphenyl	mg/kg		5	
Tetrabromobiphenyl	mg/kg		5	
Pentabromobiphenyl	mg/kg		5	
Hexabromobiphenyl	mg/kg		5	
Heptabromobiphenyl	mg/kg		5	
Octabromobiphenyl	mg/kg		5	
Nonabromobiphenyl	mg/kg		5	
Decabromobiphenyl	mg/kg		5	
PBDEs				
Monobromodiphenyl ether	mg/kg		5	
Dibromodiphenyl ether	mg/kg		5	
Tribromodiphenyl ether	mg/kg		5	
Tetrabromodiphenyl ether	mg/kg		5	
Pentabromodiphenyl ether	mg/kg		5	
Hexabromodiphenyl ether	mg/kg		5	
Heptabromodiphenyl ether	mg/kg		5	
Octabromodiphenyl ether	mg/kg	5		
Nonabromodiphenyl ether	mg/kg	5		
Decabromodiphenyl ether	mg/kg	5		
DIBP (CAS No.: 84-69-5)	mg/kg	With reference to IEC 62321-8 (2017). Analysis was performed by GC/MS.	50	
DBP (CAS No.: 84-74-2)	mg/kg		50	
BBP (CAS No.: 85-68-7)	mg/kg		50	
DEHP (CAS No.: 117-81-7)	mg/kg		50	

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1. mg/kg = ppm
2. MDL = Method detection limit
3. n.d. = not detected or lower than MDL
4. "---" = not conducted
5. n.a. = not applicable
6. " - " = Not Regulated
7. The XRF result of Br for metal sample is conducted from semi-quantitative method of polymer. If the Br result is shown as n.d., the reading will be less than 100ppm.
8. (#2):
 - a. The sample is positive for Cr(VI) if the Cr(VI) concentration is greater than 0.13 $\mu\text{g}/\text{cm}^2$.
The coating is considered to contain Cr(VI).
 - b. The sample is negative for Cr(VI) if Cr(VI) is n.d. (concentration less than 0.10 $\mu\text{g}/\text{cm}^2$).
The coating is considered a non-Cr(VI) based coating.
 - c. The result between 0.10 $\mu\text{g}/\text{cm}^2$ and 0.13 $\mu\text{g}/\text{cm}^2$ is considered to be inconclusive - unavoidable coating variations may influence the determination.

9. Magnetic samples can not be located on test position and there are breakdown risks on XRF equipment. Therefore, this kind of sample will be conducted chemical test directly.
10. If the test result by EDXRF analysis is greater than XRF screening threshold, the test sample should be further conducted by chemical test.

Mark	Description of Mark
*1	The sample weight is not enough to conduct chemical tests.
*2	The item is exempted from EU RoHS directive.
--*2	The item might be exempted from EU RoHS directive.
*3	The result was retested after regetting the same sample from client.
*4	The sample is provided separately from the client.
*5	Adopting modified IEC 62321-7-1(2015), due to the test area less than 25 cm^2
*6	The test item was tested by dry base.
*7	This sample follows requirement of client to conduct directly chemical tests.