

## Test Report

No. SH9002115/CHEM

Date: Jan. 9, 2009

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EASYROLL TECHNOLOGY (HK) LIMITED

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

Sample Name : NYLON (GRAY)  
SGS Ref No. : SHD002900223  
Part No. : EASYROLL

Sample Receiving Date : Jan.06, 2009  
Testing Period : Jan.06– 09, 2009

Test Requested : In accordance with the RoHS Directive 2002/95/EC, and its amendment directives.

Test Method : With reference to IEC 62321/2<sup>nd</sup> CDV (111/95/CDV)  
Procedures for the Determination of Levels of Regulated Substances in  
Electrotechnical Products  
(1) Determination of Cadmium by ICP.  
(2) Determination of Lead by ICP.  
(3) Determination of Mercury by ICP.  
(4) Determination of Hexavalent Chromium by Colorimetric Method.  
(5) Determination of PBBs and PBDEs by GC/MS.

Test Results : Please refer to next pages

Conclusion : Based on the performed tests on submitted samples, the results comply with the  
RoHS Directive 2002/95/EC and its subsequent amendments.

Signed for and on behalf of  
SGS-CSTC Chemical Laboratory



Sandy Hao  
Lab Manager

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SHCHEM 1835080

Test results by chemical method (Unit: mg/kg)

Test Item(s):	Method (refer to)	1	MDL	RoHS Limit
Cadmium(Cd)	(1)	ND	2	100
Lead (Pb)	(2)	ND	2	1000
Mercury (Hg)	(3)	ND	2	1000
Hexavalent Chromium (CrVI) by alkaline extraction	(4)	ND	2	1000
Sum of PBBs	(5)	ND	-	1000
Monobromobiphenyl		ND	5	-
Dibromobiphenyl		ND	5	-
Tribromobiphenyl		ND	5	-
Tetrabromobiphenyl		ND	5	-
Pentabromobiphenyl		ND	5	-
Hexabromobiphenyl		ND	5	-
Heptabromobiphenyl		ND	5	-
Octabromobiphenyl		ND	5	-
Nonabromobiphenyl		ND	5	-
Decabromobiphenyl		ND	5	-
Sum of PBDEs		ND	-	1000
Monobromodiphenyl ether		ND	5	-
Dibromodiphenyl ether		ND	5	-
Tribromodiphenyl ether		ND	5	-
Tetrabromodiphenyl ether		ND	5	-
Pentabromodiphenyl ether		ND	5	-
Hexabromodiphenyl ether		ND	5	-
Heptabromodiphenyl ether		ND	5	-
Octabromodiphenyl ether		ND	5	-
Nonabromodiphenyl ether	ND	5	-	
Decabromodiphenyl ether	ND	5	-	

**Test Part Description:**

- Gray plastic pellet

**Note:**

- (1) mg/kg = ppm
- (2) ND = Not Detected
- (3) MDL = Method Detection Limit
- (4) The exemption of DecaBDE in polymeric application according 2005/717/EC was overruled by the European Court of Justice by its decision of 01.04.2008. Subsequently DecaBDE will be included in the sum of PBDE after 01.07.2008.
- (5) "-" = Not Regulated
- (6) The maximum permissible limit is quoted from the document 2005/618/EC amending RoHS directive 2002/95/EC

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Sample photo:



SGS authenticate the photo on original report only

\*\*\* End of Report \*\*\*

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## TEST REPORT

No. : SHMR090100049-2

Date : Feb. 10, 2009

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EASYROLL TECHNOLOGY (HK) LIMITED

THIS REPORT IS TO SUPERSEDE TEST REPORT NO.SHMR090100049-1 DATE: 2009/02/06

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

Sample Name : NYLON (GRAY)  
Sample No. : SHMR090100049  
SGS Ref. No. : SHD002900223  
Model No. : EASYROLL  
Test Required : Hardness, Taber abrasion, Dynamic coefficient of friction, IZOD impact strength,  
Water absorption  
Date of Receipt : Jan. 06, 2009  
Test Period : Jan. 06, 2009 to Jan. 21, 2009  
Test result(s) : Please refer to the following page(s)

\*\*\*\*\*To be continued\*\*\*\*\*

Signed for SGS-CSTC Standards  
Technical Services Co., Ltd

Ivy Zhu

Ivy Zhu  
Lab Technical Supervisor

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SHMR 005073

# TEST REPORT

No. : SHMR090100049-2

Date : Feb. 10, 2009

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Sample Description: Gray plastic part, Gray plastic particle

Lab Environmental Condition: 23±2°C, 50±5%RH

Test Result:

No.	Test item	Test method	Test condition		Test result
1	Hardness	ISO 7619:2004	Type D Specimen thickness: 6.5mm Read interval: 15s		D: 15/80
2	Taber abrasion	ASTM D1044-05	Wheel: CS-17 Load: 500g Cycles: 5000		Weight loss: 1mg
3	Dynamic coefficient of friction	ISO 8295:1995 and client's requirement	Specimen thickness: 3.52mm Test speed: 150mm/min	Precondition: 23°C, 50%RH, 88h	Dynamic coefficient of friction, $\mu_D$ : 0.235 Standard deviation:0.024
				Precondition: 23°C, 95%RH, 24h	Dynamic coefficient of friction, $\mu_D$ : 0.225 Standard deviation:0.032
4	IZOD impact strength	ASTM D256-06a <sup>e1</sup> Method A and client's requirement	Specimen width: 6.4mm The capacity of pendulum: 2J	Precondition: 80°C, 12h	61 J/m C (complete break)
				Precondition: -60°C, 12h	52 J/m C(complete break)
				Precondition: 23°C, 40h	63 J/m C(complete break)
5	Water absorption	ASTM D570-98	Drying condition: 50°C,24h Immersion condition: 23°C,24h Specimen thickness: 2.1mm Specimen diameter: Φ80mm		2.11%

Note: 1. Test specimens of test item 1-2, 4-5 were gray plastic part and test item 3 were injection molded.

2. The test item 3 was carried out by SGS Guangzhou laboratory.

\*\*\*\*\*End of report\*\*\*\*\*

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SHMR 005074