

Test Report

No. SH9128646/CHEM

Date: Jul. 6, 2009

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CHEVRON PHILLIPS CHEMICALS (SHANGHAI) CORPORATION
ROOM 1811, SHANGHAI MART, 2299 YANAN ROAD (W) SHANGHAI, P.R.C.

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

Sample Name : K-RESIN
SGS Ref No. : 11973084-14
Part No. : KR03NW
Main substance : STYRENE, BUTADIENE

Sample Receiving Date : Jul.02, 2009
Testing Period : Jul.02 – 06, 2009

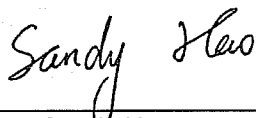
Test Requested : (1) In accordance with the RoHS Directive 2002/95/EC, and its amendment directives
(2) As specified by client, to test the specified material for compliance with the European Standard on Safety of Toys, EN 71 Part 3:1994+ A1:2000 + AC:2002 – Migration of Certain Elements.

Test Method : (1) With reference to IEC 62321:2008
(1-1) Determination of Cadmium by ICP.
(1-2) Determination of Lead by ICP.
(1-3) Determination of Mercury by ICP.
(1-4) Determination of Hexavalent Chromium by Colorimetric Method.
(1-5) Determination of PBBs and PBDEs by GC/MS.
(2) With reference to EN 71 Part 3:1994 + A1:2000+ AC:2002 – Migration of Certain Elements, Analysis was performed by Inductively Coupled Argon Plasma – Atomic Emission Spectrometer (ICP-AES).

Test Results : Please refer to next pages

Conclusion : (1) Based on the performed tests on submitted samples, the results comply with the RoHS Directive 2002/95/EC and its subsequent amendments.
(2) When tested as specified, the specified material of the submitted samples comply with the stated requirements of the European Standard EN 71 Part3:1994 + A1:2000+ AC:2002.

Signed for and on behalf of
SGS-CSTC Chemical Laboratory



Sandy Hao
Lab Manager

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

(1) Cadmium, Lead, Mercury, Hexavalent Chromium and PBBs/PBBEs Content

Test Item(s):	Method (refer to)	1	MDL	RoHS Limit
Cadmium(Cd)	(1-1)	ND	2	100
Lead (Pb)	(1-2)	ND	2	1000
Mercury (Hg)	(1-3)	ND	2	1000
Hexavalent Chromium (CrVI)	(1-4)	ND	2	1000
Sum of PBBs	(1-5)	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	-	

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 is 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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(2) EN 71 Part3:1994+ A1:2000 + AC:2002 – Migration of Certain Element

Element	Method (refer to)	1	MDL	Limit
Soluble Lead (Pb)	(1)	ND	5	90
Soluble Antimony (Sb)		ND	5	60
Soluble Arsenic (As)		ND	2.5	25
Soluble Barium (Ba)		ND	10	1000
Soluble Cadmium (Cd)		ND	5	75
Soluble Chromium (Cr)		ND	5	60
Soluble Mercury (Hg)		ND	6	60
Soluble Selenium (Se)		ND	10	500

Note:

1. mg/kg = ppm
2. ND = Not Detected
3. MDL = Method Detection Limit

Test Part Description:

1. Transparent plastic pellet

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Sample photo:



SGS authenticate the photo on original report only

*** End of Report ***

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雪佛龙菲利普斯化工贸易(上海)有限公司
上海市延安西路 2299 号上海世贸商城 1811 室

委托检验的样品及客户对样品的说明如下:

样品名称 : K-树脂
SGS 相关号 : 11973084-14
型号 : KR03NW
主要成份 : 苯乙烯, 丁二烯

样品收到日期 : 2009-07-02
样品试验日期 : 2009-07-02—2009-07-06

试验要求 : (1) 参照 RoHS 指令 2002/95/EC 及后续修正指令。
(2) 应客户要求, 为通过欧洲标准中玩具安全要求, 根据 EN 71 Part 3:1994+ A1:2000 + AC:2002 测定指定样品的几种元素的转移量。

试验方法 : (1) 参照 IEC 62321:2008:
(1-1) 用 ICP 测定镉的含量
(1-2) 用 ICP 测定铅的含量
(1-3) 用 ICP 测定汞的含量
(1-4) 用比色法测定六价铬的含量
(1-5) 用 GC/MS 测定 PBBs(多溴联苯)和 PBDEs(多溴二苯醚) 的含量
(2) 参照 EN 71 Part 3:1994+ A1:2000 + AC:2002 采用电感耦合等离子体发射光谱法(ICP- AES) 进行分析测定重金属元素含量。

试验结果 : 见后续页

试验结论 : (1) 基于所送样品进行的测试, 测试结果与欧盟 RoHS 指令 2002/95/EC 以及后续修正指令的要求相符。
(2) 按检测要求, 委托的指定样品遵从欧洲标准 EN71 Part 3:1994+ A1:2000+ AC:2002 的要求。

SGS-CSTC 化学实验室授权签字

郝金玉
实验室经理

本报告是发布日期为 2009 年 07 月 06 日编号为 SH9128646/CHEM 英文检测报告的中文译本。如有异议, 以英文版本为准。

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化学方法的试验结果 (单位: mg/kg)

(1) 镉, 铅, 汞, 六价铬和 PBBs(多溴联苯)和 PBDEs(多溴联苯醚)含量

测试项目:	方法 (参见)	1	MDL	RoHS 限值
镉(Cd)	(1-1)	ND	2	100
铅(Pb)	(1-2)	ND	2	1000
汞(Hg)	(1-3)	ND	2	1000
六价铬(Cr VI)	(1-4)	ND	2	1000
多溴联苯之和(PBBs)	(1-5)	ND	-	1000
一溴联苯		ND	5	-
二溴联苯		ND	5	-
三溴联苯		ND	5	-
四溴联苯		ND	5	-
五溴联苯		ND	5	-
六溴联苯		ND	5	-
七溴联苯		ND	5	-
八溴联苯		ND	5	-
九溴联苯		ND	5	-
十溴联苯		ND	5	-
多溴二苯醚之和(PBDEs)		ND	-	1000
一溴二苯醚		ND	5	-
二溴二苯醚		ND	5	-
三溴二苯醚		ND	5	-
四溴二苯醚		ND	5	-
五溴二苯醚		ND	5	-
六溴二苯醚		ND	5	-
七溴二苯醚		ND	5	-
八溴二苯醚		ND	5	-
九溴二苯醚	ND	5	-	
十溴二苯醚##	ND	5	-	

备注:

- (1) 毫克每千克=百万分之一(mg/kg=ppm)
- (2) ND =未检出
- (3) MDL =检测极限值
- (4) ##=根据欧洲法庭 2008 年 4 月 1 日的决议, 2005/717/EC 中关于聚合物样品中十溴二苯醚的豁免被否决。自 2008 年 7 月 1 日起, 十溴二苯醚已被包含于多溴二苯醚的总和计算之中
- (5) 多溴二苯醚 = 多溴联苯醚
- (6) "-" = 未规定
- (7) 最大允许极限值引用自 2002/95/EC RoHS 指令和后续修正指令 2005/618/EC。

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(2) EN 71 Part3:1994 + A1:2000+ AC:2002- 几种元素的转移

元素:	方法 (参见)	1	MDL	上限
可溶性铅 (Pb)	(1)	ND	5	90
可溶性锑 (Sb)		ND	5	60
可溶性砷 (As)		ND	2.5	25
可溶性钡 (Ba)		ND	10	1000
可溶性镉 (Cd)		ND	5	75
可溶性铬 (Cr)		ND	5	60
可溶性汞 (Hg)		ND	6	60
可溶性硒 (Se)		ND	10	500

备注:

- (1) 毫克每千克=百万分之一(mg/kg=ppm)
- (2) ND =未检出
- (3) MDL =检测极限值

测试部件外观描述:

- 1. 透明塑料粒子

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