

## 测试报告

No. SHAEC1725797104

日期: 2017年11月29日 第1页,共9页

无锡兴达泡塑新材料股份有限公司  
无锡市锡山区东港镇锡港南路88号

以下测试之样品是由申请者所提供及确认:可发性聚苯乙烯

SGS工作编号: SP17-039906 - SUZ  
型号: 普通型  
主要成分: 苯乙烯  
样品接收日期: 2017年11月24日  
测试周期: 2017年11月24日 - 2017年11月29日  
测试要求: 根据客户要求测试  
测试方法: 请参见下一页  
测试结果: 请参见下一页  
结论: 基于所送样品进行的测试, 镉、铅、汞、六价铬、多溴联苯(PBBs)、多溴二苯醚(PBDEs)的测试结果不超过欧盟RoHS指令2011/65/EU附录II的修正指令(EU) 2015/863的限值要求。

通标标准技术服务(上海)有限公司  
授权签名

Marry Ma 马广媛  
批准签署人

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测试结果:

### 测试样品描述:

样品编号	SGS样品ID	描述
SN1	SHA17-257971.002	白色固体颗粒

备注:

- (1) 1 mg/kg = 0.0001%
- (2) MDL = 方法检测限
- (3) ND = 未检出 (< MDL)
- (4) "-" = 未规定

### RoHS指令2011/65/EU附录II的修正指令(EU) 2015/863

测试方法: 参考IEC 62321-4:2013+AMD1:2017, IEC 62321-5:2013, IEC 62321-7-2:2017和IEC 62321-6:2015, 采用ICP-OES, UV-Vis和GC-MS进行分析。

测试项目	限值	单位	MDL	002
镉(Cd)	100	mg/kg	2	ND
铅(Pb)	1000	mg/kg	2	ND
汞(Hg)	1000	mg/kg	2	ND
六价铬 (Cr(VI))	1000	mg/kg	8	ND
多溴联苯之和(PBBs)	1000	mg/kg	-	ND
一溴联苯	-	mg/kg	5	ND
二溴联苯	-	mg/kg	5	ND
三溴联苯	-	mg/kg	5	ND
四溴联苯	-	mg/kg	5	ND
五溴联苯	-	mg/kg	5	ND
六溴联苯	-	mg/kg	5	ND
七溴联苯	-	mg/kg	5	ND
八溴联苯	-	mg/kg	5	ND
九溴联苯	-	mg/kg	5	ND
十溴联苯	-	mg/kg	5	ND
多溴二苯醚之和(PBDEs)	1000	mg/kg	-	ND
一溴二苯醚	-	mg/kg	5	ND
二溴二苯醚	-	mg/kg	5	ND
三溴二苯醚	-	mg/kg	5	ND
四溴二苯醚	-	mg/kg	5	ND



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测试项目	限值	单位	MDL	002
五溴二苯醚	-	mg/kg	5	ND
六溴二苯醚	-	mg/kg	5	ND
七溴二苯醚	-	mg/kg	5	ND
八溴二苯醚	-	mg/kg	5	ND
九溴二苯醚	-	mg/kg	5	ND
十溴二苯醚	-	mg/kg	5	ND

备注:

(1) 最大允许限值引用自RoHS指令(EU) 2015/863。

IEC 62321系列等同于 EN 62321系列

[http://www.cenelec.eu/dyn/www/f?p=104:30:1742232870351101:::FSP\\_ORG\\_ID,FSP\\_LANG\\_ID:1258637,25](http://www.cenelec.eu/dyn/www/f?p=104:30:1742232870351101:::FSP_ORG_ID,FSP_LANG_ID:1258637,25)

(2) 2015年6月4号发表在欧盟官方杂志(官方公报)上的RoHS指令(EU) 2015/863附录II限值中还包括邻苯二甲酸酯BBP, DBP, DEHP和DIBP。新的指令限制了电子电器产品的每一个均一材质中邻苯二甲酸酯含量不得超过0.1%。

(3) 2021年7月22号开始, DEHP, BBP, DBP 和 DIBP的限制适用于医疗器械, 包括体外医疗器械, 监控仪表, 包括工业监测和控制仪器。

(4) DEHP, BBP, DBP 和 DIBP的限制不适用于2019年7月22日前投放市场的电缆及电子电气产品中用于维修、重复利用、功能更新及容量提升的备用配件以及2021年7月22日前投放市场的医疗器械, 包括体外医疗器械, 监控仪表, 包括工业监测和控制仪器。

(5) DEHP、BBP 和 DBP的限制不适用于玩具产品, 因为No.1907/2006附录XVII第51条已对玩具产品中的DEHP、BBP 和 DBP含量进行了限制。

## 卤素

测试方法: 参照EN 14582: 2016方法测定, 采用 IC进行分析。

测试项目	单位	MDL	002
氟 (F)	mg/kg	50	ND
氯 (Cl)	mg/kg	50	ND
溴 (Br)	mg/kg	50	ND
碘 (I)	mg/kg	50	ND

## 多环芳香烃(PAHs)

测试方法: 参考AfPS GS 2014:01 PAK方法测试, 采用 GC-MS进行分析。

测试项目	单位	MDL	002
苯并(a)芘 (BaP)	mg/kg	0.1	ND



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测试项目	单位	MDL	002
苯并(e)芘 (BeP)	mg/kg	0.1	ND
苯并(a)蒽 (BaA)	mg/kg	0.1	ND
苯并(k)荧蒽 (BkF)	mg/kg	0.1	ND
屈 (CHR)	mg/kg	0.1	ND
二苯并(a,h)蒽(DBA)	mg/kg	0.1	ND
苯并(g,h,i)芘(二萘嵌苯) (BPE)	mg/kg	0.1	ND
茚并(1,2,3-c,d)芘 (IPY)	mg/kg	0.1	ND
苊烯(ANY)	mg/kg	0.1	ND
苊(萘嵌戊烷) (ANA)	mg/kg	0.1	ND
芴 (FLU)	mg/kg	0.1	ND
菲 (PHE)	mg/kg	0.1	ND
芘 (PYR)	mg/kg	0.1	ND
蒽 (ANT)	mg/kg	0.1	ND
荧蒽 (FLT)	mg/kg	0.1	ND
7项多环芳香烃总和[苊烯(ANY),苊(萘嵌戊烷) (ANA),芴 (FLU),菲 (PHE),芘 (PYR),蒽 (ANT),荧蒽 (FLT)]	mg/kg	-	ND
萘 (NAP)	mg/kg	0.1	0.3
18项多环芳香烃总和	mg/kg	-	0.3
苯并(b)荧蒽 (BbF)和苯并(j)荧蒽 (BjF)	mg/kg	0.1	ND
材料分类	-	-	3
5-甲基屈	mg/kg	0.1	ND

### 全氟辛烷磺酸 (PFOS)和全氟辛酸(PFOA)

测试方法: 参照US EPA 3550C: 2007. 采用HPLC-MS测试.

测试项目	限值	单位	MDL	002
全氟辛烷磺酸(PFOS)及衍生物 <sup>^</sup>	1000	mg/kg	10	ND
全氟辛酸 (PFOA)	-	mg/kg	10	ND

备注:

- (1) 最大允许限制引用自(EC) No. 850/2004的修订指令欧盟决议(EU) No. 757/2010.
  - (2) <sup>^</sup>= PFOS包含全氟辛烷磺酸(PFOS), 全氟辛基磺酰胺(PFOA), 2-(N-乙基全氟辛基磺酰胺)乙醇(EtFOSE), N-甲基全氟辛烷磺酰胺(MeFOA), N-乙基全氟辛烷磺酰胺(EtFOA)和2-(N-甲基全氟辛基磺酰胺)乙醇(MeFOSE)。
- 检测报告仅用于客户科研、教学、内部质量控制、产品研发等目的, 仅供内部参考。



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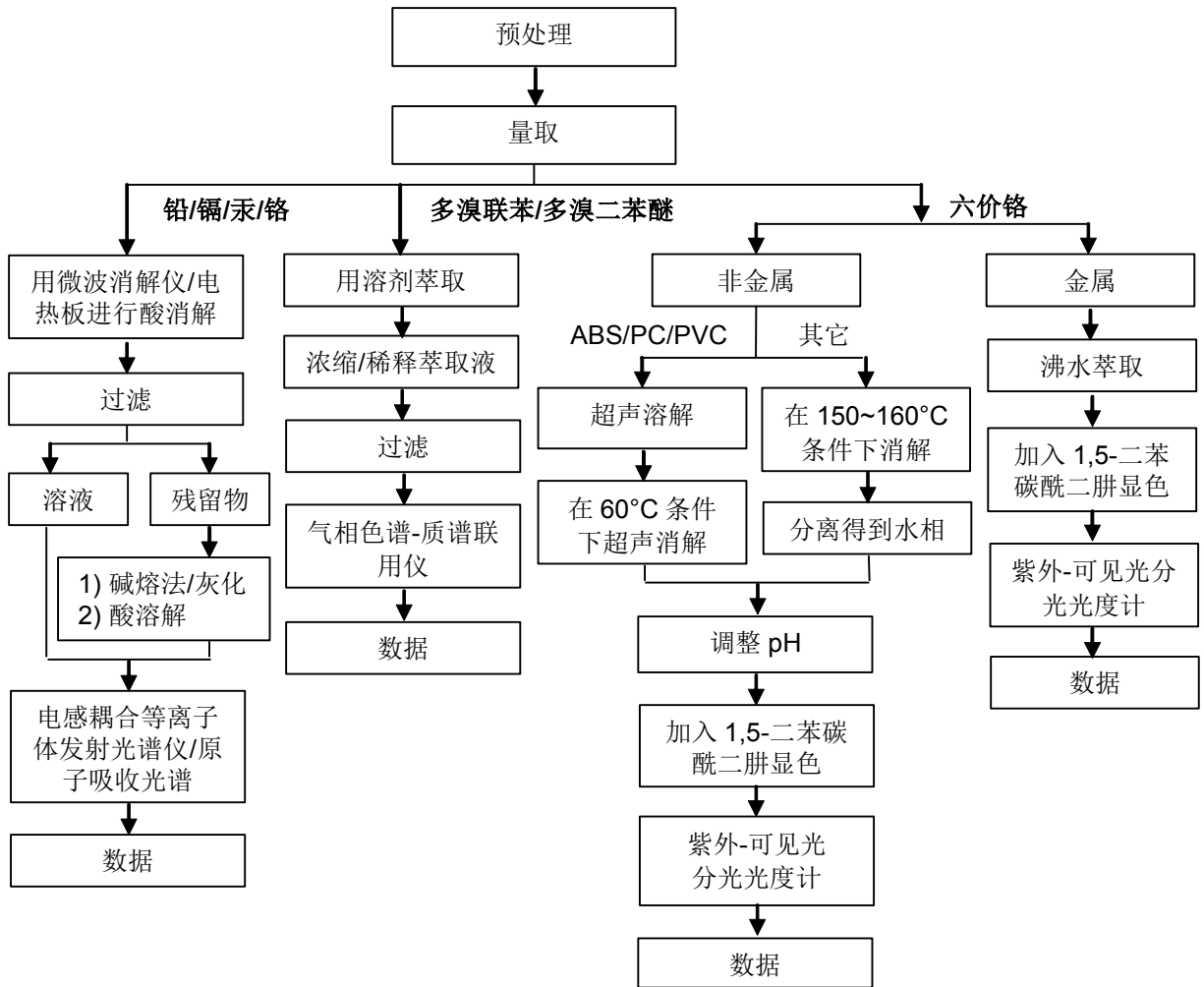
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附件

## Pb/Cd/Hg/Cr<sup>6+</sup>/PBBs/PBDEs 测试流程图

- 1) 分析人员: 金叶/徐刚/杨小龙 /宋珂静
- 2) 项目负责人: 施青/黄婷/徐亮/王晓艳
- 3) 样品按照下述流程被完全消解 (六价铬和多溴联苯/多溴二苯醚测试除外)。



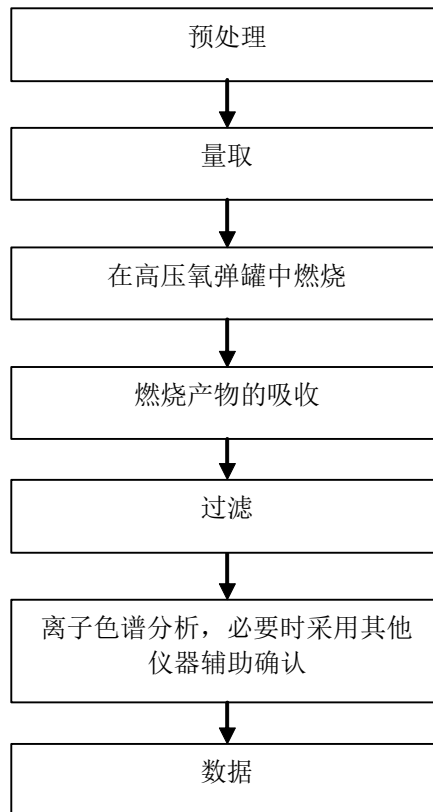
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附件

## Halogen(氧弹法)测试流程图

- 1) 分析人员: 徐诚
- 2) 项目负责人: 印宇

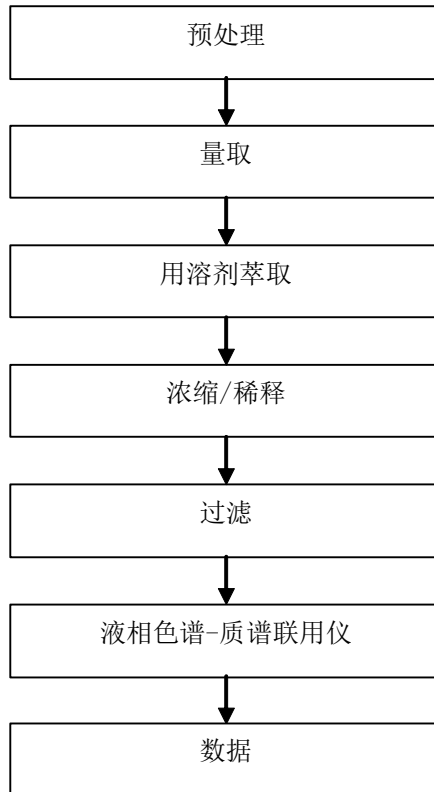


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## PFOS/PFOA 测试流程图

- 1) 分析人员: 杨占君
- 2) 项目负责人: 马永存

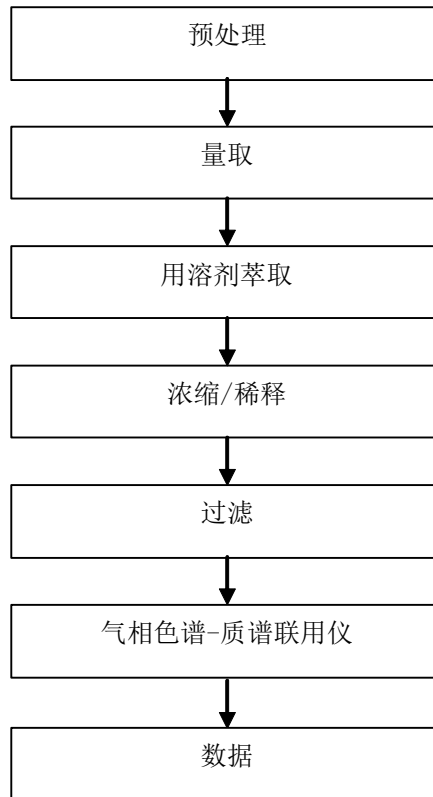


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## PAHs 测试流程图

- 1) 分析人员: 刘慧
- 2) 项目负责人: 黄婷



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