



检测报告 TEST REPORT

报告编号/ Report No..... : WTF22F12258558C
委托方/ Applicant : 合肥丰祥热缩材料科技有限公司
Hefei Fengxiang Heat-shrinkable Material Technology Co., Ltd.
地址/ Address..... : 安徽省合肥市双凤工业区
Shuangfeng Industrial Zone, Hefei City, Anhui Province
买家/ Buyer : 美的/ Midea
样品名称/ Sample Name : 热缩管/ Heat-shrinkable tube
检测结论/ Test Conclusion..... : 符合 (详情请参见下一页)
Pass (Please refer to next pages for details)
样品接收日期/ Date of Receipt sample : 2022-12-23
检测周期/ Testing period : 2022-12-23 ~ 2022-12-30
报告日期/ Date of Issue..... : 2023-01-09
检测结果/ Test Result..... : 参见报告下页/ Refer to next page (s)

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授权签字人

Signed for and on behalf of

Waltek Testing Group (Foshan) Co., Ltd.

梁志聪

梁志聪/ Swing.Liang



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- 检测要求/ Test Requested :
- 1) 根据REACH法规1907/2006/EC附录XVII第1项, 测试送检样品中多氯三联苯(PCTs)的含量
Determination of Polychlorinated terphenyls (PCTs) content in the submitted sample according to Annex XVII Items 1 of REACH regulation (EC) No.1907/2006
 - 2) 根据REACH法规1907/2006/EC附录XVII第20项及其修订法案276/2010 (以前由2009/425/EC决议管控), 测试送检样品中有机锡的含量
Determination of Organic tins content in the submitted sample according to Annex XVII Items 20 of REACH Regulation (EC) No.1907/2006 & the amendment (EU) No.276/2010 (formerly known as decision 2009/425/EC)
 - 3) 根据REACH法案1907/2006/EC附录XVII及其修订法案(EU) No 1272/2013, 测试送检样品中多环芳香烃(PAHs)的含量。
Determination of specified Polycyclic Aromatic Hydrocarbons (PAHs) content in submitted sample in accordance with Entries 50 of Annex XVII of REACH Regulation (EC) No 1907/2006 and its amendment Regulation (EU) No 1272/2013.
 - 4) 根据REACH法规1907/2006/EC附录XVII第61项及其修订法案No.412/2012, 测试样品中富马酸二甲酯的含量
Determination of Dimethyl Fumarate content in the submitted sample according to Annex XVII Items 61 of REACH Regulation (EC) No.1907/2006 and the amendment No.412/2012
 - 5) 按客户指定的要求, 测试送检样品中石棉的含量
According to the applicant's requirement, to determine the Asbestos content in the submitted sample

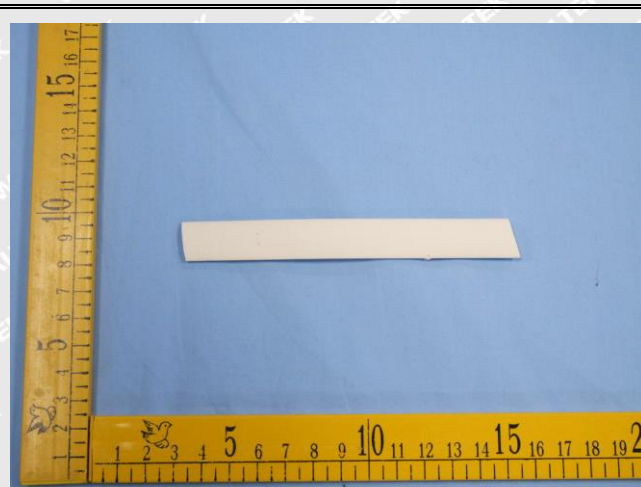


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样品图片 / Sample Photo:



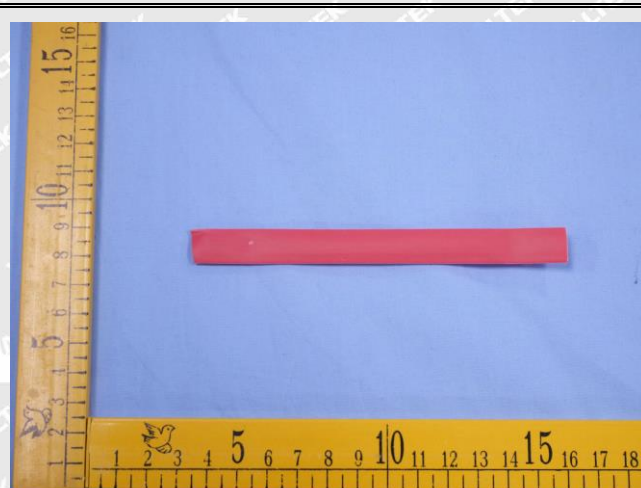
No.1



No.2



No.3



No.4



No.5



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测试结果/ Test Results:

1) 多氯三联苯(PCTs)/ Polychlorinated terphenyls (PCTs)

测试方法: 参照US EPA 3550C-2007, 采用GC-MS分析

Test Method: With reference to US EPA 3550C-2007, analysis was performed by GC-MS

物质名称 Substance Names	结果/ Result (mg/kg)	定量限 LOQ (mg/kg)	限值 Limit (mg/kg)
	No.1+No.2+No.3+No.4+No.5		
多氯三联苯(PCTs) Polychlorinated terphenyls	ND*	5	<50
结论 Conclusion	符合 Pass	--	--

备注/ Note:

- (1) ND =未检出, 检测值小于定量限/ Not Detected or lower than limit of quantitation
- (2) mg/kg =毫克每千克 (milligram per kilogram)= 百万分之一(ppm)
- (3) LOQ =定量限/ Limit of quantitation
- (4) 以上限值引用自REACH法规1907/2006/EC附录XVII第1项。/ The above limit was quoted from Annex XVII Items 1 of REACH regulation (EC) No.1907/2006.
- (5) “*”=依据申请方要求, 对样品按等质量比例进行混合测试, 基于混合测试部件中的最小样品质量计算测试结果。/ As per applicant's requirement, the testing was conducted based on mixed components by weight in equal ratio, results are calculated by the minimum weight of mixed components.



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2) 有机锡/ Organic tins

测试方法: 参考DIN EN ISO 17353:2005, 使用GC-MS分析

Test Method: With reference to DIN EN ISO 17353:2005, analysis by GC-MS.

测试项目 Test Item	定量限 LOQ(mg/kg)	结果/Result (mg/kg)	限值 Limit (mg/kg)
		No.1+No.2+No.3+No.4+No.5	
三丁基锡(TBT) Tributyl Tin(TBT)	50	ND*	1000
三苯基锡(TPhT) Triphenyl Tin(TPhT)	50	ND*	1000
三辛基锡(TOT) Trioctyltin (TOT)	50	ND*	1000
三环己基锡(TCyT) Tricyclohexyltin(TCyT)	50	ND*	1000
三丙基锡(TPT) Tripropyltin(TPT)	50	ND*	1000
三甲基锡(TMT) Trimethyltin(TMT)	50	ND*	1000
三取代有机锡化合物总和 Sum of tri-substituted organotins	50	ND*	1000
二丁基锡(DBT) Dibutyl Tin(DBT)	50	ND*	1000
二辛基锡(DOT) Dioctyl Tin(DOT)	50	ND*	1000
结论 Conclusion	--	符合 Pass	--

备注/Note:

- (1) ND =未检出, 检测值小于定量限/ Not Detected or lower than limit of quantitation
- (2) mg/kg (毫克每千克)= ppm (百万分之一)
- (3) LOQ =定量限/ Limit of quantitation
- (4) 以上限值引用自REACH法规1907/2006/EC附录XVII第20项及其修订法案276/2010 (以前由2009/425/EC决议管控)。/ The above limit was quoted from Annex XVII Items 20 of REACH Regulation (EC) No.1907/2006 and the amendment No.276/2010 (formerly known as decision 2009/425/EC).
- (5) “*”=依据申请方要求, 对样品按等质量比例进行混合测试, 基于混合测试部件中的最小样品质量计算测试结果。/ As per applicant's requirement, the testing was conducted based on mixed components by weight in equal ratio, results are calculated by the minimum weight of mixed components.



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3) 多环芳香烃(PAHs)/ Polycyclic Aromatic Hydrocarbons (PAHs)

测试方法: 参照AFPS GS 2019:01 PAK方法, 使用气相色谱-质谱联用仪分析。

Test Method: With reference to AFPS GS 2019:01 PAK method, analysis was performed by GC-MS.

测试项目 Test Items	单位 Unit	测试结果/Results	定量限 LOQ	限值 Limit
		No.1+No.2+No.3 +No.4+No.5		
苯并[a]蒽 Benzo(a)anthracene (BaA)	mg/kg	ND*	0.2	1.0
屈 Chrysene (CHR)	mg/kg	ND*	0.2	1.0
苯并[b]荧蒽 Benzo[b]fluoranthene (BbFA)	mg/kg	ND*	0.2	1.0
苯并[k]荧蒽 Benzo[k]fluoranthene (BkFA)	mg/kg	ND*	0.2	1.0
苯并[a]芘 Benzo(a)pyrene (BaP)	mg/kg	ND*	0.2	1.0
二苯并[a,h]蒽 Dibenzo[a,h]anthracene (DBAhA)	mg/kg	ND*	0.2	1.0
苯并[j]荧蒽 Benzo[j]fluoranthene (BjFA)	mg/kg	ND*	0.2	1.0
苯并[e]芘 Benzo[e]Pyrene (BeP)	mg/kg	ND*	0.2	1.0
结论 Conclusion	--	符合 Pass	--	--

备注/Note:

- (1) ND = 未检出, 检测值小于定量限/Not Detected or lower than limit of quantitation
- (2) mg/kg (毫克每千克)= ppm (百万分之一)
- (3) LOQ = 定量限/Limit of quantitation
- (4) 根据REACH法案1907/2006/EC附录XVII及其修订法案(EU) No 1272/2013, 能直接长期或短期重复接触皮肤或口腔的橡胶或塑料部件以上每种多环芳烃的限值是1 mg/kg (0.0001%)。
As per Entries 50 of Annex XVII of REACH Regulation (EC) No 1907/2006 and its amendment Regulation (EU) No 1272/2013, Articles shall not be placed on the market for supply to the general public, if any of their rubber or plastic components that come into direct as well as prolonged or short-term repetitive contact with the human skin or the oral cavity, under normal or reasonably foreseeable conditions of use, contain more than 1 mg/kg (0.0001 % by weight of this component) of any of the listed PAHs.
- (5) 根据REACH法案1907/2006/EC附录XVII及其修订法案(EU) No 1272/2013, 玩具(包括儿童运动器材和儿童用品)中能直接长期或短期重复接触皮肤或口腔的橡胶或塑料部件每种多环芳烃的限值是0.5 mg/kg (0.00005%)。
As per Entries 50 of Annex XVII of REACH Regulation (EC) No 1907/2006 and its amendment Regulation (EU) No 1272/2013, Toys, including activity toys, and childcare articles, shall not be placed on the market, if any of their rubber or plastic components that come into direct as well as prolonged or short-term repetitive contact with the human skin or the oral cavity, under normal or reasonably foreseeable conditions of use, contain more than 0.5 mg/kg (0.00005 % by weight of this component) of any of the listed PAHs.
- (6) “*”=依据申请方要求, 对样品按等质量比例进行混合测试, 基于混合测试部件中的最小样品质量计算测试结果。/As per applicant's requirement, the testing was conducted based on mixed components by weight in equal ratio, results are calculated by the minimum weight of mixed components.

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4) 富马酸二甲酯(DMFu)/ Dimethyl fumarate(DMFu)

测试方法: 参照US EPA 3550C:2007, 使用GC-MS分析

Test Method: With reference to US EPA 3550C:2007, analysis was performed by GC-MS

测试项目 Test Item	单位 Unit	结果/Results			定量限 LOQ	限值 Limit
		No.1	No.2	No.3		
富马酸二甲酯(DMFu) Dimethyl fumarate	mg/kg	ND	ND	ND	0.1	<0.1
结论 Conclusion	--	符合 Pass	符合 Pass	符合 Pass	--	--

测试项目 Test Item	单位 Unit	结果/Results		定量限 LOQ	限值 Limit
		No.4	No.5		
富马酸二甲酯(DMFu) Dimethyl fumarate	mg/kg	ND	ND	0.1	<0.1
结论 Conclusion	--	符合 Pass	符合 Pass	--	--

备注/ Note:

- (1) ND =未检出, 检测值小于定量限/ Not Detected or lower than limit of quantitation
- (2) mg/kg =毫克每千克 (milligram per kilogram)= 百万分之一(ppm)
- (3) LOQ =定量限/ Limit of quantitation
- (4) 限值引用自REACH法规1907/2006/EC附录XVII第61项及其修订法案No.412/2012。/ The above limit was quoted from Annex XVII Items 61 of REACH Regulation (EC) No.1907/2006 and the amendment No.412/2012.



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5) 石棉/ Asbestos

测试方法: 参照ISO 22262-1:2012和NIOSH 9000:2015, 采用偏光显微镜(PLM)和X射线粉末衍射仪(XRD)进行分析
Test Method: With reference to ISO 22262-1:2012 and NIOSH 9000:2015, analysis was performed by PLM and XRD.

测试项目 Test Item	化学文摘登记号 CAS No.	结果/Results (%)	定量限 LOQ (%)	客户限值 Client's Limit
		No.1+No.2+No.3 +No.4+No.5		
温石棉 Chrysotile asbestos	12001-29-5	阴性* Negative*	0.1	不得检出 Not Detected
棕石棉 Amosa asbestos	12172-73-5	阴性* Negative*	0.1	不得检出 Not Detected
青石棉 Crocidolite	12001-28-4	阴性* Negative*	0.1	不得检出 Not Detected
斜方角闪 Amphibole	77536-67-5	阴性* Negative*	0.1	不得检出 Not Detected
透闪石 Tremolite	77536-68-6	阴性* Negative*	0.1	不得检出 Not Detected
阳起石 Actinolite	77536-66-4	阴性* Negative*	0.1	不得检出 Not Detected
结论 Conclusion	--	符合 Pass	--	--

备注/ Note:

- (1) 阴性/Negative =未检出石棉/ Absence of Asbestos, 阳性/ Positive =检出石棉/ Presence of Asbestos
- (2) % =质量百分比/ Percentage by weight/, 0.1%=1000mg/kg=1000ppm
- (3) LOQ =定量限/ Limit of quantitation
- (4) 取样品灰分进行分析/ The ash of the sample was taken for analysis.
- (5) “*”=依据申请方要求, 对样品按等质量比例进行混合测试, 基于混合测试部件中的最小样品质量计算测试结果。/As per applicant's requirement, the testing was conducted based on mixed components by weight in equal ratio, results are calculated by the minimum weight of mixed components.

样品描述 / Specimen Description:

样品编号 Specimen No.	样品描述 Specimen Description
1	黑色热缩套管 Black heat-shrinkable tube
2	白色热缩套管 White heat-shrinkable tube
3	蓝色热缩套管 Blue heat-shrinkable tube
4	红色热缩套管 Red heat-shrinkable tube
5	透明热缩套管 Transparent heat-shrinkable tube



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备注/ Remarks:

1. 检验检测结果仅对测试样品负责;
The results shown in this test report refer only to the sample(s) tested;
2. 报告未经本司的书面批准不得部分复制;
This test report cannot be reproduced, except in full, without prior written permission of the company;
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The report would be invalid without specific stamp of test institute and the signatures of compiler and approver;
4. 委托单位及地址, 样品和样品信息由委托方提供, 委托方应对其真实性负责, 沃特未核实其真实性;
The Applicant name and Address, the sample(s) and sample information was/were provided by the applicant who should be responsible for the authenticity which Waltek hasn't verified;
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6. 样品材质信息(型号信息)由客户提供, 测试实验室未核实主测型号与参考型号的差异, 参考型号样品未进行测试, 测试实验室不承担客户提供信息的准确性、适当性、完整性和真实性责任。
The sample material information (Model No. information) is provided by client, not verified by test laboratory. The samples of reference Model No. are not tested. Test laboratory not responsible for the accuracy, appropriateness, completeness and authenticity of the information provided by client.

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