



Report No. 报告号: 178202988b 001

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Client 客户: DAKINGS CHEMICAL (SHANDONG) CO., LTD.德肯思化工 (山东) 有限公司
Room 8110-2-1, 1st Floor, Qiantongyuan Office Building, No. 44 Moscow Road,
Qianwan Bonded Port Area, Qingdao Pilot Free Trade Zone, China (Shandong) (A)
中国 (山东) 自由贸易试验区青岛片区前湾保税港区莫斯科路 44 号乾通源办公楼一
楼 8110-2-1 室(A)

**Identification/
Model No(s)
样品描述/规格:** Low polycyclic aromatic hydrocarbons oil-extended styrene-butadiene rubber 低稠
环芳烃充油苯乙烯-丁二烯橡胶
SBR1723

**Sample Obtaining
method 样品获取方式:** Sending by customer 客户寄样

**Sample Receiving date
收件日期:** 2024-07-23

Testing Period 测试日期: 2024-07-23 - 2027-07-29

Test Specification 测试要求:

Customer's requirement 客户要求:

1. The aromaticity of oil in vulcanized rubber compounds(Bay protons)
硫化橡胶化合物中油的芳香性(湾区质子)

Test result 测试结果:

PASS 符合

For and on behalf of
TÜV Rheinland/CCIC(Qingdao)Co., Ltd.

2024-07-30 Nina Yang / Senior project engineer

Date 日期

Name/Position 姓名/职位

Sample information is provided by customer. Test result is drawn according to the kind and extent of tests performed.
This test report relates to the a. m. test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts.
This test report does not entitle to carry any safety mark on this or similar products.
"Decision Rule" document announced in our website (<https://www.tuv.com/landingpage/en/qm-gcn/>) describes the statement of conformity and its
rule of enforcement for test results are applicable throughout this test report.
样品信息由客户提供。测试结果根据所做测试的种类和范围而得出。
本测试报告仅对来样负责。未经本测试中心许可, 测试报告不得部分复制。不能根据此报告在上述产品或类似产品上使用任何安全标志
本测试报告中, 描述符合性声明所用的判定规则发布在我司官网 <https://www.tuv.com/landingpage/en/qm-gcn/>。

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Material List 材料清单:

Item 项目: Low polycyclic aromatic hydrocarbons oil-extended styrene-butadiene rubber 低稠环芳烃充油苯乙烯-丁二烯橡胶
SBR1723

Material No. 材料号	Material 材质	Color 颜色	Location 位置
M001	Rubber 橡胶	Yellowish brown 黄棕色	Refer to photo 参考图片

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1.The aromaticity of oil in vulcanized rubber compounds (Bay protons)[^]

硫化橡胶化合物中油的芳香性(湾区质子)

Test Method Reference to ISO 21461:2012, analyzed by NMR spectrometer
测试方法: 参照 ISO 21461:2012, 核磁共振法

Material No. 材料号	Test Parameter 实验参数	% recovery values % 回收率	Average % recovery values 平均回收率 %
M001	1	78.92	80.12
	2	80.32	
	3	81.11	

Test results
测试结果:

Test No. 测试编号	Material No. 材料编号	I ₂	I ₁	I ₃	% H _{bay}
T001	M001	1.00	17.23	348.44	0.27

Abbreviation: % = percentage

缩写:

 I₂ = the area of the bay proton region from 8.3ppm to 9.5ppm

 I₃ = I₀₀ - Water_{blank} (TMS/TMS_{blank})

 I₁ = I₀ - CH_{blank} (TMS/TMS_{blank})

 I₀ = the aromatic area, from 6,0 ppm to 9,5 ppm, including the CHCl₃ signal (impurity contained in CDCl₃)

 I₀₀ = the area of the aliphatic and ethylenic proton regions from 0.2ppm to 5.8ppm, including the water signal (water from CDCl₃) at around 1.5ppm

% = 百分比

 I₂ = 湾区氢质子面积8.3ppm~9.5ppm;

 I₃ = I₀₀ - Water_{blank} (TMS/TMS_{blank}) ;

 I₁ = I₀ - CH_{blank} (TMS/TMS_{blank}) ;

 I₀ = 芳香烃面积, 6.0ppm~9.5ppm, 包括氯仿信号(未氘代的氯仿);

 I₀₀ = 脂肪类和烯烃类区域面积 0.2ppm~5.8ppm 包含在 1.5ppm 水的信号(氯仿中的水);

* Requirement according to European Directive 1907/2006/EC with Amendment No. 552/2009 EC Annex XVII Item No.: 50 is: the vulcanised rubber compounds do not exceed the limit of 0.35 % Bay protons as measured and calculated by ISO 21461.

根据欧洲指令1907/2006/EC 及其修订版No. 552/2009 附录17中第50项相关规定, 多环芳烃湾区质子不得超过ISO 21461测量和计算的0.35%湾质子的限值。

** The test method is required by the client. 此测试方法按客户要求安排。

[^] Indicates that the test has been sub-contracted to a laboratory which complies with the requirement of ISO/IEC 17025:2017.

测试已分包给符合 ISO/IEC 17025:2017 要求的实验室。

Products

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Sample Photo
样品照片:



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