

Commercial name: **Quartz surfaces**

Country of origin: China

Physic-mechanical properties - Indicative lab test results (*):

Apparent density	2330 - 2340 kgr/m ³	(EN 1936)
Flexural strength	29 - 30 MPa	(EN 12372)
Compressive strength	175 - 195 MPa	(EN 1926)
Water absorption	0.02 % wt.	(EN 13755)
Abrasion resistance	13.5 mm (length of the groove)	(EN 14157-method A)
Slip resistance	SRV _{dry} : 50 SRV _{wet} : 16	(EN 14231)
Linear thermal expansion coefficient	17.1 (10 ⁻⁶ /°C)	(ASTM D696-08)
Reaction to fire	Class B – s 1, d 0	(EN 13501-1)
Limit of radionuclides	Class A (no limits in use as a building /decorative material)	(GB 6566-2001)

(*) This information is based on information given by the supplier. However, this shall not constitute a guarantee for a specific batch of stone, and shall not establish a legally valid contractual relationship.

Halandri, 8/6/2016



16F Century YuHui Mansion,
No. 73 Fucheng Road,
Beijing China
100036
Tel: (86-10) 6845 6699
Fax: (86-10) 6845 7979

中国.北京
海淀区阜成路 73 号
世纪裕惠大厦 16 层
邮编: 100036
电话: (86-10) 6845 6699
传真: (86-10) 6845 7979

AFFILIATE CODE: F615001
CERTIFICATE NO.: MN2009/0080XM-2
BOSS NO.: 11854697

Page 1 of 2

Testing Report for Submitted Sample

来样测试报告

SGS Job No. / SGS 工作单号 : MN2009/0080XM

Declared Description / 样品名称 : Artificial Quartz / 人造石英石

Sample Remitted Date / 到样日期 : May 12, 2009 / 2009 年 5 月 12 日

Testing Period / 测试周期 : May 12 ~ June 10, 2009 / 2009 年 5 月 12 日~6 月 10 日

This is to report that we, SGS-CSTC Standards Technical Services Co., Ltd. Xiamen, at the request of Messrs. =====LTD., who submitted us samples declared description as above which were sent to our laboratory for testing, we quote the results as follows:

兹证明我司通标标准技术服务有限公司厦门分公司受福建省泉州市鹏翔岗石有限公司委托, 对其来样进行测试, 结果引用如下:

\	Test Item 测试项目	Test Method 测试方法	Test Result* 测试结果
1	Abrasion resistance 抗磨损性	EN 14157:2004	The length of the groove: 13.5mm 凹槽平均长度: 13.5mm
2	Color fastness 色牢度	EN ISO 105B02:2002	Grade (B.S) 4 or above 4 级或以上
3	Compressive strength (MPa) 抗压强度	EN 1926:2006	195
4	Apparent density (kg/m ³) 表观密度	EN 1936:2006	2340
			>250 °C
5	Heat deflection temperature (°C) 热变形温度	ASTM D648-07	<p>Remark / 备注:</p> <p>1. Test condition: Width: 20.74mm, Depth: 13.27mm, Heating rate: 120°C/h, Load: 1.82MPa / 测试条件: 宽 20.74mm, 深 13.27mm, 升温速率 120°C/h, 负荷: 1.82MPa</p> <p>2. Exceed the maximum range of the equipment, can not be measured / 测试结果超出仪器量程</p>
6	Flexural strength (MPa) 弯曲强度	EN 12372:2006	30.4
7	Shore hardness 肖氏硬度	GB 9966.5-2001	65.1

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



SGS

通标标准技术服务有限公司
SGS-CSTC Standards Technical Services Co., Ltd.

AFFILIATE CODE: F615001
CERTIFICATE NO.: MN2009/0080XM-2
BOSS NO.: 11854697

Page 2 of 2

1	Test Item 测试项目	Test Method 测试方法	Test Result 测试结果															
8	Impact resistance 抗冲击性	ISO 10545-5-1996	Mean value of coefficient of restitution / 恢复系数平均值 0.71															
9	Coefficient of linear thermal expansion ($10^{-6}/^{\circ}\text{C}$) 线性热膨胀系数	ASTM D696-08	17.1															
10	Water absorption (%) 吸水率	EN 13755:2008	0.02															
11	Slip resistance 抗滑移性	EN 14231:2003	SRVdry: 50 干防滑系数 SRVwet: 16 湿防滑系数															
12	Chemical resistance 耐化学性	EN 14617-10:2005	<table border="1"> <thead> <tr> <th>Chemical reagent 化学试剂</th> <th>Test time 测试时间</th> <th>Test result 测试结果</th> </tr> </thead> <tbody> <tr> <td>0.5mol/L HCl solution 0.5mol/L 盐酸溶液</td> <td>1h 1 小时</td> <td>No effect 无影响</td> </tr> <tr> <td></td> <td>8h 8 小时</td> <td>No effect 无影响</td> </tr> <tr> <td>0.5mol/L NaOH solution 0.5mol/L 氢氧化钠溶液</td> <td>1h 1 小时</td> <td>No effect 无影响</td> </tr> <tr> <td></td> <td>8h 8 小时</td> <td>No effect 无影响</td> </tr> </tbody> </table> <p>Remark: There are many granular crystals on the surface of the sample. So the specular gloss test is not applicable, visual inspection is instead of it. 备注: 由于试样不适用光泽度测量, 用视觉检查代替</p>	Chemical reagent 化学试剂	Test time 测试时间	Test result 测试结果	0.5mol/L HCl solution 0.5mol/L 盐酸溶液	1h 1 小时	No effect 无影响		8h 8 小时	No effect 无影响	0.5mol/L NaOH solution 0.5mol/L 氢氧化钠溶液	1h 1 小时	No effect 无影响		8h 8 小时	No effect 无影响
Chemical reagent 化学试剂	Test time 测试时间	Test result 测试结果																
0.5mol/L HCl solution 0.5mol/L 盐酸溶液	1h 1 小时	No effect 无影响																
	8h 8 小时	No effect 无影响																
0.5mol/L NaOH solution 0.5mol/L 氢氧化钠溶液	1h 1 小时	No effect 无影响																
	8h 8 小时	No effect 无影响																
13	Limit of radionuclides in building materials 建筑材料 放射性核素限量	GB 6566-2001	<table border="1"> <thead> <tr> <th>Item 项目</th> <th>Result 结果</th> <th>Class A Requirement A类材料要求</th> </tr> </thead> <tbody> <tr> <td>Internal exposure index 内照射</td> <td>0.046</td> <td>≤ 1.0</td> </tr> <tr> <td>External exposure index 外照射</td> <td>0.041</td> <td>≤ 1.3</td> </tr> <tr> <td>Remark 备注</td> <td colspan="2">A Grade decorating material is not limited when producing, selling and using. A类装修材料生产、销售与使用范围不受限制。</td> </tr> </tbody> </table>	Item 项目	Result 结果	Class A Requirement A类材料要求	Internal exposure index 内照射	0.046	≤ 1.0	External exposure index 外照射	0.041	≤ 1.3	Remark 备注	A Grade decorating material is not limited when producing, selling and using. A类装修材料生产、销售与使用范围不受限制。				
Item 项目	Result 结果	Class A Requirement A类材料要求																
Internal exposure index 内照射	0.046	≤ 1.0																
External exposure index 外照射	0.041	≤ 1.3																
Remark 备注	A Grade decorating material is not limited when producing, selling and using. A类装修材料生产、销售与使用范围不受限制。																	

This report reflects our findings for analyzing of the submitted sample only, and does not refer to any matters or evidence for any shipment. This report does not for L/C negotiation.

The information stated in this report (or certificate) is derived from the results of inspection or testing procedures carried out in accordance with the instructions of our Client, and/or our assessment of such results on the basis of any technical standards, trade custom or practice, or other circumstances which should in our professional opinion be taken into account.

*****END*****

Xiamen, June 17, 2009

2009年6月17日

SGS-CSTC Standards Technical Services Co., Ltd.

通标标准技术服务有限公司厦门分公司





16F Century YuHui Mansion,
No. 73 Fucheng Road,
Beijing China
100036
Tel: (86-10) 6845 6699
Fax: (86-10) 6845 7979

中国, 北京
海淀区阜成路 73 号
世纪裕惠大厦 16 层
邮编: 100036
电话: (86-10) 6845 6699
传真: (86-10) 6845 7979

AFFILIATE CODE: F615001
CERTIFICATE NO.: MN2009/0080XM-5
BOSS NO.: 11854697

Page 1 of 5

Testing Report for Submitted Sample

来样测试报告

SGS Job No. / SGS 工作单号 : MN2009/0080XM
Declared Description / 样品名称 : Artificial Quartz / 人造石英石
Sample Remitted Date / 到样日期 : May 12, 2009 / 2009 年 5 月 12 日
Testing Period / 测试周期 : May 12 ~ June 10, 2009 / 2009 年 5 月 12 日 ~ 6 月 10 日

This is to report that we, SGS-CSTC Standards Technical Services Co., Ltd. Xiamen, at the request of Messrs. ██████████ LTD., who submitted us samples declared description as above which were sent to our laboratory for testing, we quote the results as follows:

兹证明我司通标标准技术服务有限公司厦门分公司受福建省泉州市鹏翔岗石有限公司委托, 对其来样进行测试, 结果引用如下:

Fire test / 防火测试

I. Test reference / 试验方法

EN 13501-1:2007 Fire classification of construction products and building elements - Part 1: Classification using data from reaction to fire tests.

EN 13501-1:2007 建筑制品和构件的火灾分级 第 1 部分: 用对火反应试验数据的分级进行分级。

1. EN 13823:2002 Reaction to fire tests for building products - Building products excluding floorings exposed to the thermal attack by a single burning item.

EN 13823:2002 建筑制品对火反应试验—不含铺地材料的建筑制品单体燃烧试验。

2. EN ISO 11925-2: 2002 Reaction to fire tests - Ignitability of building products subjected to direct impingement of flame - Part 2: Single-flame source test.

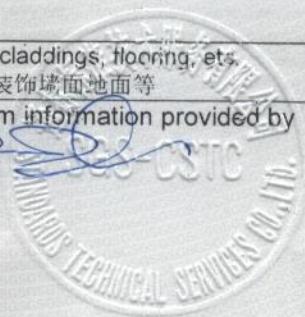
EN ISO 11925-2:2002 对火反应试验 - 受到直接火焰撞击的建筑制品的可燃性—第 2 部分: 小火焰源试验规定的试验方法。

II. Product details / 制品描述

Details of the nature and use of the product 样品信息	Countertops, wall claddings, flooring, etc. 台面板, 装饰墙面地面等
--	---

Remark: The details of the product given above have been prepared from information provided by the sponsor of the test.

备注: 以上样品信息由客户提供。





AFFILIATE CODE: F615001
CERTIFICATE NO.: MN2009/0080XM-5
BOSS NO.: 11854697

Page 2 of 5

III. Test results / 测试结果

Test method 试验方法	Parameter 参数	Specimen number 样品数量	Results 试验结果
EN 13823	FIGRA (W/s)	3	3.3
	LFS < edge of specimen LFS < 试样边缘		YES / 是
	THR _{600s} (MJ)		0.23
	SMOGRA (m ² /s ²)		Not detected 没有发现
	TSP _{600s} (m ²)		0
	Flaming particles or droplets 燃烧滴落物/微粒		NO / 否
	Fs ≤ 150mm		YES / 是
EN ISO 11925-2 Exposure = 30s / 点火时间 = 30秒	Ignition of the filter paper 是否引燃滤纸	6	NO / 否

IV. Classification / 分级

This classification has been carried out in accordance with EN 13501-1:2007.

试验制品燃烧性能等级以及产烟量和燃烧滴落物的附加等级按EN13501-1:2007的相关条款判定。

Conclusion: The product, Artificial Quartz, classification is as following.

结论: 该制品“人造石英石”分级结果如下:

Fire behaviour 燃烧性能	-	Smoke production 产烟量		Flaming droplets 燃烧滴落物	
		s	1	d	0
Reaction to fire classification: B - s 1, d 0 燃烧性能等级: B - s 1, d 0					

Remark: The classes with their corresponding fire performance are given in annex A.

备注: 分级参数表见附录A。

Statement: The test results relate to the behaviour of the test specimens of a product under the particular conditions of the test; they are not intended to be the sole criterion for assessing the potential fire hazard of the product in use.

陈述: 在特定的试验条件下, 试验结果与试样的性能有关; 试验结果不能作为评估制品在实际使用条件下潜在火灾危险性的唯一依据。

Annex A / 附录 A

Classes of reaction to fire performance for construction products excluding floorings and linear pipe thermal insulation products

建筑材料及制品(铺地材料材料除外)燃烧性能分级

Class 等级	Test method 测试标准	Classification criteria 分级判据	Additional classification 附加分级
A1	EN ISO 1182 ^a and EN ISO 1716	$\Delta T \leq 30^\circ\text{C}$, and $\Delta m \leq 50\%$, and $t_r = 0$ (i.e. no sustained flaming)	-
		$PCS \leq 2.0\text{MJ/kg}^{\text{a}}$ and $PCS \leq 2.0\text{MJ/kg}^{\text{b,c}}$ and $PCS \leq 1.4\text{MJ/m}^2\text{d}$ and $PCS \leq 2.0\text{MJ/kg}^{\text{e}}$	-
A2	EN ISO 1182 ^a or	$\Delta T \leq 50^\circ\text{C}$, and $\Delta m \leq 50\%$, and $t_r \leq 20\text{ s}$	-



AFFILIATE CODE: F615001
CERTIFICATE NO.: MN2009/0080XM-5
BOSS NO.: 11854697

Page 4 of 5

h: 通过=过滤纸未被引燃;

未通过=过滤纸被引燃 (d2级);

i Under conditions of surface flame attack and, if appropriate to the end-use application of the product, edge flame attack
i. 火焰轰击制品的表面和 (如果适合该制品的最终应用) 边缘。

I. EN 13823: 2002

Test reference / 测试标准

This test is conducted as per EN 13823:2002 Reaction to fire tests for building products - Building products excluding floorings exposed to the thermal attack by a single burning item.

EN 13823:2002 建筑制品对火反应试验 - 不含铺地材料的建筑制品单体燃烧试验

II. Sample details / 试样信息:

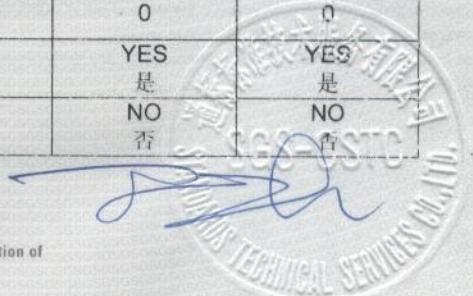
Material 材质	Artificial Quartz 人造石英石		
Specimen size (mm) 样品尺寸	Long wing: 1500×1000×21; Short wing: 1500×495×21 长翼 1500×1000×21, 短翼 1500×495×21		
Descriptions (including the substrate, mounting of specimen, etc) 描述 (包括试样基材、安装等样品详情)	i. Calcium silicate board, with its density 900kg/m ³ , thickness 9mm, is as the substrate of the specimen. 厚度为9毫米, 密度为900kg/m ³ 的硅酸钙作为测试基材 ii. The specimens are fixed mechanically to the substrate. 试样采取机械方式固定于基材上 iii. The specimens tested with horizontal joint and vertical joint in the long wing. 在试样长翼上设有水平和垂直接缝 iv. The specimens tested with a 40mm cavity between substrate and backing board. 试验基材与背板之间的间隙为40毫米		
Precondition 试样调节	Temperature (°C) 温度	Humidity (%) 相对湿度	Duration (h) 时间
	23±2	50±5	360

Remark: Test specimens shall be conditioned at least 48 h before testing, until constant mass is achieved.

备注: 试样至少调节 48h 直到质量平衡。

III. Test results / 测试结果

Items 项目	1 试样1	2 试样2	3 试样3	Average 平均值
FIGRA _{0.2MJ} (W/s)	3	3	4	3.3
FIGRA _{0.4MJ} (W/s)	--	--	--	--
THR _{600s} (MJ)	0.2	0.2	0.3	0.23
SMOGRA (m ² /s ²)	Not detected 没有发现	Not detected 没有发现	Not detected 没有发现	Not detected 没有发现
TSP _{600s} (m ²)	0	0	0	0
LFS < edge of specimen (yes/no) LFS < 试样边缘	YES 是	YES 是	YES 是	YES 是
Flaming particles or droplets 燃烧的碎块或滴落物	NO 否	NO 否	NO 否	NO 否





通标标准技术服务有限公司
SGS-CSTC Standards Technical Services Co., Ltd.

AFFILIATE CODE: F615001
CERTIFICATE NO.: MN2009/0080XM-5
BOSS NO.: 11854697

Page 5 of 5

2. EN ISO 11925-2:2002

I. Test reference / 测试标准

This test is conducted as per EN ISO 11925-2:2002 Reaction to fire tests - Ignitability of building products subjected to direct impingement of flame - Part 2: Single-flame source test.

EN ISO 11925-2:2002 对火反应试验—受到直接火焰撞击的建筑制品的可燃性 - 第 2 部分: 小火焰源试验

II. Sample details / 试样信息

Material 材质	Artificial Quartz 人造石英石		
Size of sample (mm) 样品尺寸	250×90×21		
Precondition 试样调节	Temperature (°C) 温度	Humidity (%) 湿度	Duration (h) 时间
	23±2	50±5	360
Flame application time 点火时间		30 s 30秒	

III. Test Results / 测试结果

(A) Face ignition / 表面点火

Parameter 参数	1	2	3
Occurrence of ignition (Yes/No) 是否发生点燃	NO	NO	NO
Whether flame reaches 150mm 火焰是否达到150mm处	NO	NO	NO
Time to reach 150mm 到达150mm的时间	--	--	--
Ignition of the filter paper (Yes/No) 是否点燃滤纸	NO	NO	NO

(B) Bottom edge ignition / 边缘点火

Parameter 参数	1	2	3
Occurrence of ignition (Yes/No) 是否发生点燃	NO	NO	NO
Whether flame reaches 150mm 火焰是否达到150mm	NO	NO	NO
Time to reach 150mm 到达150mm的时间	--	--	--
Ignition of the filter paper (Yes/No) 是否点燃滤纸	NO	NO	NO

This report reflects our findings for analyzing of the submitted sample only, and does not refer to any matters or evidence for any shipment. This report does not for L/C negotiation.

The information stated in this report (or certificate) is derived from the results of inspection or testing procedures carried out in accordance with the instructions of our Client, and/or our assessment of such results on the basis of any technical standards, trade custom or practice, or other circumstances which should in our professional opinion be taken into account.

*****END*****

SGS-CSTC Standards Technical Services Co., Ltd.

Xiaren, June 17, 2009

2009年6月17日

通标标准技术服务有限公司厦门分公司