

## TEST REPORT

No. : SHMR100301185

Date : May.07,2010

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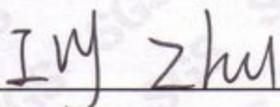
SHANGHAI RED CORAL TECHNOLOGY DEVELOPMENT CO., LTD.  
26/F DAZHONG FINANCE TOWER 1023#B WEST YANAN ROAD SHANGHAI CHINA

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

Sample Name : ACRYLIC  
Sample No. : SHMR100301185  
Manufacturer : SHANGHAI SHANGHONG CHEMICAL TECHNOLOGY DEVELOPMENT  
CO.,LTD  
Buyer : SHANGHAI RED CORAL TECHNOLOGY DEVELOPMENT CO., LTD.  
Date of Receipt : Mar.11,2010  
Test Period : Mar.11,2010 to Apr.19,2010  
Test result(s) : For further details, please refer to the following page(s)

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

Signed for SGS-CSTC Standards  
Technical Services (Shanghai) Co., Ltd

  
Ivy Zhu  
Authorized signatory

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Sample Description: Transparent plastic board

1. To determine the leachable Lead and Cadmium contents from internal surface in accordance with the American Food and Drug Administration (FDA) Compliance Policy Guides 7117.07 (May 2005) and 7117.06 (May 2005).

Test Method: With reference to AOAC 16th Ed. (2000) Section 973.32, Lead and Cadmium in Ceramic ware, analysis was performed by AAS.

### Internal surface (Flatware)

	<u>Volume(ml)</u>	<u>Diameter(mm)</u>
1	440	151x61
2	440	151x61
3	440	151x61
4	440	151x61
5	440	151x61
6	440	151x61

	<u>Leachable Lead(mg/L)</u>	<u>Leachable Cadmium(mg/L)</u>
1	<0.05	<0.01
2	<0.05	<0.01
3	<0.05	<0.01
4	<0.05	<0.01
5	<0.05	<0.01
6	<0.05	<0.01
Average	<0.05	<0.01

Limit                      3                      0.5

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

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Lab Environmental Condition: 23±2°C, 50±5 RH%

Test Result:

No.	Test Item	Test Method	Test Condition	Result
2	Glass transition temperature	ASTM E1356-08	Temperature range: 40~170°C Ramp: 10°C/min N <sub>2</sub> flow rate: 50ml/min	Detail see Table 1
3	Shore hardness	ASTM D2240-05	Specimen thickness: 12.3mm	A/93/1
4	Water absorption	ASTM D570-98(2005)	Specimen: 76.2mm×25.4mm×12.3mm Immersion condition: 50°C, 24h Distilled water	20.9%
5	Heat deflection temperature	ASTM D648-07	Specimen width: 4.39mm Specimen thickness: 13.00mm Rate of temperature: 120°C/h Load: 1.82MPa	101.8°C
6	IZOD impact strength	ASTM D256-06a <sup>ε1</sup> Method C	Specimen width: 4.3mm The capacity of pendulum: 2.75J	3.6J/m C (Complete break)
7	Compressive strength	ASTM D695-08	Specimen: 13.4mm×14.6mm×25mm Testing speed: 1.3mm/min	103MPa
8	Flexural strength	ASTM D790-07 <sup>ε1</sup> Method A	Specimen: 127mm×12.89mm×3.69mm Testing speed: 1.6mm/min Span: 60mm	114MPa
9	Flexural modulus			3270MPa
10	Flammability	ASTM D635-06	Specimen: 125mm×13.15mm×4.46mm	HB <sup>Note1</sup> Detail see table 2

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

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No.	Test Item	Test Method	Test Condition	Result
11	Total luminous transmittance	ASTM D1003-07 <sup>E1</sup> Method A	Specimen thickness: 4.79mm Light source type: C	90.3%
12	Haze			4.0%
13	Coefficient of linear thermal expansion	ASTM E831-06	30°C~80°C	90.9857µm/(m·°C)
			117°C~124°C	-456.1189µm/(m·°C)
14	Thermal Conductivity	ASTM C518-04	Sample Dimension: 300mm×300mm×30.005mm Mean temperature: 23.63°C Temperature difference: 19.66°C	0.18830 W/(m·K)

### 15. Refractive index

No.	Test Required	Test Method	n <sub>c</sub> (656.3nm)	n <sub>c</sub> (587.7nm)	n <sub>c</sub> (486.1nm)
First	Refractive index	V-Block Refractometer	1.48804	1.49045	1.49671
Second			1.48820	1.49058	1.49683
Average			1.48812	1.49052	1.49677

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Table 1

Test Item	Run1 (DSC curve see Fig.1)	Run2 (DSC curve see Fig.2)
Glass transition temperature (Onset)	110°C	105°C

Table 2

Sample No.	1	2	3
Burning Distance	75mm	75mm	75mm
Burning Time	139.1s	145.6s	143.2s
Burning Rate	32.4mm/min	30.9mm/min	31.4mm/min

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

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**SHMR 032189**

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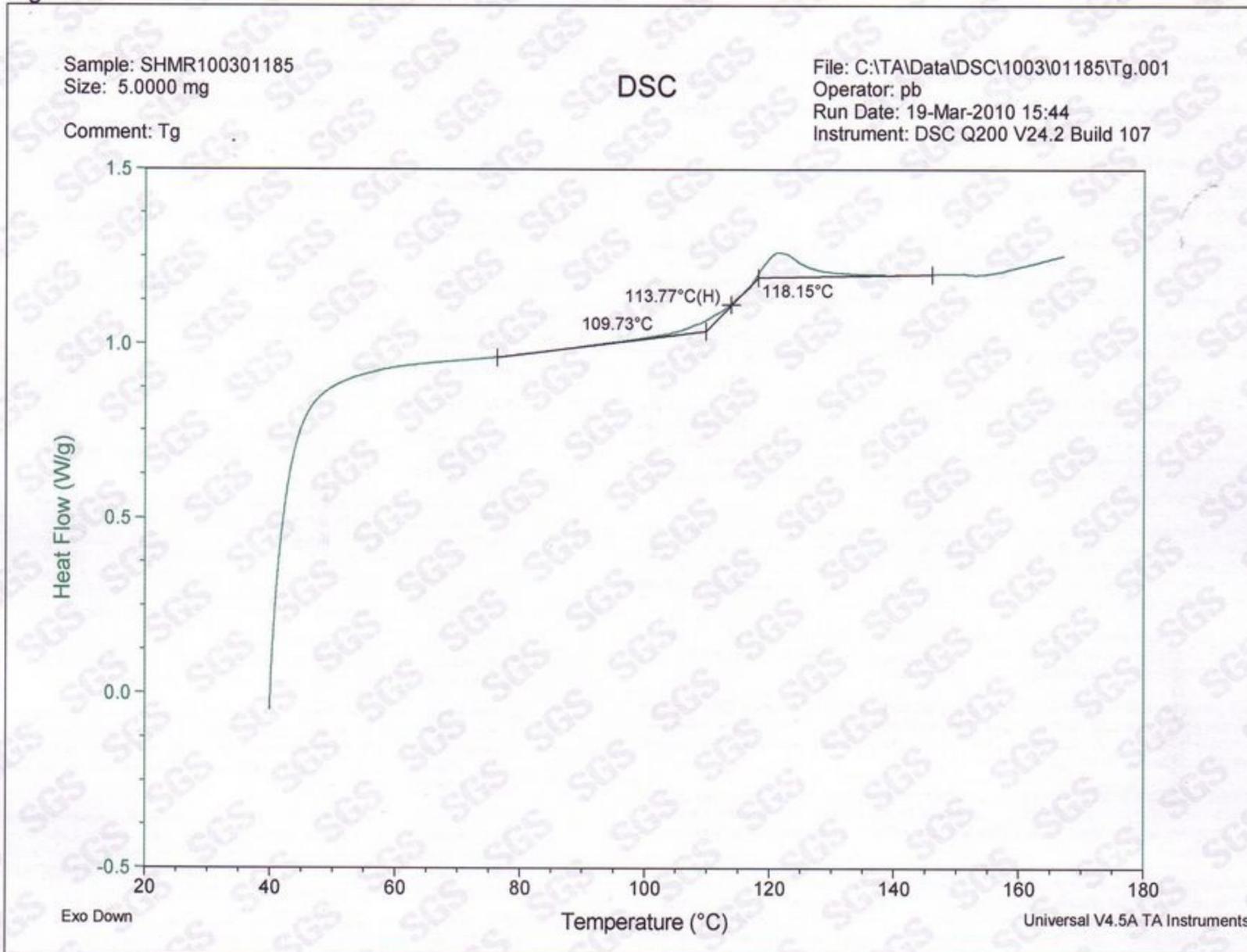
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Fig.1



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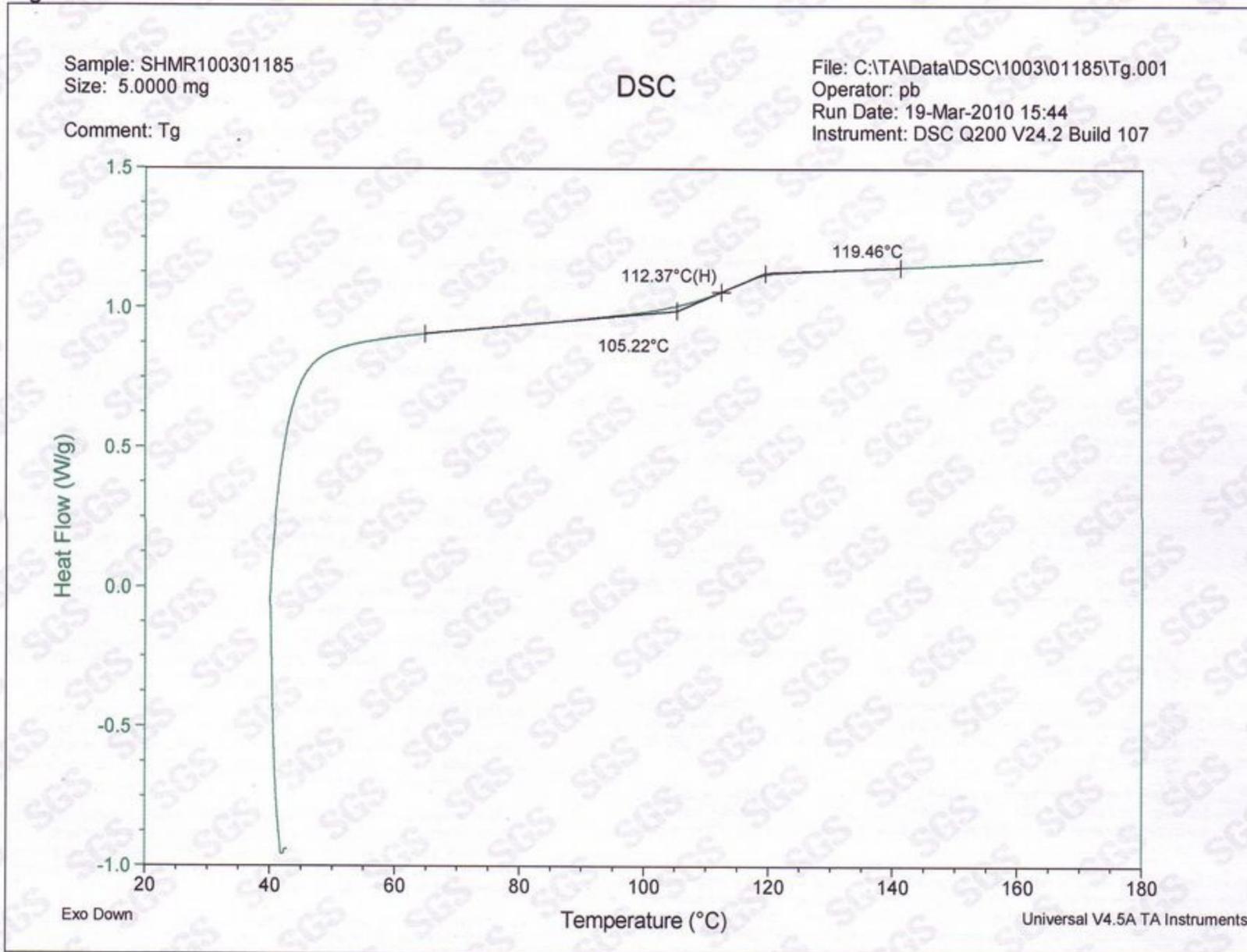
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Fig.2



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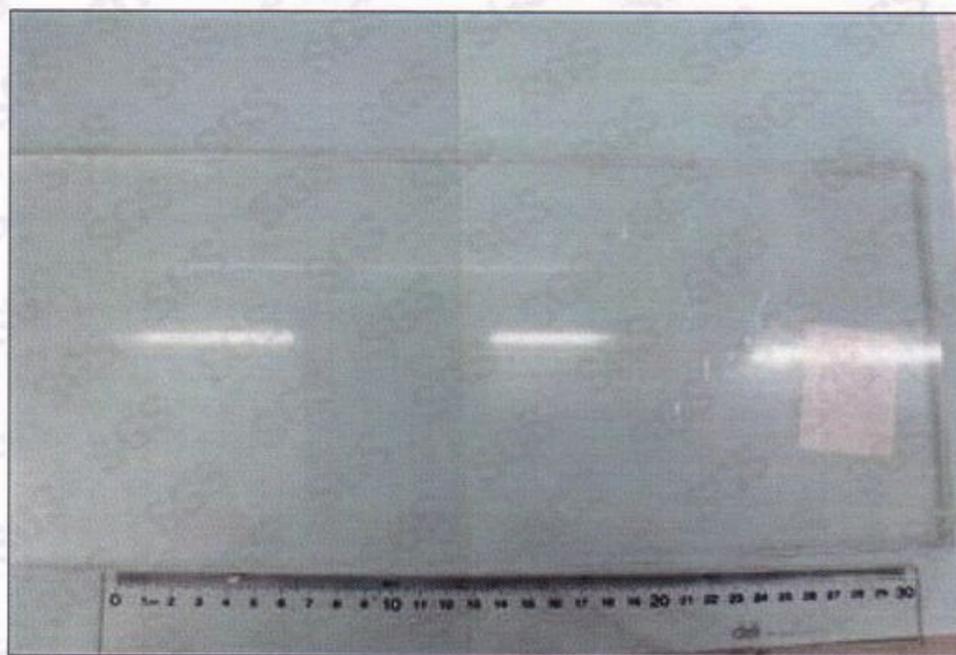
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### Note:

1. According to UL94 Ed.5 Oct 29 1996 section 7, a material classed HB shall:
  - a) Not have a burning rate exceeding 40mm/min over a 75mm span for specimens having a thickness of 3.0-13mm, or
  - b) Not have a burning rate exceeding 75mm/min over a 75mm span for specimens having a thickness less than 3.0mm, or
  - c) Cease to burn before the 100mm reference mark.
2. The test item 11~12 were performed by SGS internal laboratory.
3. The test item 13 was performed by SGS certificated external laboratory.

### Sample Photo:



\*\*\*\*\* End of report \*\*\*\*\*

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