



中国认可
国际互认
检测
TESTING
CNAS L4743

Test Report

Report No.: AJFS2306004593FR

Date: JUL.13, 2023

Page 1 of 18

RESCOM® BUILDING PRODUCTS

6A KERRYL STREET KUNDA PARK QLD 4556

Sample Name: RESCOM® (CMC)

SGS Ref No.: IN-SH-CP-5627-23175

Buyer: ResCom BP

Material and Mark: RESCOM® ISO:8336

Product specification: ISO 8336 Magnesia Cement Board [Patent No. 2016240394] [Patent No. 2980948]
[Patent No. 2553700 B]

Manufacturer: SHANDONG HENGYI SCIENCE AND TECHNOLOGY CO, LTD/(RGBP GLOBAL BUILDING MEMBER)

Thicknesses: 16mm

The above sample(s) was / were submitted and identified on behalf of the client. SGS is not responsible for the authenticity, integrity and results of the data and information and / or the validity of the conclusion arising therefrom. Test results apply to the sample as received.

Test Requested:

AS 1530.4-2014 Method for fire tests on building materials, components and structures Part 4: Fire-resistance test of elements of construction, section 3 walls - vertical separating elements.

Test Results: -- See attached sheet --

Conclusion: The tested specimen satisfied the performance requirements specified in AS 1530.4:2014 for the following period:

Integrity, (E)	Insulation, (I)
84 min	73 min

Test Period:

Sample Receiving Date : MAY 31, 2023

Test Performing Date : MAY 31, 2023 TO JUN.02, 2023

Signed for and on behalf of

SGS CSTC Standards Technical Services Co., Ltd. Anji Branch


Echo Li
Approved Signatory

scan to see the report



AJFS2306004593FR



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/terms-and-conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/terms-and-conditions/terms-a-document.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced, except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Responsibility to check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-754) 8387 7888, or visit: www.sgs.com
No. 301, Sunlight Road, 2 Block, Sunlight Industry Zone, Anji County, Zhejiang Province, China 313300 t (86-572) 5018825 f (86-572) 5018829 www.sgs.com.cn
中国·浙江·安吉县阳光工业园二区阳光大道301号 邮编:313300 t (86-572) 5018825 f (86-572) 5018829 e sgs.china@sgs.com

Member of the SGS Group (SGS SA)

1. Introduction

Determine the fire resistance of the non-load bearing vertical separating elements in accordance with section 3 of AS 1530.4-2014: Method for fire tests on building materials, components and structures part 4: Fire-resistance test of elements of construction.

The specified side of submitted specimen was exposed to a time-temperature curve as dictated by the clause 2.11 of AS 1530.4 for a period of 85 min under non-loaded conditions.

The test was conducted on JUN.02, 2023.

2. Summary

The performance of the specimen was judged against the criteria for integrity and insulation as specified in AS 1530.4:2014, and the results obtained were as follows:

Integrity, (E)	Insulation, (I)
84 min	73 min

3. Test Specimen

The specimen was received on MAY 31, 2023, and was stored in the laboratory until JUN.02, 2023. During the storage of the specimen, the temperature and humidity of the laboratory were measured and recorded as being within a range of from 20°C to 28°C and 46% to 70% respectively. The specimen was installed on JUN.02, 2023, and the test was conducted on JUN.02, 2023.

The overall dimensions of the tested system furnace were 3000mm long by 3000mm wide and the tested system overall thickness was 116mm / 4.567in. The tested system was asymmetric, to emulate the standalone fire protection performance of the ResCom® Shaftliner / Barrier board at the request of the test sponsor. The testing was carrying out from one side only and specimen was mounted within a masonry wall construction such that the specified side exposed to the heating conditions of the test.

The tested system composed of a light gage metal frame with single layer of 16mm thick ResCom® (CMC) Shaftliner / Barrier board with shiplap edge on the exposed side.

Each of the Shaftliner / Barrier board were 620mm wide x 3000mm long and installed vertically.

The boards were screw fixed into place with 8g class 3 non-corrosive self-tapering screws.

Screw fixings at maximum 300mm spacing, 50mm in from the corners and 10mm in from the edge of the shiplap joints.

There was one layer of 10mm thick standard grade plasterboard / drywall on the unexposed side of the 90mm wide cavity void.

There was no insulation in the cavity void of the tested system.

The specification of the supporting light gage metal frame system was 90mm x 45mm x 1.1bmt with vertical studs at a maximum of 600mm o/c.



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/terms-and-conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/terms-and-conditions/terms-e-document.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-725) 8307 1881, or e-mail: china@sgs.com

中国·浙江·安吉县阳光工业园二期阳光大道301号 邮编:313300 t: 86-572 501825 f: 86-572 501829 www.sgschina.com.cn
 中国·浙江·安吉县阳光工业园二期阳光大道301号 邮编:313300 t: 86-572 501825 f: 86-572 501829 e: sgs.china@sgs.com

The shiplap joints of the 16mm ResCom® (CMC) Shaftliner / Barrier boards were caulked with a standard industry FR rated caulking compound (the joints were not taped).

The 10mm Standard Plasterboard / Drywall was butt fixed and the joints taped with self-adhesive tape (not caulked and set).

The tested 16mm ResCom® Shaftliner / Barrier System installed as per the structural drawings provided by the test sponsor as shown in Figure 1.

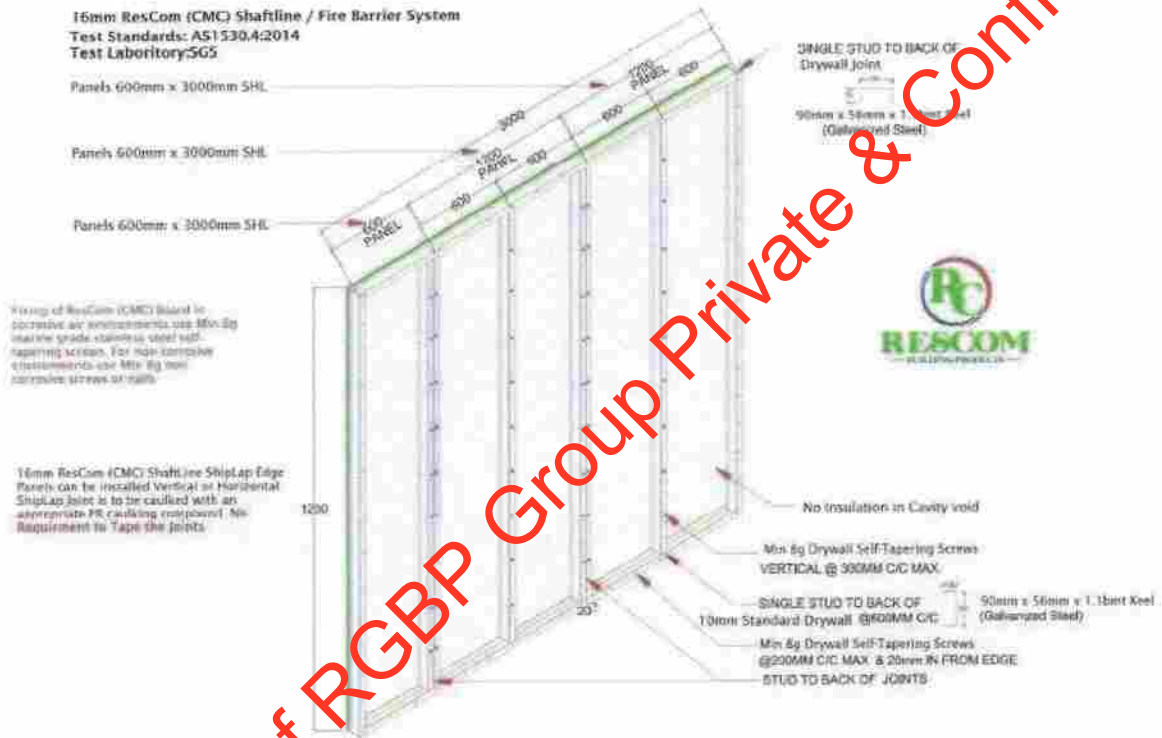


Figure 1(1) - Specimen structure

Copyright & IP of RGBP Group Private & Confidential



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained herein reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced, except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To avoid the risk of falsification of test report & certificate, please contact us at sgs@sgs.com (86-755) 8387 3668, or email: CN.Operations@sgs.com

No. 391, Sunlight Road, 2 Block, Sunlight Industry Zone, Anji County, Zhejiang Province, China 313300 | (86-572) 501825 | (86-572) 501829 | www.sgs.com
 中国·浙江·安吉县阳光工业园二区阳光大道391号 | 邮编: 313300 | (86-572) 501825 | (86-572) 501829 | sgs.china@sgs.com

16mm ResCom (CMC) Shaftline / Fire Barrier System
 Test Standard: AS1530.4:2014
 Laboratory: SGS



Figure 1(2) - Specimen structure

Copyright & IP of RGBP Group Private & Confidential



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8317 1882.

Headquarters: CHINA: www.sgs.com
 No. 301, Sunlight Road, 2 Block, Sunlight Industry Zone, Anji County, Zhejiang Province, China 313300 t (86-572) 5018825 f (86-572) 5018829 www.sgs.com.cn
 中国·浙江·安吉县阳光工业园二区阳光大道301号 邮编: 313300 t (86-572) 5018825 f (86-572) 5018829 e sgs.china@sgs.com

4. Test Procedure

The test was conducted in accordance with the procedure specified in AS 1530.4:2014, section 4.

The ambient temperature of test area was 28°C at commence of test with variation of +1°C during the test.

The furnace was controlled so that the mean furnace temperature, deviation from the mean furnace temperature and uniformity of temperature distribution complied with the requirement of AS 1530.4-2014.

Sixteen furnace thermocouples were used to determine the mean furnace temperature.

The furnace pressure was controlled to comply with the requirements of AS 1530.4-2014, Clause 2.11.3. The furnace pressure shall be monitored and controlled. 5 min after the commencement of the test the furnace pressure shall be 0± 5 Pa of the nominal pressure specified for the particular element under test; from 10 min onwards, it shall be 0± 3 Pa of the nominal pressure specified for the particular element under test at a height of approximately 500 mm above the notional floor level.

Cotton pads and gap gauges were used to determine the integrity. The sustained flaming on the unexposed surface was also checked to determine the integrity. The thermocouples specified in clause 2.2.3.1 were used to determine the insulation of specimen.

The layout of thermocouple on unexposed surface of the specimen was shown in Figure 2.

During the test, the temperatures and pressures were continuously monitored and were recorded at one-minute intervals.

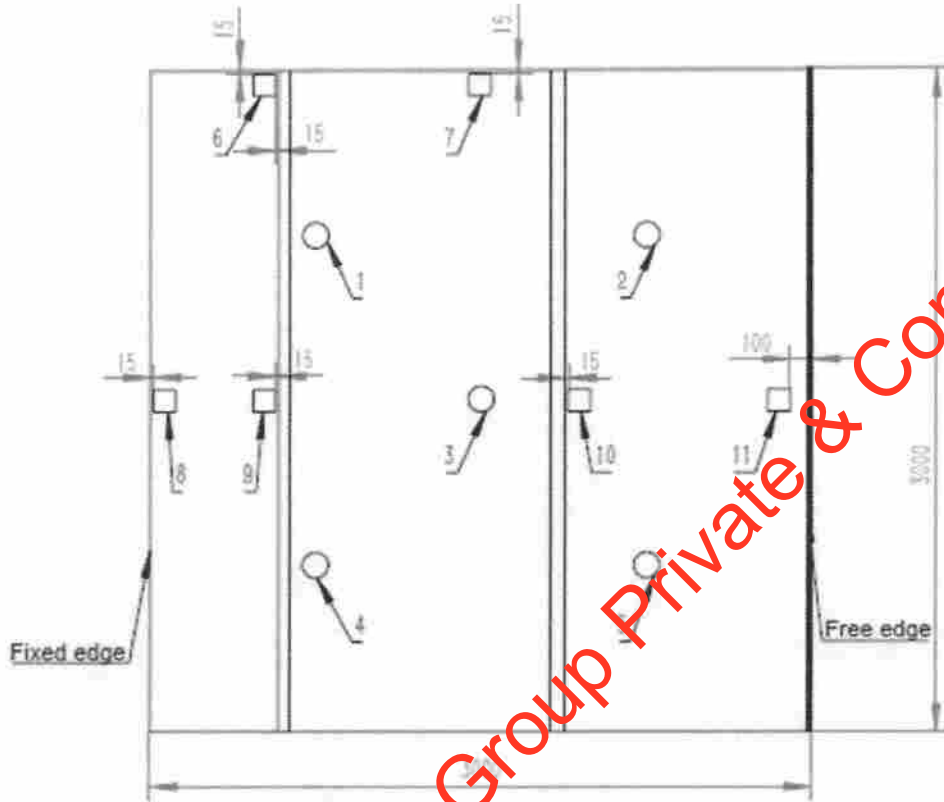
5. Test Results

The following data were recorded during the test:

- a) The actual mean furnace temperature/time curve as well as the standard furnace temperature/ time curve, which were shown in Figure 3. The mean temperatures recorded within the furnace were shown in Table 1.
- b) The average and maximum temperature rise on unexposed face of the specimen was shown in Figure 4. The individual thermocouple temperature record on the unexposed surface of the specimen was shown in Table 2.
- c) The furnace pressures relative to laboratory atmosphere at the 500 mm above the bottom of specimen was shown in Figure 5.
- d) A summary of the observations made on the general behavior of the specimen was given in Table 3.

Copyright & IP of TCBP Group Private & Confidential





○ Thermocouples for average temperature
 □ Thermocouples for maximum temperature
 No.1, 2, 4, 5 in the center of each quarter for specimen, No.3 in the center of the specimen.

Figure 2 - The layout of thermocouple on unexposed face of the specimen (Unit: mm)

Copyright & IP of RGGP Group Private & Confidential



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/terms-and-conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/terms-and-conditions/terms-a-document.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Address for check the authenticity of testing / inspection report & certificate, please contact us at sgs@china.com / 8007 1988 20000 / 010-572 508825

SGS (China) Inspection & Testing Services Co., Ltd.
 No. 301, Sunrise Road, 2 Block, Sunrise Industry Zone, Anji County, Zhejiang Province, China 313300 t: (86-572) 508825 f: (86-572) 508829 www.sgs.com.cn
 中国·浙江·安吉县阳光工业园二区阳光大道301号 邮编: 313300 t: (86-572) 508825 f: (86-572) 508829 e: sgs.china@sgs.com

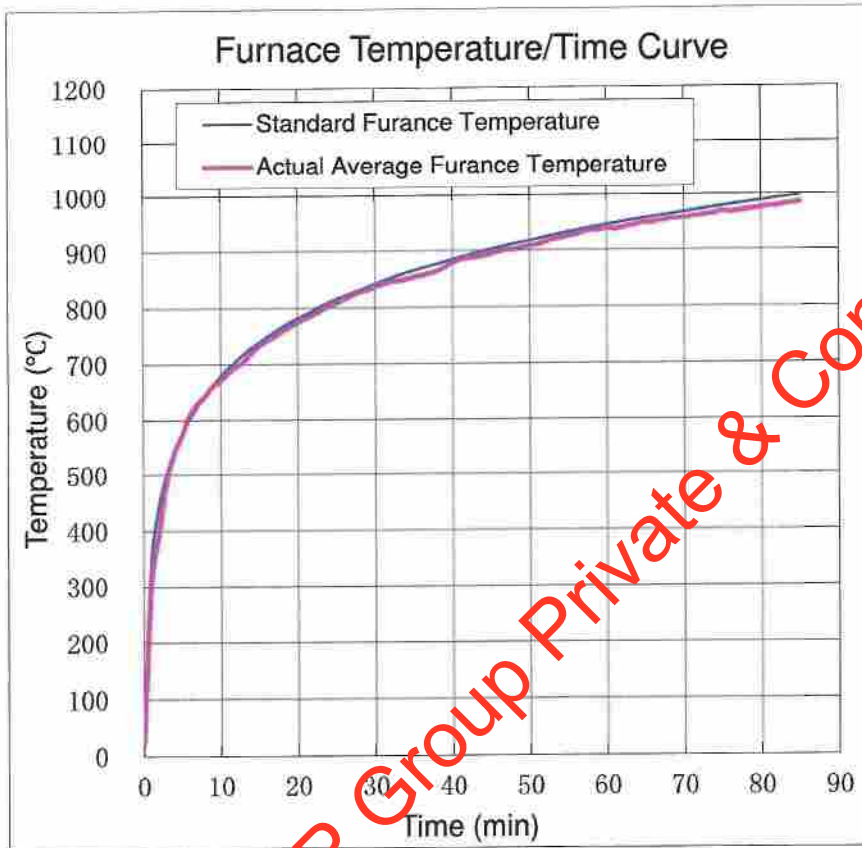


Figure 3 - Standard and actual mean furnace temperature / time curve

Copyright & IP of RGGP Group Private & Confidential



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/terms-and-conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/terms-and-conditions/terms-e-document.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction clauses defined therein. Any holder of this document is advised that information contained herein reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 7828 or visit: www.sgs.com

No. 301, Sunlight Road, 2 Block, Sunlight Industry Zone, Anji County, Zhejiang Province, China 313300 | (86-572) 501825 | (86-572) 501823 | www.sgs.com
 中国·浙江·安吉县阳光工业园区二区阳光大道301号 | 邮编: 313300 | (86-572) 501825 | (86-572) 501823 | sgs.china@sgs.com

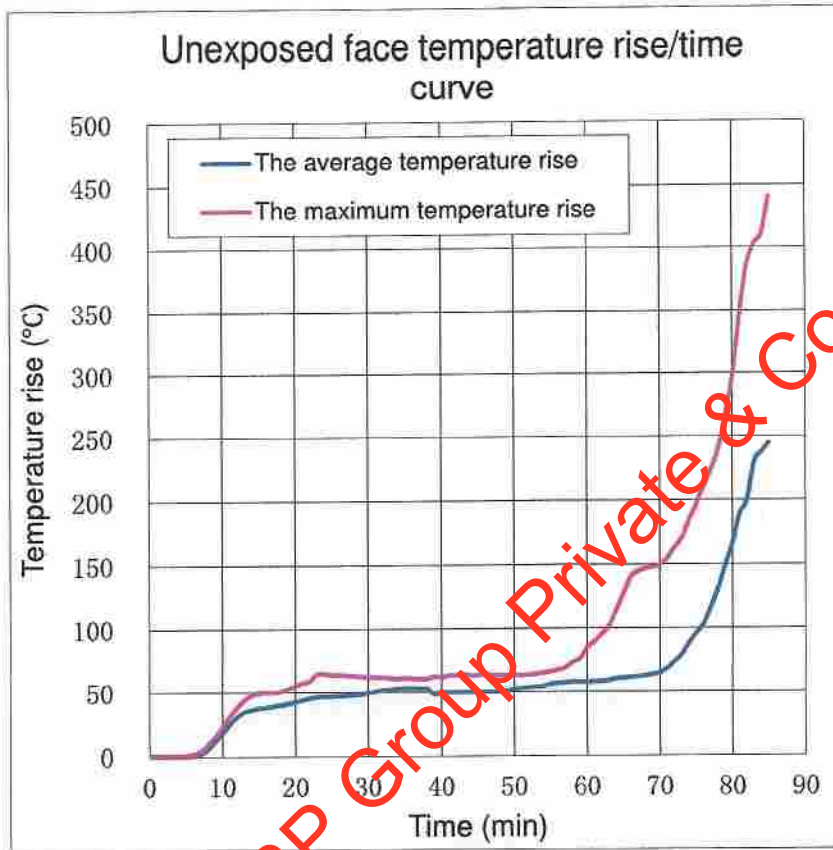


Figure 4 – the average and maximum temperature rise / time curve

Copyright & IP of RCBP Group Private & Confidential



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained herein reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing inspection report & certificate, please contact us at telephone: (86-755) 2007 1823 or e-mail: sgs@sgs.com

No. 371, Suzhou Road, 28000, Suzhou Industry Zone, Any County, Zhejiang Province, China 313300 | (86-572) 508822 | (86-572) 508825 | www.sgs.com
 中国·浙江·安吉县阳光工业园二区阳光大道301号 邮编: 313300 | (86-572) 508825 | (86-572) 508829 | sgs.china@sgs.com

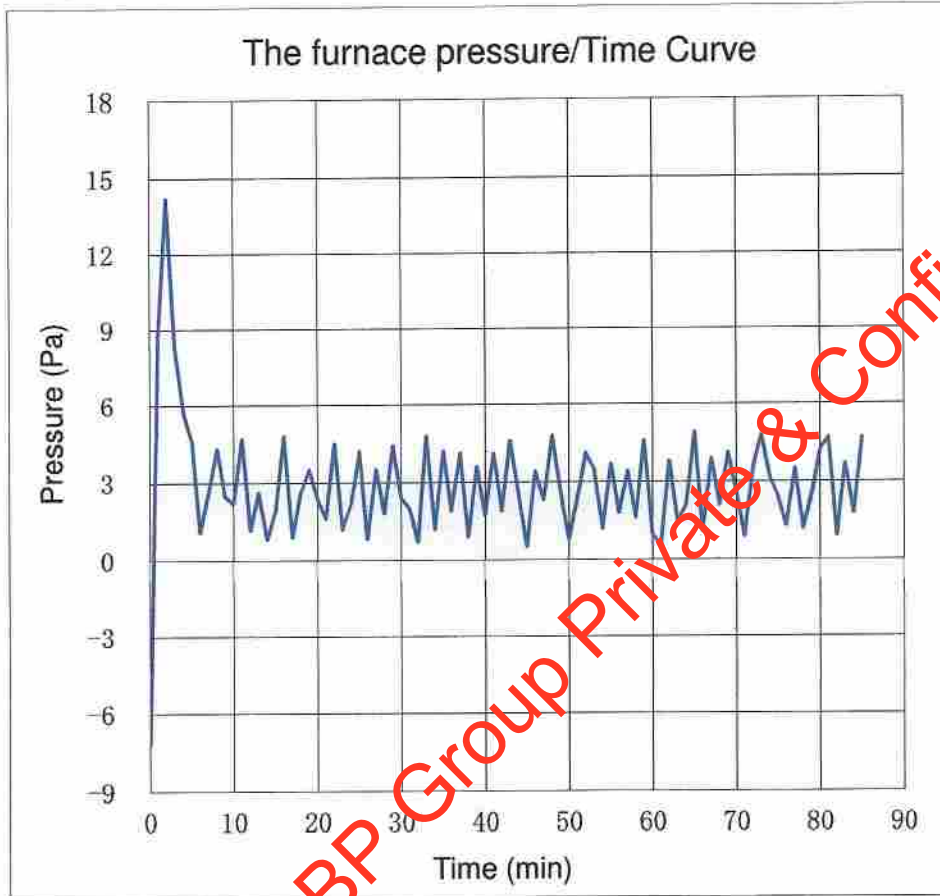


Figure 5 - Furnace pressure / time curve

Copyright & IP of RGGP Group Private & Confidential



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To ensure the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8207 1000, or website: www.sgs.com

No. 301, Sunlight Road, 2 Block, Sunlight Industry Zone, Anji County, Zhejiang Province, China 313300 | (86-572) 501825 | (86-572) 501829 | www.sgs.com
 中国·浙江·安吉县阳光工业园区二区阳光大道301号 | 邮编: 313300 | (86-572) 501825 | (86-572) 501829 | sgs.china@sgs.com

Time (min)	AS1530.4 Std Average (°C)	Furnace Average (°C)	Error (%)
62	950.2	939.6	-1.1%
63	952.6	942.7	-1.1%
64	955.0	945.6	-1.1%
65	957.3	948.6	-1.1%
66	959.6	949.3	-1.1%
67	961.8	952.2	-1.1%
68	964.1	954.5	-1.1%
69	966.2	955.8	-1.1%
70	968.4	957.3	-1.1%
71	970.5	959.1	-1.1%
72	972.6	961.4	-1.1%
73	974.7	963.3	-1.1%
74	976.7	965.2	-1.1%
75	978.7	968.9	-1.1%
76	980.7	967.1	-1.1%
77	982.6	969.4	-1.1%
78	984.6	971.2	-1.1%
79	986.5	973.1	-1.1%
80	988.4	975.3	-1.1%
81	990.2	976.8	-1.1%
82	992.1	978.2	-1.1%
83	993.9	980.7	-1.1%
84	995.7	982.3	-1.1%
85	997.4	984.9	-1.1%

Copyright & IP of RGBR Group Private & Confidential



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic formal documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced, in whole or in part, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at enquiry@sgs.com or <tel:+86-572-501825>

No. 301, Sunjig Road, 2 Block, Sunjig Industry Zone, Anji County, Zhejiang Province, China 313300 t: (86-572) 501825 f: (86-572) 501825 www.sgs.com
 中国·浙江·安吉县阳光工业园二区阳光大道301号 邮编: 313300 t: (86-572) 501825 f: (86-572) 501825 e: sgs.china@sgs.com

Table 2 The individual thermocouple temperature record on the unexposed surface of the specimen

Time (min)	Thermocouple temperature (°C)										
	1#	2#	3#	4#	5#	6#	7#	8#	9#	10#	11#
0	28.2	29.9	29.8	29.3	29.5	28.8	28.9	29.9	29.0	29.5	28.2
1	28.3	29.9	29.9	29.3	29.5	28.9	28.9	29.9	29.0	29.5	28.3
2	28.3	30.0	29.9	29.3	29.5	29.1	29.0	29.9	29.0	29.5	28.3
3	28.3	30.1	29.9	29.4	29.5	29.1	29.0	29.8	29.1	29.6	28.3
4	28.4	30.1	30.1	29.5	29.5	29.2	29.2	29.9	29.3	29.6	28.4
5	28.6	30.3	30.3	29.6	29.6	29.3	29.5	29.9	29.3	29.7	28.6
6	29.0	31.1	30.9	30.2	29.9	29.6	30.2	30.3	29.5	29.8	29.0
7	30.0	33.3	32.5	31.4	30.5	30.4	31.7	30.9	29.6	29.8	30.0
8	32.9	37.8	36.1	33.8	32.8	31.8	35.0	32.5	29.9	30.0	31.8
9	37.6	44.5	43.0	38.8	38.3	34.1	42.5	35.6	30.3	30.3	34.1
10	42.7	52.1	51.6	44.4	44.8	37.4	51.4	40.5	30.6	31.4	37.4
11	49.4	59.3	60.5	53.6	50.0	38.7	56.1	47.2	31.1	33.6	38.7
12	54.7	65.1	67.8	60.2	52.6	42.0	58.2	55.1	31.7	35.3	42.0
13	56.0	69.1	73.5	68.5	53.9	44.1	58.8	62.4	32.4	37.0	44.1
14	55.0	71.2	77.1	71.8	54.7	48.1	59.4	68.6	33.0	38.7	48.1
15	55.7	72.5	78.7	73.7	56.0	51.5	60.2	72.6	33.8	40.3	51.5
16	54.3	73.4	79.3	75.9	56.8	51.3	61.2	73.8	35.2	42.6	51.3
17	54.5	74.1	79.3	78.8	57.8	54.2	62.5	75.3	37.3	44.5	54.2
18	55.2	74.4	79.4	80.0	58.7	59.3	64.0	78.3	39.5	46.7	55.2
19	57.9	74.2	79.9	82.2	59.5	58.2	64.8	76.9	42.4	48.6	57.9
20	60.0	74.3	79.1	84.5	61.6	50.1	65.8	80.4	45.3	51.3	50.1
21	61.4	76.0	80.1	86.8	62.8	50.9	67.2	80.4	48.6	54.1	50.9
22	63.7	76.0	80.7	88.5	64.7	56.4	68.5	80.8	52.4	56.3	56.4
23	62.9	75.2	80.6	93.4	66.6	52.2	69.4	80.6	56.0	58.5	52.2
24	62.7	75.1	80.6	93.7	68.4	52.8	70.4	81.0	63.4	60.5	52.8
25	62.3	75.6	80.5	92.9	70.1	53.3	71.2	81.3	69.2	65.0	53.3
26	62.3	76.0	80.4	92.9	71.8	53.1	72.2	81.7	73.6	67.8	53.1
27	62.4	76.9	80.5	92.6	73.0	54.3	72.7	82.3	76.7	70.4	54.3
28	62.4	77.9	80.6	92.3	74.1	54.2	73.1	82.6	77.0	72.0	54.2
29	62.7	78.5	80.8	91.6	75.1	54.7	73.4	83.2	79.9	73.5	54.7
30	62.5	81.1	81.1	91.5	77.1	53.9	73.5	84.2	78.6	73.9	53.9

Copyright & IP of PGB Group Private & Confidential



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/terms-and-conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/terms-and-conditions/terms-e-document.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8387 1883, or website: CN.sgs.com/track

No. 301, Sunlight Road, 2 Block, Sunlight Industry Zone, Any County, Zhejiang Province, China 311300 t (86-572) 503825 f (86-572) 503829 www.sgs.com.cn
 中国·浙江·安吉县阳光工业园二区阳光大道301号 邮编:311300 t (86-572) 503825 f (86-572) 503829 e: sgs.china@sgs.com

Time (min)	Thermocouple temperature (°C)										
	1#	2#	3#	4#	5#	6#	7#	8#	9#	10#	11#
31	62.5	85.0	81.2	91.2	79.1	54.1	73.7	85.0	81.7	74.3	54.1
32	63.0	87.8	81.2	91.1	81.3	52.3	73.7	85.3	82.4	74.6	52.3
33	62.3	89.0	81.2	90.2	83.4	54.9	73.9	85.3	83.4	75.9	54.9
34	62.0	89.9	81.2	89.1	86.2	56.2	74.7	85.0	84.0	76.8	56.2
35	62.6	90.3	81.2	89.5	88.1	54.7	78.2	85.4	85.1	77.4	54.7
36	62.1	90.0	81.6	88.9	89.1	56.2	84.3	85.3	86.1	78.6	56.2
37	61.8	89.7	81.5	88.3	88.9	57.8	85.7	85.1	87.2	78.9	57.8
38	61.7	89.8	80.8	87.9	89.8	59.3	86.1	84.7	88.5	77.6	59.3
39	61.7	91.6	57.5	87.5	90.7	61.6	86.8	85.0	89.8	77.7	57.5
40	61.6	91.0	65.3	87.0	90.7	64.5	86.8	85.1	90.9	78.0	61.6
41	59.8	88.0	76.8	84.3	86.2	71.6	86.8	82.5	92.3	78.7	59.8
42	59.3	87.5	79.3	83.4	85.7	72.1	86.3	82.5	92.3	78.8	59.3
43	59.6	87.4	80.2	82.8	85.3	73.0	85.6	82.7	93.2	79.1	59.6
44	59.6	87.5	81.0	82.4	84.6	73.3	85.3	82.6	92.3	80.0	59.6
45	60.1	87.5	82.2	82.3	83.7	74.0	83.4	82.7	92.3	80.2	60.1
46	60.2	86.9	83.0	82.4	83.6	73.7	83.8	83.4	93.2	81.3	60.2
47	60.3	86.6	84.5	82.5	82.4	73.8	82.6	84.0	92.4	82.1	60.3
48	60.6	86.5	86.1	82.7	82.0	73.0	83.7	84.3	92.3	82.7	60.6
49	61.3	86.8	86.8	83.5	82.0	72.5	85.8	84.8	92.2	83.5	61.3
50	63.4	86.9	87.4	85.0	83.7	71.4	86.6	85.6	92.5	84.5	63.4
51	65.1	87.1	88.2	85.0	83.8	71.5	88.0	85.7	92.2	84.8	65.1
52	66.6	86.9	89.1	86.7	84.4	71.4	90.8	86.6	92.5	85.3	66.6
53	68.4	86.1	90.5	87.6	82.9	72.0	89.2	87.3	93.1	86.1	68.4
54	70.1	85.8	90.9	89.0	82.2	72.5	89.3	87.8	94.3	87.4	70.1
55	71.6	87.6	91.1	90.6	86.5	71.4	89.1	87.8	95.1	88.7	71.4
56	73.2	88.1	91.8	92.0	85.9	71.1	94.6	88.0	96.3	87.0	71.1
57	74.7	87.2	93.2	92.6	84.9	72.4	80.9	87.9	98.2	86.7	72.4
58	75.7	87.3	94.2	93.0	85.3	72.4	82.2	88.0	102.5	87.0	72.4
59	76.8	86.9	93.3	92.7	85.1	72.3	91.9	88.5	105.6	87.5	72.3
60	77.6	87.1	93.2	92.1	84.6	72.6	99.8	89.0	113.9	88.4	72.6

Copyright & IP of PGB Group Private & Confidential



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/terms-and-conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/terms-and-conditions/terms-e-document.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained herein reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not associate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced, except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing / inspection report, please contact us at telephone: (86-731) 8387 1442, or email: CH.Operations@sgs.com

No. 301, Sunlight Road, 2 Block, Sunlight Industry Zone, Anji County, Zhejiang Province, China 313300 | (86-572) 5018225 | (86-572) 5018229 | www.sgs.com.cn
 中国·浙江·安吉县阳光工业园区二区阳光大道301号 | 邮编: 313300 | (86-572) 5018225 | (86-572) 5018229 | e: sgi.china@sgs.com

Time (min)	Thermocouple temperature (°C)										
	1#	2#	3#	4#	5#	6#	7#	8#	9#	10#	11#
61	78.5	87.3	93.8	92.2	84.2	72.9	109.4	89.4	118.6	88.8	72.9
62	79.5	87.3	94.3	92.6	84.2	73.3	119.3	90.0	124.8	89.4	73.3
63	80.6	87.5	95.1	92.9	84.6	73.8	130.6	90.6	130.2	89.9	73.8
64	81.6	88.2	99.3	93.1	85.6	74.1	143.3	92.1	134.9	90.8	74.1
65	82.8	89.5	96.9	93.4	87.1	74.6	156.3	92.5	138.7	91.3	74.6
66	83.7	89.8	97.1	94.2	87.4	75.4	169.6	93.0	142.3	92.4	75.4
67	85.4	89.7	97.5	94.6	88.2	76.5	173.7	93.4	150.9	93.6	76.5
68	87.5	90.5	98.3	94.8	87.4	77.1	175.9	93.5	161.4	93.4	77.1
69	90.9	90.2	99.5	94.9	87.5	77.9	177.0	94.3	169.8	93.4	77.9
70	95.6	90.8	101.7	94.9	86.5	78.1	178.2	95.2	178.8	93.4	78.1
71	103.1	93.0	109.8	95.3	85.9	78.4	179.9	96.1	183.9	93.2	78.4
72	112.6	100.2	119.6	95.7	86.7	79.0	180.9	97.0	192.3	93.1	79.0
73	124.4	108.3	126.9	96.3	87.6	79.8	182.4	97.9	199.5	93.2	79.8
74	141.8	114.7	145.3	97.7	88.9	81.2	183.1	99.3	213.2	93.2	81.2
75	136.4	121.3	177.4	102.0	90.4	82.9	194.9	101.1	226.0	93.2	82.9
76	114.9	138.7	207.5	109.9	91.4	85.2	198.4	103.6	239.8	93.2	85.2
77	115.1	162.0	238.9	120.6	92.6	87.9	210.7	107.8	253.3	93.0	87.9
78	123.1	182.1	269.0	135.0	95.0	91.0	225.6	113.2	266.7	95.3	91.0
79	139.2	200.5	295.5	158.2	98.2	94.9	239.2	120.0	282.7	103.4	94.9
80	144.8	220.8	325.0	182.7	104.7	99.2	250.9	128.5	309.3	114.0	99.2
81	151.5	245.0	375.7	206.4	114.6	102.7	261.2	138.5	330.7	130.8	102.7
82	147.1	282.0	415.1	251.3	142.2	108.4	278.0	155.2	351.1	148.1	108.4
83	218.7	334.0	431.8	120.5	194.0	112.3	301.8	172.7	388.3	171.2	112.3
84	299.7	250.6	439.8	90.2	254.3	118.7	351.5	190.7	421.8	194.4	90.2
85	258.0	230.1	469.2	73.7	337.2	127.4	273.3	207.5	458.9	227.7	73.7

Copyright & IP of PGP Group Private & Confidential



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8337 1443, e-mail: CN.Check@sgs.com

No. 301, Sunlight Road, 2 Block, Sunlight Industry Zone, Anji County Zhejiang Province, China 313300 t (86-572) 501825 f (86-572) 501829 www.sgs.com.cn
 中国·浙江·安吉县阳光工业园二区阳光大道301号 邮编:313300 t (86-572) 501825 f (86-572) 501829 e sgs.china@sgs.com

Table 3 Observations Made during the Test

Time (min:sec)	Observations
00:00	Test was started.
20:00	The center of the specimen concaved towards the furnace slightly.
35:00	Smoke was issued from the joint at the lower right corner.
50:00	The area near the joint at lower right corner was to be discolored.
65:00	The top plasterboard was to be discolored.
70:00	The discoloration area was getting larger and larger.
78:00	There was smouldering on the surface near the No. 9 thermocouple, the cotton pad was applied on the smouldering area but fail to ignite.
83:00	The area of smouldering became larger and larger, the cotton pad was still failed to ignite.
85:00	Crack appeared on unexposed face, the 6mm gap gauge could be passed through the specimen and could be moved a distance of more than 150mm, the failure of integrity was deemed to be occurred.
86:00	The test was discontinued.

6. Performance Criteria (AS 1530.4:2014, Clause 2.13.2 and 2.13.3)

6.1 Integrity

Failure in relation to integrity shall be deemed to have occurred when evaluated as follows:

6.1.1 Cotton pad

The cotton pad in its frame shall be applied against the surface of the test specimen over the crack, fissure or flaming under examination, until ignition of the cotton pad (defined as glowing or flaming) or for a maximum of 30s.

6.1.2 Gap gauges

Gap gauges are used to evaluate the size of any opening in the surface of the test specimen at time intervals that will be determined by the apparent rate of the specimen deterioration.

- a) a 6mm gap gauge can be passed through the specimen so that the gap gauge projects into the furnace and the gauge can be moved a distance of 150 mm along the gap; or
- b) a 25mm gap gauge can be passed through the specimen so that the gap gauge projects into the furnace.

6.1.3 Flaming

Sustained flaming on the surface of the unexposed surface for 10s or longer constitutes integrity failure.



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/terms-and-conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/terms-and-conditions/terms-e-document.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing inspection report & certificates, please contact us at sgs@sgs.com or <tel:+86-571-508825>

No. 301, Sunlight Road, 2 Block, Sunlight Industry Zone, Anji County, Zhejiang Province, China 313300 t: (86-572) 508825 f: (86-572) 508829 www.sgs.com.cn
 中国·浙江·安吉县阳光工业园二区阳光大道301号 邮编:313300 t: (86-572) 508825 f: (86-572) 508829 e: sgs.china@sgs.com

6.2 Insulation

Failure in relation to insulation shall be deemed to have occurred when measured by thermocouples on the unexposed surface, the specimen is deemed to have failed when:

- a) the mean temperature of the unexposed face of the test specimen exceeds the initial temperature by more than 140 K; or
- b) the temperature at any location on the unexposed face of the test specimen exceeds the initial temperature by more than 180 K.
- c) When integrity failure occurs.

7. Conclusion

During the heating period of 85 min, the 6mm gap gauge can be passed through the specimen and can be moved a distance of more than 150mm at the 85th minute. At the end of 70 min, the average temperature rise on unexposed face of the specimen was 64.6K and the maximum temperature rise was 185.5K. The fire resistance of the specimen was judged against the criteria for integrity and insulation as specified clause 6 of this report, and the specimen satisfied the performance requirements for the following period:

Integrity, (E)	Insulation, (I)
84 min	73 min

The test was terminated after a period of 86 min.

8. STATEMENT

THE RESULTS OF THESE FIRE TESTS MAY BE USED TO DIRECTLY ASSESS FIRE HAZARD, BUT IT SHOULD BE RECOGNIZED THAT A SINGLE TEST METHOD WILL NOT PROVIDE A FULL ASSESSMENT OF FIRE HAZARD UNDER ALL FIRE CONDITIONS.

THIS REPORT DETAILS METHODS OF CONSTRUCTION, THE TEST CONDITIONS AND THE RESULTS OBTAINED WHEN THE SPECIFIC ELEMENT OF CONSTRUCTION DESCRIBED HEREIN WAS TESTED FOLLOWING THE PROCEDURE OUTLINED IN AS 1530.4. ANY SIGNIFICANT VARIATION WITH RESPECT TO SIZE, CONSTRUCTION DETAILS, LOADS, STRESSES, EDGE OR END CONDITIONS, OTHER THAN THAT ALLOWED UNDER THE FIELD OF DIRECT APPLICATION IN THE RELEVANT TEST METHOD, IS NOT COVERED BY THIS REPORT.

BECAUSE OF THE NATURE OF FIRE RESISTANCE TESTING AND THE CONSEQUENT DIFFICULTY IN QUANTIFYING THE UNCERTAINTY OF MEASUREMENT OF FIRE RESISTANCE, IT IS NOT POSSIBLE TO PROVIDE A STATED DEGREE OF ACCURACY OF THE RESULT.



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at <tel:+86-572-501825> / <tel:+86-572-501829> / www.sgs.com.cn / sgs.china@sgs.com

No. 301, Sunrise Road, 2 Block, Sunrise Industry Zone, Anji County, Zhejiang Province, China 313300 t: (86-572) 501825 f: (86-572) 501829 www.sgs.com.cn
 中国·浙江·安吉县阳光工业园二区阳光大道301号 邮编:313300 t: (86-572) 501825 f: (86-572) 501829 e: sgs.china@sgs.com

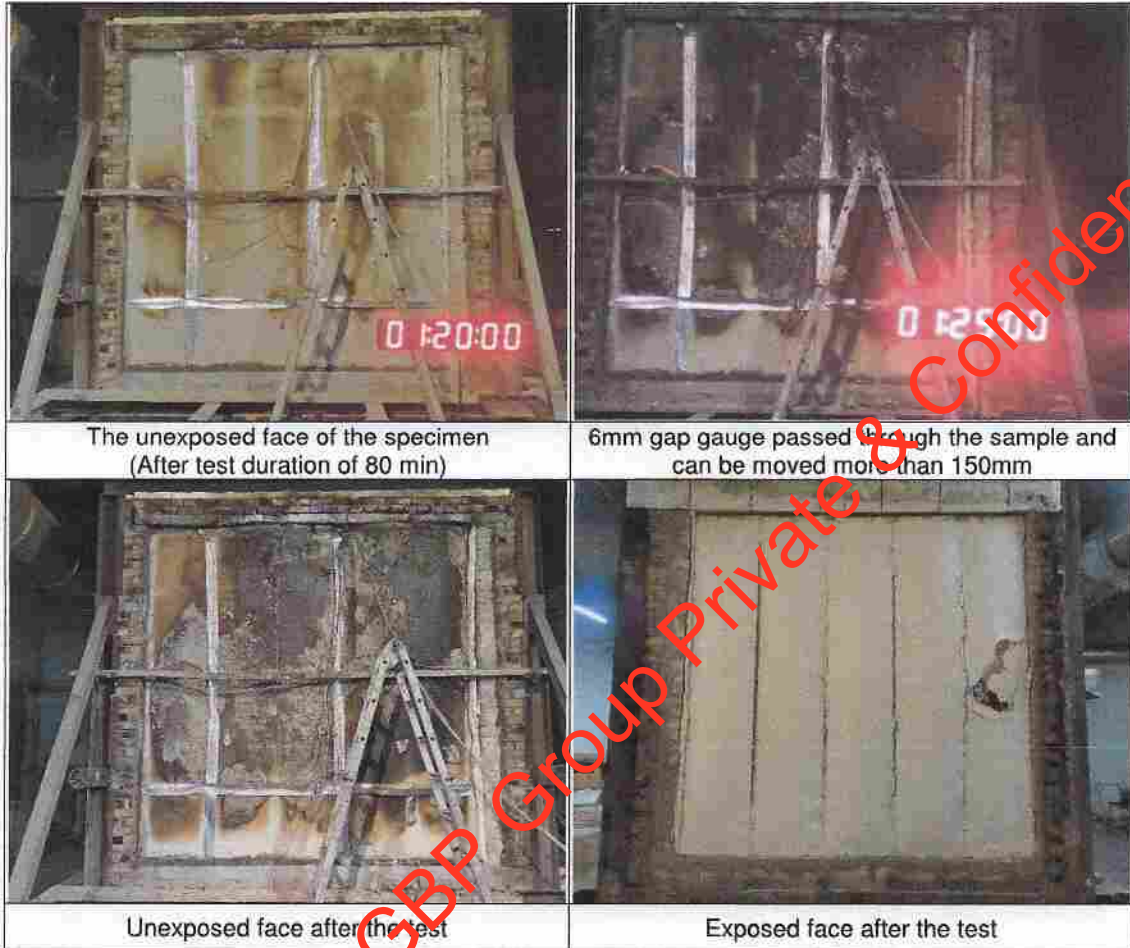
Appendix - Photographs



SGS Inspection & Testing Services
Anji Branch Park Technology Service

Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8387 3883, or email: CS.China@sgs.com
 No. 301, Sunlight Road, 2 Block, Sunlight Industry Zone, Anji County, Zhejiang Province, China 313300 t: (86-572) 5018823 f: (86-572) 5018829 www.sjsgsgroup.com.cn
 中国·浙江·安吉县阳光工业园二区阳光大道301号 邮编:313300 t: (86-572) 5018825 f: (86-572) 5018829 e: sgs.china@sgs.com



SGS authenticate the photo on original report only

End of Report

Copyright & IP of PCBP Group Private & Confidential



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To insure the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8327 1443, or email: CN.Director@sgs.com

No. 301, Sunlight Road, 2 Block, Sunlight Industry Zone, Anji County, Zhejiang Province, China 313300 t (86-572) 501825 f (86-572) 501829 www.sgs.com.cn
 中国·浙江·安吉县阳光工业园二区阳光大道301号 邮编: 313300 t (86-572) 501825 f (86-572) 501829 e sgs.china@sgs.com