Report No.：R-12-00016

Performance Experiment Center
Architecture and Building Research Institute
Ministry of the Interior, R.O.C.(Taiwan)

Testing Laboratory
1646

Test Report

Client：JiChuan Tech, Co., Ltd. Application No.：R12041101

Specimen Name：Stop-Slip（J001） Specimen No.：RS12042501

Environmental Conditions：Temperature 25℃ Relative Humidity 52%（RH）

Date Of Sample Received：2012.4.25 Total Pages：3 This Page：2

Item(s)	Method(s)	Result(s)	Remark(s)
Asbestos Identification	NIEA R401.21T CNS13970	Not detected （The sample does not contain asbestos）	Estimated LOD：<1% Asbestos

研究所騎縫章

報告專用章

※ Notes：

1.This report relates only to the items tested, and the content of this report is for references, but not for advertising publicity or other commercial purpose.
2.To reproduce, copy and/or counterfeit this report shall be prohibited.
3.Confirmation of this report is welcome.

Architecture and Building Research Institute
Ministry of the Interior

Approval Signatory：

Green Building Material Project Lab.-Taipei

GBM Test Report

Report No.：HB-10-04844XA
Page： 1 OF 1
Date： Jul. 12, 2010

JiChuan Tech. Co., Ltd.
No.165,Wenchang Rd.,Wuqi Dist., Taichung City 435,Taiwan(R.O.C.)
The following sample(s) was/were submitted and identified by/on behalf of client as:

Applicant:	JiChuan Tech. Co., Ltd. (Unify Serial No.:25087926)	
Person in charge:	Lin Chen Hu(ID Number:L120874855)	
Sample Submitted by:	JiChuan Tech. Co., Ltd.	
Sample Name:	JiChuan Stop-Slip	
Product Description:	Style/Item No:	JICHUAN
	Use of Product:	Stone class structure recycling
	Elements of Product:	Non-slip to go to grease, detergents surfactants, etc.
	Specifications:	10ML、5ML、1ML、500CC、300CC
Date of Sample Receive:	Jul. 05, 2010	
Date of Testing:	Jul. 05, 2010	

We have tested the submitted samples as required and the following results were obtained：

Detection of Radiation

Test Result：1.Background Value：0.07~0.11 μSv/hr
2.Radiation Test Result：10cm from the sample surface

Type of Product	Sample size	Test Value（μSv/hr）	GBM Standard	Test Result
JiChuan Stop-Slip	300g	0.07~0.10	＜0.2 μSv/h	Normal

Testing Specialist：	XIAO JIAN LIANG
原能會認可證書字號:	鋼偵訓(輻協)字第 0950044 號
Unit of Testing：	SGS Ltd.in Taiwan
原能會認可證書字號:	輻防偵字第 00012 號
Person in Charge：	Helmut Chik
Address:	136-1,Wu Kung Road,WuKu Ind Zone,24803 Taipei County,Taiwan(R.O.C.)
Test Apparatus：	SE Detector
Style/Item No：	Inspector(12778)
Date of calibration：	Jan.19, 2010

Note: 1.This test report refer only to the sample(s) tested and cannot be reproduced, except in full.
2.This is the first additional issued report of HB-10-04844X.Reissue date：Jul. 05 , 2012

The value of required specifications are for reference only.
Conformity judgment is the Applicant's final verdict.

Signed for and on behalf of
SGS TAIWAN Ltd.

TWA 5748585

Test Report

Report No.: AR/2010/70051a
Page: 1 OF 1
Date: 2012/07/02

The following merchandise was submitted & identified by the client as:

Subcontract Group: JiChuan Tech. Co., Ltd.
Type of Product: JiChuan Stop-Slip
Sample No.: AR7005101
Sampling Group: The Commission department give the sample over by himself
Time of Sample Received: 2010/07/05 16:30
Test Results:

Test Requested	Test Results (Unit)	Test Methods	Criterion
pH	7.92(24.7℃)	NIEA R208.04C	≦2.0；≧12.5

Remark：1.This test document cannot be reproduced in any way, except in full content, without the prior approval in writing of the laboratory.

2.The results shown in this test report refer only to the sample(s) tested unless otherwise stated.

3.If there are any discrepancy, the Chinese version shall prevail.

4.This report was for reference only.

Pamu Liu, Asst. Manager
SIGNED FOR AND ON BEHALF OF
SGS TAIWAN LTD.

SGS Taiwan Ltd. 台灣檢驗科技股份有限公司 | No.61, Kai-Fa Road, Nanzih Export Processing Zone, Kaohsiung, Taiwan /高雄市楠梓加工出口區開發路61號
t (886-7) 301-2121 f (886-7) 301-2897 www.sgs.tw
Member of SGS Group

TWA 8112600

SGS

Material & Engineering Laboratory-Kaohsiung

Test Report

Report No. : KB-12-05278XA
C-12-10203
Page No. : 1 OF 2
Date of Report : May 23, 2012

Applicant	JiChuan Tech. Co., Ltd.
Address	No. 165, Wenchang Rd., Wuqi Dist., Taichung City 435, Taiwan(R.O.C.)
Sample Name	JiChuan Stop-Slip
Sample Submitted By	JiChuan Tech. Co., Ltd.
Date of Sample Received	Apr. 25,2012
Date of Testing	Apr. 25,2012~May 23,2012
Remark	The information mentioned in the above section is provided by Client (Exclude Date of Sample Received and Date of Testing)

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Test Results :

1. Test Method : Refer to CNS 13432(1994)

Test Item		Test Result	
		dry surfaces	wet surfaces
Static coefficient of friction	Surfaces with Acid Treatment (To immerse the sample in the 10%HCl agent for 24hrs)	0.71	0.61
	Surfaces with Alkali Treatment (To immerse the sample in the 10%NaOH agent for 24hrs)	0.69	0.60
	Surfaces with Weathering Treatment (To expose the sample for 168hrs by UV light)	0.71	0.60
	Surfaces with Autoclave Treatment (under the autoclave 10 kgf/cm^2 pressure for 1hr)	0.67	0.58
	Surfaces with soap water Treatment	---	0.53

Signed for and on behalf of
SGS Taiwan Ltd.

The required specification(s) offered in this test report is/are for reference only.
The conformity judgment is at the Applicant's final verdict.

TWA7668389

SGS Taiwan Ltd. 台灣檢驗科技股份有限公司 | No.61, Kai –Fa Road, Nanzih Export Processing Zone, Kaohsiung, Taiwan /高雄市楠梓加工出口區開發路61號
t (886-7) 301-2121 f (886-7) 301-1165 www.sgs.tw
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SGS

Material & Engineering Laboratory-Kaohsiung

Test Report

Report No. : KB-12-05278XA
C-12-10203
Page No. : 2 OF 2
Date of Report : May 23, 2012

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Test Results :

2. **Test Method** : Refer to CNS 3299(2006)

Test Item	Test Result
Water Absorption (%)	0.3
Glazed Surface Abrasion Test	The substrate was exposed when the sample was abraded for 302 seconds. Weight loss 0.004g when the sample was abraded for 641 seconds.

3.

Test Item	Test Method	Test Result	
		blank	applied
$45^0 0^0$ diffuse reflectance (%)	CNS 10756-1(1994)	69	69
Weather resistance(168 hrs)	ASTM G154-06 Cycle 1	No Variation	No Variation
Surface Frictional Properties (BPN)	ASTM E303-93(2003)	23	46

NOTE :

1. The test results of static coefficient were not contain calibration factor.
2. $45^0 0^0$ diffuse reflectance (%) 、Weather resistance(168 hrs) 、Surface Frictional Properties (BPN) to SGS M&E Polymer Lab.-Kaohsiung. 。(Report Number KV-12-04475X)
3. This Test Report is an additional original report of KB-12-05278X C-12-10203. Issued date : Jul. 24.2012

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Signed for and on behalf of
SGS Taiwan Ltd.

The required specification(s) offered in this test report is/are for reference only.
The conformity judgment is at the Applicant's final verdict.

SGS

Material & Engineering Laboratory-Taipei

TEST REPORT

REPORT NO. : HV-10-03938XA
PAGE : 1 OF 3
DATE : JULY 17, 2010

JiChuan Tech. Co., Ltd.
No.165, Wenchang Rd., Wuqi Dist., Taichung City 435, Taiwan (R.O.C.)

The following merchandise was submitted and identified by the vendor as :

Product Description : JiChuan Stop-Slip
Style/Item No. : JICHUAN
Manufacturer/Vendor : JiChuan Tech. Co., Ltd.

We have tested the submitted sample(s) as requested and the following results were obtained :

Test Required : (According to client's test specification, please see following sheets in detail.)
Surface Frictional Properties

Test Result :
-PLEASE SEE ATTACHED SHEETS-

Date of Receive : JULY 05, 2010

Date of Testing : JULY 05, 2010~ JULY 17, 2010

Remark : This Test Report is an additional original report of HV-10-03938X. Issued date : JULY 09, 2012.

Signed for and on behalf of
SGS Taiwan Ltd.

Carlos Kao
Asst. Manager

TEST REPORT

Surface Frictional Properties

Test Equipment :

Name	Brand	Model
Portable Skid Resistance Tester	Munro Stanley Londan	1006

Lab Environmental Conditions :

Ambient temperature : 23±2℃

Relative humidity : 50±5%RH

Test Method/ Specification :

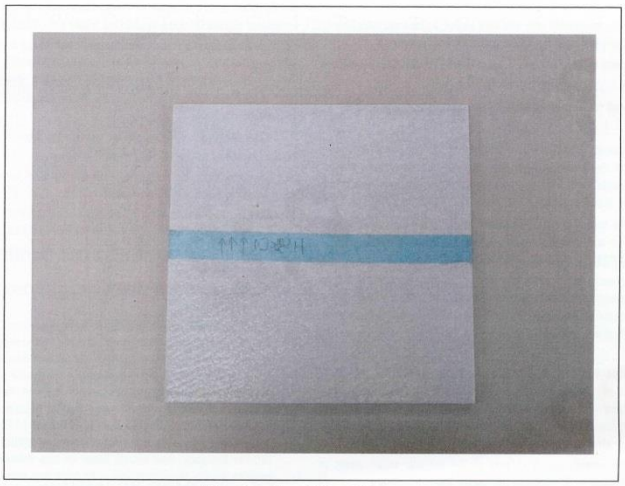
ASTM E303-93(2003) Standard Test Method for Measuring Surface Frictional Properties Using the British Pendulum Tester

Test Result :

Test Items		Test Result			
		1st	2nd	3rd	4th
Surface Frictional Properties (BPN)	Not construction	23	20	21	20
	Have already stared construction	41	42	42	42

TEST REPORT

Test Photo :



— The End of Test Report —

Performance Experiment Center
Architecture and Building Research Institute
Ministry of the Interior, R.O.C.(Taiwan)
No.2496, Sec.1, Zhongzheng S. Rd., Guiren Dist., Tainan 71150, Taiwan
TEL：+886-6-330-0504 FAX：+886-6-330-0480

Testing Laboratory 1646

TVOC from the Building Materials Test Report

Test Date：2012/08/06
Report No.：C-12-00038

Specimen Name：Stop-slip (J001)
Application Number：C12051501
Client Name：JiChuan Tech. Co., Ltd.
Client Address：No.165, Wenchang Rd., Wuqi Dist., Taichung City 435, Taiwan (R.O.C.)

- The specimen has been tested by our laboratory, and total are 10 pages, including cover.
- The report will be invalid if used separately and can't be extracted arbitrarily.
- The report is only responsible to this specimen.
- The information about sample name, sample type, and the contact are provided by the contact.
- The report is for reference only, and can not be used for advertisement or lawsuit.
- The name of Architecture and Building Research Institute, Ministry of the Interior can not be used in any advertisement, leaflet or propaganda.
- The following words are authorized to be used：according to MOIS901014 standard of test method procedure to the VOC emitted from interior materials, the test results are approved by Architecture and Building Research Institute, Ministry of the Interior.

內政部建築研究所 報告專用章 性能實驗中心

施文和
Laboratory Head

2012 / 08 / 27

Report No.：C-10-00038-1

內政部建築研究所性能實驗中心

Performance Experiment Center

Architecture and Building Research Institute, Ministry of the Interior

Testing Report

Specimen name 【International code.】	Stop-slip（J001）		
Client	JiChuan Tech. Co., Ltd		
Business Registration No.	25087926		
Responsible person	Lin, Chen-Hu		
ID numbers	L120874855		
Date of sample received	2012.08.01		
Begin of the test	2012.08.06		
End of the test	2012.08.08		
Testing hours	48hr		
Speciment No.	CS12080601		
Testing No.	RW12080601		
Testing method	Follows【Standard guide for organic volatile compound emissions from interior building materials】MOIS901014 testing method		
Testing Condition Data			
Testing temperature (℃)	25	Product loading (m^2/m^3)	0.4
Relative humidity (RH%)	50	Air exchange rate (h^{-1})	0.5

Testing result of Total Volatile Organic Compounds (TVOC)		
Time (hr)	TVOC-emission concentration (mg/m^3)	TVOC-emission rate (mg/m^2•hr)
48hr	**0.023**	**0.029**

Testing result of Formaldehyde (HCHO)		
Time (hr)	HCHO-emission concentration (mg/m^3)	HCHO- emission rate (mg/m^2•hr)
48hr	**＜0.03**	**＜0.037**

The Formaldehyde Scope of Certification by TAF (0.03 ~ 20 mg/m^3)。

Approval Signatory	林晨建

內政部建築研究所性能實驗中心
Performance Experiment Center
Architecture and Building Research Institute, Ministry of the Interior

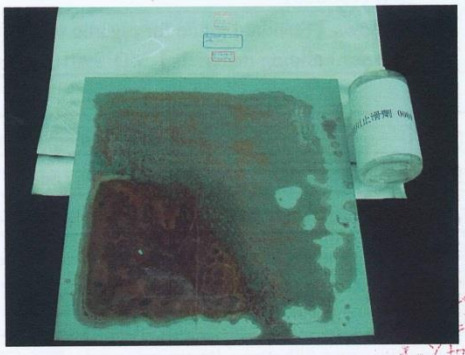
Testing Report

Specimen Specification	
dimensions (W x D) mm	300 × 300
Specimen net weigh (g)	344.2（including bottle weigh）

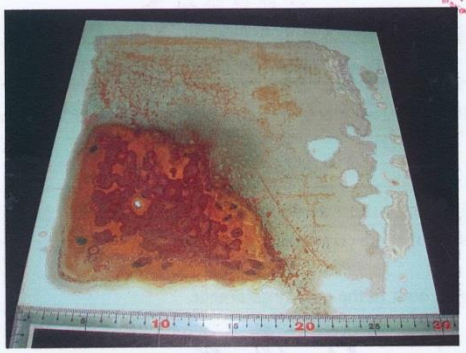
Specimen Description

Sample purpose：Stone class structure recycling.
Sample composition：Surfactants, antifreeze, dispersants, Stop-Slip. etc.。(above text provided by the client）.
The sample is transparent coating, and the specimen was painted on 300×300 mm steel plate with zinc. The painting weight is 27 g (according the standard 300 mg/m^3).

sample surface and contents map



specimen map



內政部建築研究所性能實驗中心
Performance Experiment Center
Architecture and Building Research Institute, Ministry of the Interior

Testing Report

Apparatus

Item	Apparatus	Type of product	Operating range	Date of Calibration /check	Calibration cycle
1	Emission test chamber	King Son Instrument Tech Co., Ltd /Lambda 800/900	10 ℃～95 ℃ 20 %RH～98 %RH	2012.5.10	1year
2	Gas Chromatograph / Flame Ionization Detector，GC/FID	Agilent /Technologies 6890N	100 ℃～450 ℃	2012.5.21	1year
3	gas chromatography / mass spectrometry，GC/MS	Agilent / Agilent 5973 MASS 6890N	2～800 a.m.u	2012.5.21	1year
4	Gas Chromatograph / Flame Ionization Detector，GC/FID	Thermo /Trace GC 2000/	100 ℃～450 ℃	2011.12.23	1year
5	Auto Thermal Desorption， ATD	PerkinElmer/ Turbo Matrix ATD-50	50 ℃～400 ℃	2012.5.17	1year
6	Syringe	SGE Analytical Science	10 μL～1 mL	2012.1.5	1year

內政部建築研究所性能實驗中心
Performance Experiment Center
Architecture and Building Research Institute, Ministry of the Interior

Testing Report

Test Sampling

Samples have been provided by JiChuan Tech. Co., Ltd, the institute have provided sampling procedure guidelines for reference.

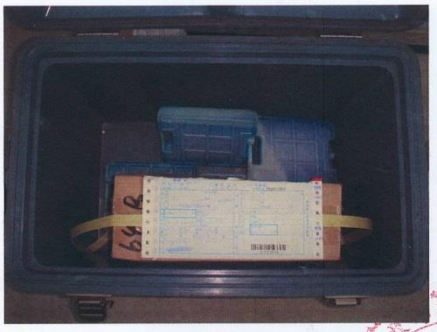
Building material samples collection and storage：

The date of manufacture of this specimen was 2011.02.01.

Wet materials：Samples are sent as the smallest containers produced. Should the container be impractical to send, it is sent sealed by 500 g container placed into sampling bags. Each sampling bag contains at least 3 samples and are stored in low temperature.

Testing material transportation and storage：

Contractor sampling and mailing chart



Sample storage within the institute chart

Report No. : C-10-00038

內政部建築研究所性能實驗中心

Performance Experiment Center

Architecture and Building Research Institute, Ministry of the Interior

Testing Report

築研究所 中心騎縫章

內政部建 性能實驗

TVOC-emission concentration data

Time(hr)	Benzene (mg/m^3)	Toluene (mg/m^3)	EB (mg/m^3)	m,p-xylene (mg/m^3)	o-xylene (mg/m^3)	TVOC (mg/m^3)	emission rate (mg/m^2*hr)
1	0.004	0.014	0.004	0.001	0.0005	0.023	0.029
2	0.004	0.017	0.008	0.001	0.0005	0.030	0.038
3	0.004	0.023	0.004	0.001	0.0005	0.032	0.040
4	0.004	0.024	0.004	0.001	0.0005	0.033	0.041
5	0.004	0.031	0.004	0.001	0.0005	0.040	0.050
6	0.004	0.018	0.005	0.001	0.0005	0.028	0.035
7	0.004	0.017	0.002	0.001	0.0005	0.024	0.030
8	0.004	0.018	0.005	0.001	0.0005	0.028	0.035
9	0.004	0.017	0.005	0.001	0.0005	0.027	0.034
10	0.004	0.020	0.005	0.001	0.0005	0.030	0.037
11	0.004	0.019	0.008	0.001	0.0005	0.032	0.040
12	0.004	0.018	0.006	0.001	0.0005	0.029	0.037
13	0.004	0.019	0.006	0.001	0.0005	0.029	0.037
14	0.004	0.019	0.005	0.001	0.0005	0.029	0.036
15	0.004	0.019	0.006	0.001	0.0005	0.030	0.037
16	0.004	0.019	0.007	0.001	0.0005	0.031	0.039
17	0.004	0.017	0.006	0.001	0.0005	0.028	0.035
18	0.004	0.018	0.006	0.001	0.0005	0.029	0.037
19	0.004	0.017	0.007	0.001	0.0005	0.028	0.036
20	0.004	0.021	0.007	0.001	0.0005	0.033	0.041
21	0.004	0.020	0.007	0.001	0.0005	0.033	0.041
22	0.004	0.021	0.007	0.001	0.0005	0.033	0.041
23	0.004	0.021	0.005	0.001	0.0005	0.031	0.039
24	0.004	0.019	0.004	0.001	0.0005	0.028	0.035
26	0.002	0.019	0.004	0.0002	0.0002	0.026	0.032
28	0.002	0.023	0.007	0.0002	0.0002	0.032	0.040
30	0.002	0.021	0.007	0.0002	0.0002	0.031	0.039
32	0.002	0.020	0.008	0.0002	0.0002	0.030	0.037
34	0.002	0.018	0.006	0.0002	0.0002	0.026	0.033
36	0.002	0.015	0.007	0.0002	0.0002	0.024	0.031
38	0.002	0.015	0.007	0.0002	0.0002	0.024	0.030
40	0.002	0.015	0.005	0.0002	0.0002	0.022	0.028
42	0.002	0.014	0.005	0.0002	0.0002	0.021	0.027
44	0.002	0.014	0.007	0.0002	0.0002	0.023	0.029
46	0.002	0.015	0.007	0.0002	0.0002	0.024	0.030
48	0.002	0.015	0.007	0.0002	0.0002	0.023	0.029

內政部建築研究所性能實驗中心
Performance Experiment Center
Architecture and Building Research Institute, Ministry of the Interior

Testing Report

HCHO-emission concentration data

Time(hr)	HCHO-emission concentration mg/m^3	HCHO- emission rate mg/m^2*hr
2	0.004	0.004
4	0.004	0.004
6	0.004	0.004
8	0.004	0.004
10	Not analysis	Not analysis
12	Not analysis	Not analysis
14	Not analysis	Not analysis
16	Not analysis	Not analysis
18	Not analysis	Not analysis
20	0.004	0.004
22	0.004	0.004
24	0.004	0.004
28	0.002	0.002
32	0.002	0.002
36	0.002	0.002
40	0.002	0.002
44	0.002	0.002
48	0.002	0.002

內政部建築研究所性能實驗中心
Performance Experiment Center
Architecture and Building Research Institute, Ministry of the Interior

Testing Report

HCHO-emission concentration data

Time(hr)	HCHO-emission concentration mg/m^3	HCHO- emission rate $mg/m^2 \cdot hr$
2	＜0.03	＜0.037
4	＜0.03	＜0.037
6	＜0.03	＜0.037
8	＜0.03	＜0.037
10	Not analysis	Not analysis
12	Not analysis	Not analysis
14	Not analysis	Not analysis
16	Not analysis	Not analysis
18	Not analysis	Not analysis
20	＜0.03	＜0.037
22	＜0.03	＜0.037
24	＜0.03	＜0.037
28	＜0.03	＜0.037
32	＜0.03	＜0.037
36	＜0.03	＜0.037
40	＜0.03	＜0.037
44	＜0.03	＜0.037
48	＜0.03	＜0.037

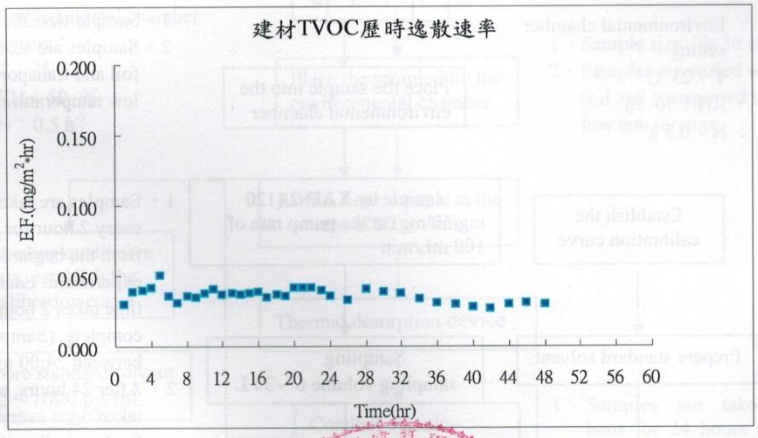
內政部建築研究所性能實驗中心

Performance Experiment Center

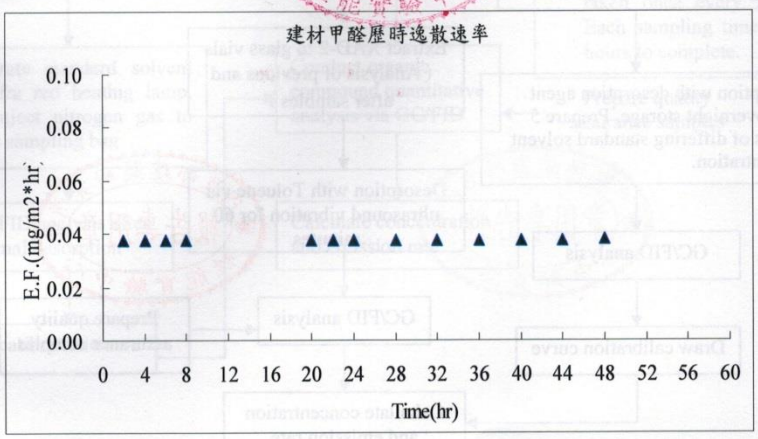
Architecture and Building Research Institute, Ministry of the Interior

Testing Report

Testing result of TVOC-emission rate



Testing result of HCHO-emission rate



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Performance Experiment Center
Architecture and Building Research Institute, Ministry of the Interior

Testing Report

TVOC sampling and analysis procedure