

TEST REPORT

No. : QDIN2003000762PS

Date : Apr 24, 2020

Page: 1 of 7

scan to see the report



QDIN2003000762PS

CUSTOMER NAME: SHINWOO CHEMICAL CO., LTD.
ADDRESS: 39, DODAM 5-RO, SEO-GU, INCHEON, KOREA

Sample Name : Plus 9000 (Hichem Plus 9000) Weather seal silicone sealant
Product Specification : 270~300ML CARTRIDGE
Product or Lot No. : Plus 9000 (Hichem Plus 9000) Weather seal silicone sealant
Buyer : SHINWOO CHEMICAL CO., LTD.

Above information and sample(s) was/were submitted and confirmed by the client. SGS, however, assumes no responsibility to verify the accuracy, adequacy and completeness of the sample information provided by client.

SGS Ref. No. : GZIN2003008569MR
Date of Receipt : Mar 03, 2020
Testing Start Date : Mar 03, 2020
Testing End Date : Apr 24, 2020
Test result(s) : For further details, please refer to the following page(s)
(Unless otherwise stated the results shown in this test report refer only to the sample(s) tested)

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

Vicky Dong
Authorized signatory



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.
Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755)83071443, or email: CN.Doccheck@sgs.com

SGS-CSTC Standards Technical Services (Qingdao) Co., Ltd.

SGS Center, No. 143, Zhuzhou Road, Laoshan District, Qingdao, China 266101
t (86-532) 68998888 f (86-532) 80991955

www.sgs.com
sgs.china@sgs.com

TEST REPORT

No. : QDIN2003000762PS

Date : Apr 24, 2020

Page: 2 of 7

Summary of Results:

No.	Test Item	Test Method	Result	Conclusion
1	Tack-Free Time	ASTM C679-15	50min	/
2	Peel Strength	ASTM C794-18	48.7N	/
3	Shore Hardness	With reference to ASTM C661-15 & ASTM D2240-15 ^{e1} and client's requirement	A/18/1	/
4	Tear Strength	ASTM D624-00(2012)	6.27kN/m	/
5	Tensile Strength	ASTM C1135-19	0.506MPa	/
6	Tensile Test	ASTM D412-16 Method A	See result	/

- Note: 1. Pass : Meet the requirements;
 Fail : Does not meet the requirements;
 / : Not Apply to the judgment.
2. Test items 1 was carried out by SGS-CSTC Standards Technical Services Co., Ltd. Guangzhou Branch (CNAS L0167, CMA2017191612Z).

Original Sample Photo:



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.

Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755)83071443, or email: CN.Doccheck@sgs.com

SGS Center, No. 143, Zhuzhou Road, Laoshan District, Qingdao, China 266101
 t (86-532) 68999888 f (86-532) 80991955

www.sgs.com
 www.sgs.com.cn
 e sgs.china@sgs.com

TEST REPORT

No. : QDIN2003000762PS

Date : Apr 24, 2020

Page: 3 of 7

1. Test item: Tack-Free Time

Sample description: Sealants

Test method: ASTM C679-15

Test condition:

Dimension of Sealants layers:95mm×25.4mm×3mm

Dimension of Weight: 41mm×19mm

Weight mass: 30g

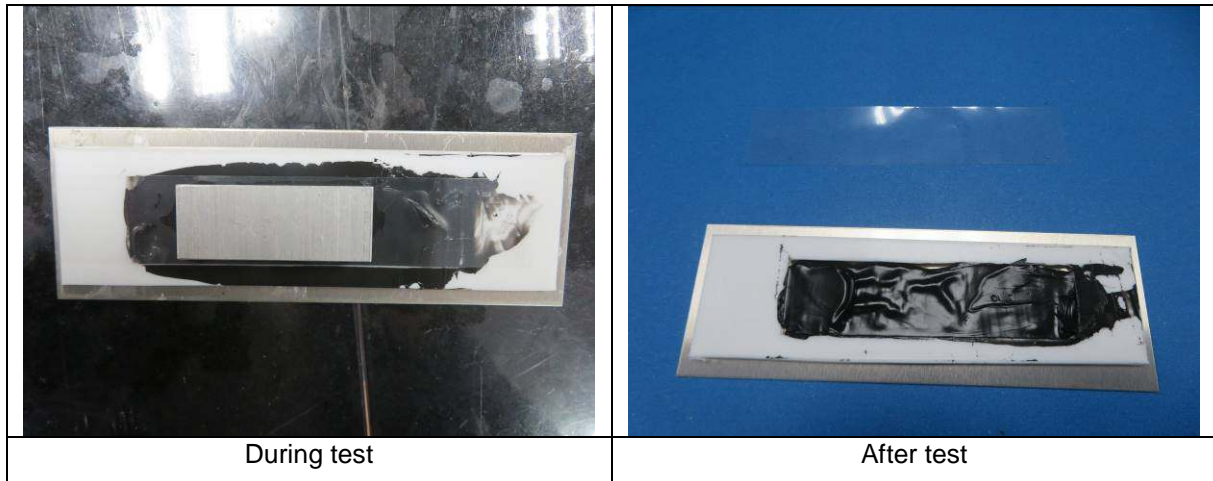
Weight duration time: 30s

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

Test result(s):

Test item	Test result
Tack-Free Time	50min

Test Photo:



Equipment Information:

Equipment	Model	Equipment No.	Calibration date	Next Calibration date
Stopwatch	DM1-001	GZMR-PL-E011-24	2019-12-28	2020-12-27



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.

Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755)83071443, or email: CN.Doccheck@sgs.com

SGS-CSI (Shanghai) Technical Services (Group) Co., Ltd.

SGS Center, No. 143, Zhuzhou Road, Laoshan District, Qingdao, China 266101
t (86-532) 68999888 f (86-532) 80991955

www.sgs.com
www.sgs.com.cn
e sgs.china@sgs.com

TEST REPORT

No. : QDIN2003000762PS

Date : Apr 24, 2020

Page: 4 of 7

2. Test Item: Peel Strength

Sample Description: See photo

Test Method: ASTM C794-18

Test Condition:

Specimen width: 25mm

Testing speed: 50mm/min

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

Test Result:

Test Item	Test Result
Peel strength	48.7N (See note 1)

Note:

1. Failure type: Cohesive failure.
2. Test specimens were prepared by SGS.

Equipment Information:

Equipment	Model	Equipment No.	Calibration date	Next Calibration date
Universal Material Testing Machine	Z010	POL-PL-E005	2019.08.26	2020.08.25

3. Test Item: Shore Hardness

Sample Description: See photo

Test Method: With reference to ASTM C661-15 & ASTM D2240-15^{e1} and client's requirement

Test Condition:

Specimen thickness: 7.40mm (3 layers plied up)

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



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.

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755)83071443, or email: CN.Doccheck@sgs.com

SGS-CSI (Shanghai) Technical Services (Group) Co., Ltd.

SGS Center, No. 143, Zhuzhou Road, Laoshan District, Qingdao, China 266101
t (86-532) 68998888 f (86-532) 80991955

www.sgs.com
sgs.china@sgs.com

TEST REPORT

No. : QDIN2003000762PS

Date : Apr 24, 2020

Page: 5 of 7

Test Result:

Test Item	Test Result
Shore Hardness	A/18/1

Note:

1. A/X/1 Indicates that A is the type of durometer; X is the hardness value; 1 s is the reading time.
2. Test specimens were cut from the sample.
3. Test sample were prepared by SGS.
4. Test result exceeded the lower limit of the tester, only for reference.

Equipment Information:

Equipment	Model	Equipment No.	Calibration date	Next Calibration date
Shore Type A Hardness Meter	Asker A	POL-PL-E006	2019.10.22	2020.10.21

4. Test Item: Tear Strength

Sample Description: See photo

Test Method: ASTM D624-00(2012)

Test Condition:

Specimen: Type C

Specimen thickness: 2.46mm

Testing speed: 500mm/min

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

Test Result:

Test Item	Test Result
Tear Strength	6.27kN/m

Note: 1. Test specimens were cut from the sample.

2. Test sample were prepared by SGS.



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.
Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755)83071443, or email: CN.Doccheck@sgs.com

SGS Center, No. 143, Zhuzhou Road, Laoshan District, Qingdao, China 266101
 t (86-532) 68999888 f (86-532) 80991955

www.sgs.com.cn
 e sgs.china@sgs.com

TEST REPORT

No. : QDIN2003000762PS

Date : Apr 24, 2020

Page: 6 of 7

Equipment Information:

Equipment	Model	Equipment No.	Calibration date	Next Calibration date
Universal Material Testing Machine	Z010	POL-PL-E005	2019.08.26	2020.08.25

5. Test Item: Tensile Strength

Sample Description: See photo

Test Method: ASTM C1135-19

Test Condition:

Testing speed: 50.8mm/min

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

Test Result:

Test Item	Test Result
Tensile Strength	0.506MPa

Note: Test specimens were prepared by SGS.

Equipment Information:

Equipment	Model	Equipment No.	Calibration date	Next Calibration date
Universal Material Testing Machine	Z010	POL-PL-E005	2019.08.26	2020.08.25



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.

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755)83071443, or email: CN.Doccheck@sgs.com

SGS-CSI (Shanghai) Technical Services (Qingdao) Co., Ltd.

SGS Center, No. 143, Zhuzhou Road, Laoshan District, Qingdao, China 266101
t (86-532) 68998888 f (86-532) 80991955

www.sgs.com
sgs.china@sgs.com

TEST REPORT

No. : QDIN2003000762PS

Date : Apr 24, 2020

Page: 7 of 7

6. Test Item: Tensile Test

Sample Description: See photo

Test Method: ASTM D412-16 Method A

Test Condition:

Specimen: Die C

Specimen thickness: 2.46mm

Testing speed: 500mm/min

Gauge length: 25mm

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

Test Result:

Test Item	Test Result
Tensile Strength	1.06MPa
Elongation at Break	600%

Note: 1. Test specimens were cut from the sample.

2. Test sample were prepared by SGS.

Equipment Information:

Equipment	Model	Equipment No.	Calibration date	Next Calibration date
Universal Material Testing Machine	Z010	POL-PL-E005	2019.08.26	2020.08.25

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



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.

Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755)83071443, or email: CN.Doccheck@sgs.com

SGS-CSI (Shanghai) Technical Services (Qingdao) Co., Ltd.

SGS Center, No. 143, Zhuzhou Road, Laoshan District, Qingdao, China 266101
t (86-532) 68998888 f (86-532) 80991955

www.sgs.com
www.sgs.com.cn
e sgs.china@sgs.com