

Test report

Test report relating to a glass product after performing the Fogging test according to European standard EN 1279-6, concerning the product marked as: ZEYSI, manufactured by: Zeysi cam ins. san.ve.tic.Ltd. sti

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Author(s)	M.A.A.M. Schets, B.Sc
Client	Zhengzhou Zhongyuan Silande High Technology Co. Ltd No.28 Dongqing West St. Zhengzhou Hi- Tech Development Zone 45001 Zhengzhou, Henan China
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Contents

1	Introduction	3
1.1	Purpose	3
1.2	Description of the test specimen	3
1.3	Sampling procedure	4
1.4	Application	4
1.5	Method of testing	4
1.6	Put out to contract	4
1.7	Privacy statement	4
1.8	Remark concerning this report	5
1.9	Notifications, accreditations, designations	5
2	Test results	6
3	Conclusion	7
4	References	8
5	Signatures	9
	Appendix A, Pictures of the test specimen	10

1 Introduction

1.1 Purpose

The tests have been performed in order to establish whether or not the product meets the requirements concerning the Fogging test of Annex C of the European standard EN 1279-6 [1].

1.2 Description of the test specimen

General

Name of the demonstrator	Zhengzhou Zhongyuan Silande High Technology Co. Ltd
Address of the demonstrator	No.28 Dongqing West St., Zhengzhou Hi- Tech Development Zone 45001 Zhengzhou, Henan China
Production plant of the samples	-
Line ID where the samples are made	-
Production date	-
Sampling date	-
Trade mark and /or product name	ZEYSI,
System description, file number	-
Dimensions of the samples	(502 ±2) mm x (352 ±2) mm

Specific

Insulating glass units – Declaration manufacturer	
Name of the manufacturer	ZEYSI CAM INS. SAN. VE TIC. LTD. STI.
Address of the manufacturer	Akcakale 2 Sokak No: 82 Siteler Altindag, Ankara,Turkey.
Production plant of the samples	Ankara
Line ID where the samples are made	---
Production date	
Trade mark and /or product name	ZEYSI
System description, file number	---
Exterior dimensions:	mm
Total thickness:	20 mm
Construction:	4/12/4 mm and glass types
Spacer:	SILANDE 12A Bendable Spacer. Manufacturer: ZHENGZHOU ZHONGYUAN SILANDE HIGH TECHNOLOGY CO.,LTD
Spacer material:	Aluminium , bendable
Corner construction:	Bent welded
Corner keys:	---
Linear connector:	SILANDE
Desiccant:	Shandong Natergy Energy Technology Co., Ltd / Natergy 3A

Desiccant type:	3 Å Zeolite
Standard Moisture adsorption capacity (T_C)	18 %
Desiccant amount:	40 g/m
Outer sealant:	SILANDE MF882 Silicone Sealant for Insulating Glass
Polymer type:	Silicone, two part
Average sealant depth on spacer back (u)	5-7 mm
Average sealant width on glass surface (s)	
Inner sealant:	SILANDE MF910G Butyl Sealant
Polymer type:	Polyisobutylene (PIB)
Average sealant width (r):	3 mm
Mass of inner sealant/length and side (R)	2,5 g/m - single side
Coating:	----
Edge deletion:	----
Gas filling:	---
Temperature during production	4 °C
Pressure during production	103.6 KPa
Altitude during production	978 m above sea level
Closing of gas filling holes:	----
Special features:	---

1.3 Sampling procedure

TÜV Rheinland B.V., acting as Notified Test Laboratory, has had no influence on the selection of the sample. All test specimen within the sample were test-worthy and were received on 29 May 2017.

1.4 Application

The request for testing was submitted by the manufacturer on 28 April 2017, order or reference number or name: -. Assignment Form number: 17.A056.

1.5 Method of testing

All applicable tests were performed according to the European standard EN 1279-6 Annex C [1].

1.6 Put out to contract

No tests were performed at third parties.

1.7 Privacy statement

Due to privacy reasons, the names of involved personnel that executed the tests, are not disclosed in the report. However, this information is available on internal work sheets, test forms etc. in the project file.

1.8 Remark concerning this report

For any other manufacturer this report is not automatically valid. The manufacturer for this report is defined under 1.2.

1.9 Notifications, accreditations, designations

TÜV Rheinland Nederland B.V. has been notified by the Dutch Minister for Housing and the Central Government Sector as Notified Laboratory (number 1750) and Notified (Factory Production Control) Certification Body (number 0336) for the European Construction Products Regulation 305/2011 (EU).

TÜV Rheinland Nederland B.V. has been accredited by the Dutch Accreditation Council (RvA) as ISO 17025 Test Laboratory (nr. L 484) and ISO 17065 Certification Body (nr. C078).

TÜV Rheinland Nederland B.V. has been designated as Technical Service (Laboratory) by the Approval Authorities for Germany (KBA – E1) and the Netherlands (RDW – E4) for automotive safety glass (ECE R43, 92/22/EC, 2009/144/EC).

TÜV Rheinland Nederland B.V. has been recognised by the German Institute for building technics (DIBt) under number NL005 as test, control and certification body.

Remark

The reported tests were performed under ISO 17025 accreditation.

2 Test results

Test results after performing the Fogging test according to Annex C of the European standard EN 1279-6 [1].

Construction tested IGUs

Construction	4-12-4 mm
Corner construction	Bent
Average sealant depth on spacer back (u)	8.5-9.5 mm
Average sealant width on glass surface (s)	10-12 mm
Average inner sealant width (r)	4-5 mm
Closing of gas filling holes	not applicable
Special features	none
Markings	none
Coated glass	no

Requirements and results

Required	Value of the test	Pass / fail
Annex C (normative), Fogging test		
Test pieces are subjected to visual inspection of the interior glass surfaces. The test pieces are conditioned for one week and then placed in the fogging test apparatus. After exposure, the test pieces are visually inspected again for evidence of fogging on the interior glass surfaces. No permanent visual condensation is permitted. If condensation occurs, re-examination is permitted after 7 days and then no permanent visual condensation is permitted.		
Visual inspection before the tests	no fogging	pass
Visual inspection after the tests	no fogging	pass

Additional test data

	Required	Test
Hot spot temperature [°C]	(≥ 50 - ≤ 60)	60 ±1.5
Cold spot temperature [°C]	(27 K to 33 K) < Hot spot temperature	25 ±1.5
Air temperature		52 ±1.5
Time [h]	(168 ±4)	167
Date of test	4-11 July 2017	

3 Conclusion

The tested glass product, marked by the client or manufacturer as ZEYSI, manufactured by Zeysi cam ins. san.ve.tic.Ltd. sti, with inner sealant with trade mark/type: SILANDE MF910G Butyl and outer sealant with trade mark/type: SILANDE MF882 Silicone meets the applicable requirements as stated in the European standard EN 1279-6 Annex C (Fogging test) [1].

The test results exclusively relate to the tested objects.

Remark 1

When and if changes are made in production method and/or equipment, assessment according to this standard shall be reconsidered and re-tests shall be performed when the changes can lead to different specifications of the glass. The decision and responsibility lies at the manufacturer.

Remark 2

If no reference of the product description was supplied by the manufacturer, than that document shall be added to this test report by the manufacturer. It was to the manufacturer's responsibility that the samples delivered for initial type test are representative to the production and deviations from perfection were included in the delivered test samples.

4 References

- 1 European standard EN 1279-6:2002 (E),
Glass in building – Insulating glass units – Part 6: Factory production control and periodic tests,
European Committee for Standardization, November 2002.

5 Signatures

Author Mr. M.A.A.M. Schets, B. Sc.	Signature 
Specialist	
Peer review Mr. S. el Bardai	Signature 
Specialist	
Approved by Mrs. C.C.M. van Houten	Signature 
Manager operations	

Appendix A, Pictures of the test specimen



- End of report -