

Test report

Test report relating to a glass product according to European standard EN 1279-2, concerning the product marked as: Sanco, manufactured by: Glas Ockels b.v.

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Client	Nedex Chemie Deutschland GmbH Konrad- Zuse- Strasse 33 D 47445 Moers Germany
Project number	89202496
Project name	Sanco
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1 Introduction

1.1 Purpose

The tests have been performed in order to establish whether or not the product meets the requirements of the European standard EN 1279-2 [1].

1.2 Description of the samples

General

Name of the manufacturer	Nedex Chemie Deutschland GmbH
Address of the manufacturer	Konrad- Zuse- Strasse 33 D 47445 Moers Germany
Production plant of the samples	Glas Ockels BV Steenhouwer 29 9502 EV Stadskanaal The Netherlands
Line ID where the samples are made	1
Production date	20-9-2012
Sampling date	20-9-2012
The product was marked as	Sanco
System description, file number	286358
Dimensions of the samples	(502 ±2) mm x (352 ±2) mm

Specific

Type of glass	Clear float glass
Configuration of the samples	4-12-4 mm
DESICCANT	
Trademark / type of desiccant	Nedex Zeolan K (NA3) 0.5-0.9
INNER sealant	
Trademark / type of inner sealant	Nedex PIB 996
Kind of inner sealant	polyisobutylene (butyl)
OUTER sealant	
Trademark / type of outer sealant	Nedex PS 998R
Kind of outer sealant	polysulfide
SPACER	
Trademark / type of spacer	Profilglass, Aluminium
Trademark / type of corners	bent

1.3 Sampling procedure

The samples have been submitted by the assignor. The test house, acting as notified test body, has had no influence on the selection of the samples.

1.4 Application

The request for testing was submitted by the assignor on 24 September 2012. Assignment Form number: 11.A470_rev2.

1.5 Method of testing

All applicable tests have been performed according to the European standard EN 1279-2 [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 ITT report

For any other manufacturer this initial type test (ITT) report is not automatically valid. The manufacturer for this ITT report is defined under 1.2.

1.9 Notifications and accreditations

TÜV Rheinland Nederland B.V. has been notified by the Dutch Ministry of Infrastructure and the Environment as Notified Test Body (number 1750) and Notified Certification Body (number 0336) for the European Construction Products Directive 89/106/EEC.

TÜV Rheinland Nederland B.V. has been accredited by the Dutch Accreditation Council (RvA) as ISO 17025 Test Laboratory (accreditation number L 484) and EN 45011 Certification Body (accreditation number C058).

TÜV Rheinland Nederland B.V. has been accredited as Technical Service (Laboratory) by RDW competent Administrative Department (Approval Authority) for the Netherlands to grant approvals as mentioned in Directive 70/156/etc. and the 1958 Agreement of the Economic Commission for Europe of the United Nations (UN-ECE) for glass as used in the automotive sector: ECE Regulation 43, safety glazing; EC Directive 92/22, Safety glass; EC Directive 2009/144, Glazing cat. T (accreditation number RDW-99050043 01).

2 Test results

Test results after performing all applicable tests according to European standard EN 1279-2 [1].

Requirements and end result

Required	Value of the test	Pass / fail
4.1 Moisture penetration index		
Insulating glass units shall fulfil their functions during an economically reasonable working life. Therefore the following values are verified on test specimens submitted to the climate test described in this Part of the standard.		
The average moisture penetration index I_{av} over the five test specimen shall not exceed 0.20	I_{av} over the five test specimen = 0.03	pass
The unit with the highest moisture penetration index shall have an index value I not exceeding 0.25	Highest moisture penetration index I = 0.04	pass

Prior to ageing, all 15 IGU's were visually inspected. No special deviations above variations due to the production process were found. After the visual inspection the test specimen were analysed on dew points. All IGU's showed dew points lower then -60°C . The test specimens were randomly numbered and the moisture contents (T_i & T_f) were determined. From these results the individual penetration indices I and I_{av} were calculated.

Detailed test results

			T_c^* [%]	20	
Initial values					
Specimen no.	m_o [g]	m_i [g]	m_r [g]	T_i [%]	
7	62.9631	82.9826	82.4684	2.64	
8	65.4146	85.4324	84.8709	2.89	
9	67.5529	87.6070	87.0813	2.69	
10	61.9945	81.9948	81.4590	2.75	
				Average	2.74
After climate exp.					
Specimen no.	m_o [g]	m_i [g]	m_r [g]	T_f [%]	I
4	60.2795	80.2850	79.6264	3.40	0.04
5	62.5191	82.6214	81.9789	3.30	0.03
6	64.1808	84.1919	83.5688	3.21	0.03
11	61.6889	81.7118	81.1094	3.10	0.02
12	65.3763	85.4003	84.7419	3.40	0.04
				Average	0.03

* T_c is based on the fixed value of 20% given in the EN1279-2, Annex D.

3 Conclusion

The tested glass product, marked by the client or manufacturer as: Sanco, manufactured by: Glas Ockels b.v., with inner sealant with trade mark/type: Nedex PIB 996 and outer sealant with trade mark/type: Nedex PS 998R, meets the applicable requirements as stated in the European standard EN 1279-2 [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.

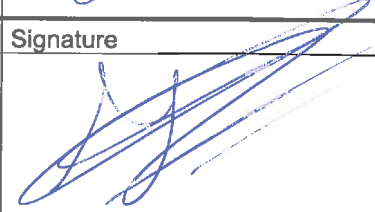
Remark 2

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 1279-2:2002 (E),
Glass in building – Insulating glass units – Part 2: Long term test method and requirements for
moisture penetration, European Committee for Standardization, November 2002.

5 Signatures

Author Mr. M.A.A.M. Schets, B.Sc.	Signature 
Specialist	
Peer review Mr. M.J.R. Luppens	Signature 
Specialist	
Approved by Mr. H. van Ginkel	Signature 
Business field manager	



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Summary of report n°: 89202496-20

Date: 29 January 2013

Insulating glass units - Moisture penetration results according to EN 1279-2

For details, see the test report

Company: **Name:** Nedex Chemie Deutschland GmbH
 Address: Konrad- Zuse- Strasse 33
 D 47445 Moers
 Germany

Plant: Name: Glas Ockels BV
Address: Steenhouwer 29
 9502 EV Stadskanaal
 The Netherlands

System description, file number: 286358
Product name: The glass product: Sanco with inner sealant: Nedex PIB 996
and outer sealant: Nedex PS 998R and aluminium spacer

System conforms: **YES**

NOTE Comparisons of moisture penetration indices of different insulating glass unit system are meaningless

Signature: M.A.A.M. Schets, B.Sc
Project leader

Signature: H. van Ginkel
Business field manager

(This is the end of this report).