REPORT

Issued by an Accredited Testing Laboratory

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2023-02-03

Reference
O100106-1149196 B Rev. 1

NMC Sverige AB
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Type test of damp proof courses, durability

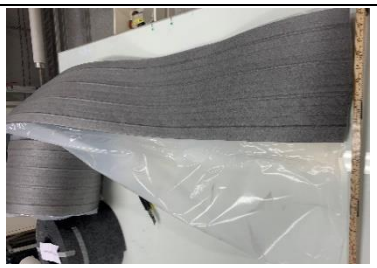
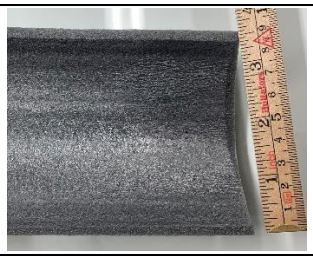
(1 appendix)

Commission

Type test according to selected properties, according to standard EN 14909:2012, issue 5.8.1 Durability watertightness after artificial ageing (EN 1296+EN 1928), issue 5.8.2 Durability Alkali resistance (EN 1847+EN 1928), of three flexible damp proof course products of plastics.

Test Object

The test object is described as three flexible damp proof courses made of plastics.

Product designation	Appearance	Picture	Dimension width
3014621 - Nomatec® Sill Insulation	Foamed plastic, grey coloured, flat		Foam, width 24 cm
3014627 - Nomatec® Sill Insulation	Foamed plastic, light grey coloured, profiled, laminated with a plastic thin film		Foam width 27 cm, laminated film width 62 cm
3014577 - Nomatec® Sill Insulation	Foamed plastic, light grey coloured, profiled		Foam width 10 cm

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ISO/IEC 17025

The length of the test objects was of approximately 10 meters. The test objects were selected by NMC Sverige AB and sent to RISE Research Institute of Sweden, Borås, Polymeric Products and Service Life Technology. The history of the test object or the sampling is not known by RISE. The samples arrived at RISE on the 12th of October, 2022.

Test Performance

The test was performed according to standard EN 14909:2012 *"Flexible sheets for waterproofing – Plastic and rubber damp proof courses - Definitions and characteristics* including issue 5.8.1 Durability watertightness after artificial ageing, issue 5.8.2 Durability Alkali resistance. The test was performed during October 2022 – January 2023. The test method EN 1847 is not accredited. Details of test performance and results will be found in the appendix 1.

Summary of Results

Product designation	Issue in EN 14909:2012	Characteristics	Test method	Unit	Result
3014621 - Nomatec® Sill Insulation	5.8.1	Durability, watertightness after artificial ageing	EN 1296, 12 weeks at 70°C, evaluation with EN 1928-method A at 2 kPa, 24 h	-	Watertight, Pass
3014621 - Nomatec® Sill Insulation	5.8.2	Durability, Alkali resistance	EN 1847** liquid 2, 28d at 23°C evaluation with EN 1928-method A at 2 kPa, 24 h	-	Watertight, Pass
3014627 - Nomatec® Sill Insulation	5.8.1	Durability, watertightness after artificial ageing	EN 1296, 12 weeks at 70°C, evaluation with EN 1928-method A at 2 kPa, 24	-	Watertight, Pass
3014627 - Nomatec® Sill Insulation	5.8.2	Durability, Alkali resistance	EN 1847** liquid 2, 28d at 23°C evaluation with EN 1928-method A at 2 kPa, 24 h	-	Watertight, Pass
3014577 - Nomatec® Sill Insulation	5.8.1	Durability, watertightness after artificial ageing	EN 1296, 12 weeks at 70°C, evaluation with EN 1928-method A at 2 kPa, 24	-	Watertight, Pass*
3014577 - Nomatec® Sill Insulation	5.8.2	Durability, Alkali resistance	EN 1847** liquid 2, 28d at 23°C evaluation with EN 1928-method A at 2 kPa, 24 h	-	Watertight, Pass*

**The exposed area was reduced for the product, due to product dimension limitation in width. This is a deviation from standard.*

*** = The test method EN 1847 is not accredited.*

The test results are only valid for the foil tested.

Report O100106-1149196 B dated 2023-01-18 is hereby withdrawn and replaced by this report O100106-1149196 B Rev 1. dated 2023-02-03.

Revision 1: By request from the commissioner the designated article number 3014623 - Nomatec® Sill Insulation is changed to 3014621 -Nomatec® Sill Insulation. The product name spelling is corrected, “Nomatec® Sill Insulation” changed from “Normatec® Sill Insulation, all three products.

RISE Research Institutes of Sweden AB
Polymers, fibers and composites - Polymeric Products and Service Life Tech

Performed by

Jörgen Romild

Examined by

Mia Sjöqvist

Appendix: Detailed test performance and results

Appendix 1

Test Performance and Result

5.8.1 Durability - watertightness after artificial ageing

The product was exposed to elevated temperature of 70 ± 2 °C for 12 weeks in accordance with standard EN 1296:2000 *Flexible sheets for waterproofing - Bitumen, plastic and rubber sheets for roofing - Method of artificial ageing by long term exposure to elevated temperature*. Material for exposure, were taken distributed along the length of the damp proof courses, sample pieces 40x45 cm. Sample specimens were punched out of the exposed test samples with a circular die. The heat exposure was performed during period 2022-10-18- 2023-01-10. After the exposure the water tightness was determined according to EN 1928:2000 *Flexible sheets for waterproofing - Bitumen, plastic and rubber sheets for roof waterproofing - Determination of watertightness, method A*, with 2 kPa and duration of 24 hours. Triple test was performed. The tests specimens have been conditioned for at least 24 hours in 23 ±2 °C and 50 ±10 % RH before the test. The test was performed at temperature of 23 ±5 °C.

Product designation	**Sample No.**	**Test date**	**Result**
3014621 - Nomatec® Sill Insulation	**1**	**2023-01-11-12**	Watertight
	2	**2023-01-11-12**	Watertight
	3	**2023-01-11-12**	Watertight
3014627 - Nomatec® Sill Insulation**	**1**	**2023-01-12-13**	Watertight
	2	**2023-01-12-13**	Watertight
	3	**2023-01-12-13**	Watertight
3014577 - Nomatec® Sill Insulation ***	**1**	**2023-01-13-14**	Watertight*
	2	**2023-01-16-17**	Watertight*
	3	**2023-01-17-18**	Watertight*

**The exposed area was reduced for the product, due to product dimension limitation in width. The exposed area was 60 mm in diameter instead of 150 mm. This is a deviation from standard.*
*** The opposite side to the laminated film was subjected to the water pressure. The laminated film was included when tested.*
**** The profiled side of the membrane was subjected to the water pressure.*

Appendix 1

5.7.2 Durability, against alkali, chemical resistance

The product was exposed to alkali chemical solution in accordance with standard EN 1847:2009 *Flexible sheets for waterproofing - Plastics and rubber sheets for roof waterproofing - Methods for exposure to liquid chemicals, including water.* The test liquid used was 2, milk of lime, saturated water solution of $Ca(OH)_2$. Material to be immersed, were taken distributed along the length of the damp proof coarses, sample pieces 40x45 cm. The samples were immersed in the solution at (23±2) °C for 28 days. The immersion period was performed during 2022-10-18 - 2022-11-15. After the exposure the water tightness was determined according to EN 1928:2000 *Flexible sheets for waterproofing - Bitumen, plastic and rubber sheets for roof waterproofing - Determination of watertightness, method A,* with 2 kPa and duration of 24 hours. Sample specimens were punched out of the test samples with a circular die. Triple test was performed. The tests specimens have been conditioned for at least 24 hours in 23 ±2 °C and 50 ±10 % RH before the watertightness test. The test was performed at temperature of 23 ±5 °C.

Product designation	**Sample No.**	**Test date**	**Result**
3014621 - Nomatec® Sill Insulation	**1**	**2022-11-22-23**	Watertight
	2	**2022-11-22-23**	Watertight
	3	**2022-11-23-24**	Watertight
3014627 - Nomatec® Sill Insulation**	**1**	**2022-11-21-22**	Watertight
	2	**2022-11-21-22**	Watertight
	3	**2022-11-24-25**	Watertight
3014577 - Nomatec® Sill Insulation ***	**1**	**2022-11-23-24**	Watertight*
	2	**2022-11-24-25**	Watertight*
	3	**2022-11-28-29**	Watertight*

**The exposed area was reduced for the product, due to product dimension limitation in width. The exposed area was 60 mm in diameter instead of 150 mm. This is a deviation from standard.*
*** The opposite side to the laminated film was subjected to the water pressure. The laminated film was included when tested.*
**** The profiled side of the membrane was subjected to the water pressure.*

Verifikat

Transaktion 09222115557486479229

Dokument

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Huvuddokument
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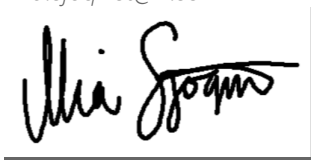

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