



**INITIAL TYPE TEST (ITT)**  
 BituNii Company / Manufacturing / Plant / Laboratories / Quality Control Lab.

Initial Type Test No. **F219**  
 Issuing Date 06/02/2024

Family Name: **NILOSHIELD SBS**  
 Product Name: **NILOSHIELD SBS 15 GF\_PS**  
 Product Full Name: **NILOSHIELD SBS 15 GF\_PS 4.5 mm S/E**  
 Type of Product: **an Elastomeric SBS**  
 Type of Reinforcement: **DOUBLE (POLYESTER + FIBER GLASS)**

Sampling methodology: **According to EN 13416:2001**  
 Batch No: **0352412**

Compound: **SBS -15**  
 Reinforcement: **DOUBLE (POLYESTER + FIBER GLASS) 35 OF (NA+UBS) and PS (TP+60)**  
 Upper Surface: **SAND**  
 Lower Surface: **POLYETHYLENE**  
 Production date: **06/02/2024**

**Damp proof and basement tanking system, type A and T according to EN 13969 as a Top layer in multilayer system.**

M TEST	STANDARD	UNIT	TOLERANCE	SPECIFIED VALUES	ACTUAL MEASURING VALUE	REF. REPORT NO.	DATE OF MEASURING	REMARKS
* Visual Defects	EN 1850-1		Pass	Passed	PASS	485/1850-1	07/02/2024	
* Thickness	EN 1849-1	mm	-5%	4.5	4.53	485/1849-1	07/02/2024	
* Weight	EN 1849-1	kg/m <sup>2</sup>	-10%			495/1849-1	07/02/2024	
* Length	EN 1848-1	m	-1%	10	10.10	495/1848-1	07/02/2024	
* Width	EN 1848-1	m	-1%	10	1.000	495/1848-1	07/02/2024	
* Straightness	EN 1848-1			± 10	3	495/1848-1	07/02/2024	
- Flexibility at low temperature	EN 1109	°C	± 5	-5	U.S. -15	495/1109	07/02/2024	
- Flow resistance at elevated Temp	EN 1110		± 2	100	100	495/1110	07/02/2024	
* Vapor Permeability	EN 1893	μ		20000	40,000			use the min. value as per Norm.
* Tensile Strength Longitudinal	EN 12311-1	N/50mm	-20%	800	938	Machine report 07/02/2024	07/02/2024	
* Tensile Strength Transversal	EN 12311-1	N/50mm	-20%	500	641	Machine report 07/02/2024	07/02/2024	
* Elongation @ Break Longitudinal	EN 12311-1	%	-15 absolute (polyest.40)		31	Machine report 07/02/2024	07/02/2024	
* Elongation @ Break Transversal	EN 12311-1	%	-15 absolute (polyest.45)		42	Machine report 07/02/2024	07/02/2024	
* Tear resistance (rail shank) Longitudinal	EN 12310-1	N	-30%	200	294	Machine report 07/02/2024	07/02/2024	
* Tear resistance (rail shank) Transversal	EN 12310-1	N	-30%	250	354	Machine report 07/02/2024	07/02/2024	
- Dimensional stability	EN 1107-1	%	± 0.3	± 0.3	-0.18	495/1107-1	11/02/2024	
* Resistance to static loading	EN12730 method A	kg	Min	25	25	495/12730	08/02/2024	
* Resistance to impact	EN12691 method B	mm	Min	1250	1250	495/12691	11/02/2024	
- Peel resistance of joints	EN 12317-1	N/50mm	-20N	800	953	Machine report 07/02/2024	07/02/2024	
* Shear resistance of joints Longitudinal	EN 12317-1	N/50mm	-20%	500	684	Machine report 07/02/2024	07/02/2024	
* Shear resistance of joints Transversal	EN 1296/EN1109	°C/0 mm	±	-5	U.S. -5	495/1296	07/02/2024	
- Durability (Flexibility after artificial ageing)	EN 1296/EN1110	°C	±	90	90	495/1296/EN1110	07/02/2024	
- Durability (Heat Flow after artificial ageing)	UNI EN 1297/EN1850-1		Passed	Passed	Passed	24/F219-2020		
- External Fire Performance	EN 1187/EN 13501-5	Class	F roof	F roof	F roof	No Performance Determined		
* Reaction to Fire	EN 11925-2/EN 13501-1	Class	E	E	E	495/11925	08/02/2024	
- Watertightness after stretching at low temperature	EN13897	%						
* Water Impermeability (Water tightness)	EN 1928 method A	60 kPa	Passed	Passed	Passed	495/1928	08/02/2024	
* Durability : Watertightness Against Artificial Ageing	EN 1296/EN 1928	60 kPa	Passed	Passed	Passed	495/1296	16/06/2024	
* Durability : Watertightness Against Chemicals	EN 1847 / EN 1928	60 kPa	Passed	Passed	Passed	495/1847	07/03/2024	
- Adhesion of Granules	EN12039	%	Max.	Max.	Max.			
* Root Resistance	EN 13948		NPD	NPD	NPD	495/13948		
* Dangerous Substances			Free	Free	Free			None Dangerous substances used

\*References to mandatory (necessary) tests as per specified for system used according to EN 13707 or EN 13969 requirements.  
 FM-QC-02-14 VER (1)

DATE 11/1/2014

Product Verification

Approval

**NILOSHIELD SBS 15 GF\_PS**

**NILOSHIELD SBS 15 GF\_PS 4.5 mm S/E**

WILE WATERPROOFING  
 MATERIALS CO. (BITU) S.A.E  
 LABORATORIES

Product Confirmation of  
 EN 13969 / EN 13707  
 Requirements

495 14

## DECLARATION OF PERFORMANCE (DOP)

NILOSHIELD SBS 15 GF\_PS = ( NILOSHIELD SBS 15 GF\_PS 4.5 mm S/E)

1. Unique Identification code of the product-type:

**NILOSHIELD SBS 15 GF\_PS 4.5 mm S/E**

2. Type, batch or serial number or any other element allowing identification of the construction product as required under Article II (4) of the CPR

Export Order No. (EOC #) : 40&43  
Batch no. : Refer to packing list  
Type : an Elastomeric Bituminous waterproofing membrane  
Thickness : 4.500 mm  
Mass per unit area : Product is defined by Thickness  
Reinforcement : DOUBLE (POLYESTER + FIBER GLASS)  
Surfacing : SAND / POLYETHYLENE

3. Intended use or uses of the construction product, in accordance with the applicable harmonized technical specification, as foreseen by the manufacturer"

**NILOSHIELD SBS 15 GF\_PS is an Elastomeric waterproofing membrane made of bituminous SBS modified compound with a non woven DOUBLE (POLYESTER + FIBER GLASS) reinforcement and covered by SAND as an upper surface and POLYETHYLENE as a lower surface.**

**NILOSHIELD SBS 15 GF\_PS is used as Damp proof and basement tanking system, type A and T according to EN 13969 as a Top layer in multilayer system.**

4. Name, registered trade name or registered trade mark and contact address of the manufacturer as required under Article I (5):

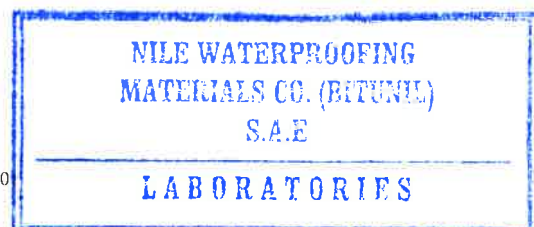
Trade Name : NILOSHIELD SBS 15 GF\_PS ( NILOSHIELD SBS 15 GF\_PS 4.5 mm S/E)  
Manufacturer address & contacts : Nile waterproofing materials Co. S.A.E (BituNil)  
50 Al Khalifa Al Maamoun St, Roxy-Heliopolis, Cairo- Egypt  
Tel: (202) 24511194 - 24511195 Fax: (202) 24511198  
Plant : Merghem - Al Max - Alexandria  
Web: [WWW.bitunil.com](http://WWW.bitunil.com) - e-mail: [bitunil@bitunil.com](mailto:bitunil@bitunil.com)

5. Where applicable, name and contact address of the authorized representative whose mandate covers the tasks specified in Article 12(2)

Not relevant (see point 4)

6. System or systems of assessment and verification of constancy of performance of the construction product as set out in CPR, Annex V

**System +2**



7. In case of the declaration of performance concerning a construction product covered by a harmonized standard:

**Notified Factory Production Control (FPC) certification body**

SGS ICS - Serviços Internacionais de Certificação, Lda Notified Body 1029

Pólo Tecnológico Lisboa, 6 piso 0, 1600-513 Lisboa - Portugal

T:+351 217104200; F: +351 217157527 e-mail:pt.info@sgs.com www.sgs.PT

SGS has performed the initial inspection, performs the continuous surveillance, assessment, approval of the factory and issued the certificate of conformity of the factory production control.

Certificate of Conformity of the FPC no. EG20/4456 valid until 20 June 2025

8. In case of the declaration of performance concerning a construction product for which a European Technical Assessment (ETA) has been issued: **Not relevant (see point 7)**

9. Declared Performance

HARMONIZED TECHNICAL SPECIFICATIONS ACCORDING TO EN 13707:2004+A2:2009 -Updated 2013

TEST METHOD	NORM	UNIT	TOLERANCES	MDV VALUE
Thickness	EN 1849-1	mm	-5%	4.5
Weight	EN 1849-1	kg/m <sup>2</sup>	-10%	-
Length	EN 1848-1	m	-1%	10
Width	EN 1848-1	m	-1%	1
Straightness	EN 1848-1	-	20mm/10m	± 10
Flexibility at low temperature	EN 1109	°c/ø mm *	≤	-15
Flow resistance at elevated Temp.	EN 1110	°c	≥	100
Water Impermeability (Water tightness)	EN 1928 method A	60 kPa	Passed	Passed
Water Impermeability at High Pressure	EN 1928 Method B	kPa	Assessment after 1hr.	500
Vapour Permeability	EN 1931	μ	-	40000
Tensile Strength Longitudinal	EN 12311-1	N/50mm	-20%	800
Tensile Strength Transversal	EN 12311-1	N/50mm	-20%	500
Elongation @ Break Longitudinal	EN 12311-1	%	-15 absolute (polyester only)	40
Elongation @ Break Transversal	EN 12311-1	%	-15 absolute (polyester only)	45
Tear resistance (nail shank) Longitudinal	EN 12310-1	N	-30%	200
Tear resistance (nail shank) Transversal	EN 12310-1	N	-30%	250
Dimensional stability	EN 1107-1	%	≤	± 0.3
Resistance to Static loading	EN12730 method A	kg	Min.	25
Resistance to Impact	EN12691 method B	mm	Min.	1250
Peel resistance of joints	EN 12316-1	N/50mm	-20N	-
Shear resistance of joints Longitudinal	EN 12317-1	N/50mm	-20%	800
Shear resistance of joints Transversal	EN 12317-1	N/50mm	-20%	500
Durability (Flexibility after artificial ageing)	EN 1296/ EN1109	°c/ø mm *	≤	-5
Durability (Heat Flow after artificial ageing)	EN 1296/EN1110	°C	≥	90
Durability (Visible defects after UV ageing)	UNI EN 1297/EN1850-1	-	-	Passed
External Fire Performance	ENV 1187/EN 13501-5	Class	-	F roof
Reaction to Fire	EN 11925-2/EN 13501-1	Class	-	E
Watertightness after stretching at low temperature	EN13897	%	-	-
Adhesion of Granules	EN12039	%	Max.	-
Root Resistance	EN 13948	-	-	NPD
Dangerous Substances	-	-	-	Free

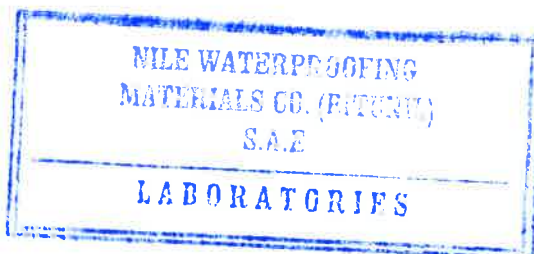
\* ø :30 mm (the mandrel diameter during cold bending), MLV: Manufacturer's limiting value, MDV:Manufacturer's declared value

EOC #

10. The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 9  
This declaration of Performance (DoP) is issued under the sole responsibility of the manufacturer identified in point 4

40&43

Signed for and on behalf of the Manufacturer:





2024

Nile waterproofing materials Co. S.A.E

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Product Name:

Product Full Name:

# NILOSHIELD SBS 15 GF\_PS NILOSHIELD SBS 15 GF\_PS 4.5 mm S/E

## TYPE

NILOSHIELD SBS 15 GF\_PS ( NILOSHIELD SBS 15 GF\_PS 4.5 mm S/E) is an Elastomeric Bituminous waterproofing membrane manufactured in an advanced continuous calendaring process by a saturating and coating a synthetic carrier with a waterproofing compound made of special grade of bitumen, modified with SBS polymers and fillers. While the modifiers enhance the thermal, mechanical, and ageing properties of membrane compound, the mechanical characteristics of NILOSHIELD SBS 15 GF\_PS ( NILOSHIELD SBS 15 GF\_PS 4.5 mm S/E) are established by the continuous non- woven DOUBLE (POLYESTER + FIBER GLASS) carrier which acts as the reinforcement that provides the membrane with tensile strength , tear resistance, and elongation. The upper surface of the product is covered with SAND while the lower face is covered with POLYETHYLENE.

## FIELD OF USE

NILOSHIELD SBS 15 GF\_PS ( NILOSHIELD SBS 15 GF\_PS 4.5 mm S/E) is suitable for application as Damp proof and basement tanking system, type A and T according to EN 13969 as a Top layer in multilayer system.

## TECHNICAL FEATURES

TEST METHOD	NORM	UNIT	TOLERANCES	MDV VALUE
Thickness	EN 1849-1	mm	-5%	4.5
Weight	EN 1849-1	kg/m2	-10%	-
Length	EN 1848-1	m	-1%	10
Width	EN 1848-1	m	-1%	1
Straightness	EN 1848-1	-	20mm/10m	± 10
Flexibility at low temperature	EN 1109	°c/Ø mm	≤	-15
Flow resistance at elevated Temp.	EN 1110	°c	≥	100
Water Impermeability (Water tightness)	EN 1928 method A	60 kPa	Passed	Passed
Water Impermeability at High Pressure	EN 1928 Method B	kPa	Assessment after 1hr.	500
Vapour Permeability	EN 1931	µ	-	40000
Tensile Strength Longitudinal	EN 12311-1	N/50mm	-20%	800
Tensile Strength Transversal	EN 12311-1	N/50mm	-20%	500
Elongation @ Break Longitudinal	EN 12311-1	%	-15 absolute (polyester only)	40
Elongation @ Break Transversal	EN 12311-1	%	-15 absolute (polyester only)	45
Tear resistance (nail shank) :Longitudinal	EN 12310-1	N	-30%	200
Tear resistance (nail shank) :Transversal	EN 12310-1	N	-30%	250
Dimensional stability	EN 1107-1	%	≤	± 0.3
Resistance to Static loading	EN12730 method A	kg	Min.	25
Resistance to Impact	EN12691 method B	mm	Min.	1250
Peel resistance of joints	EN 12316-1	N/50mm	-20N	-
Shear resistance of joints :Longitudinal	EN 12317-1	N/50mm	-20%	800
Shear resistance of joints:Transversal	EN 12317-1	N/50mm	-20%	500
Durability (Flexibility after artificial ageing)	EN 1296/ EN1109	°c/Ø mm	≤	-5
Durability (Heat flow after artificial ageing)	EN 1296/EN1110	°C	≤	90
Durability (Visible defects after U.V ageing)	UNI EN 1297/EN1850-1	-	-	Passed
External Fire Performance	ENV 1187/EN 13501-5	Class	-	F roof
Reaction to Fire	EN 11925-2/EN 13501-1	Class	-	E
Watertightness after stretching at low temperature	EN13897	%	-	-
Adhesion of Granules	EN12039	%	Max.	-
Root Resistance	EN 13948	-	NPD	NPD
Dangerous Substances	-	-	-	Free

\* omm is the mandrel diameter during cold bending.

## APPLICATION METHOD

NILOSHIELD SBS 15 GF\_PS ( NILOSHIELD SBS 15 GF\_PS 4.5 mm S/E) is applied by using a propane torch. The substrate surface must be clean,dry,smooth,and free from any irregularities. the product can be applied to the substrate fully bonded, semi bonded or loose laid , and the method of adhesion to the the substrate shall be decided according to the water proofing system design.

For further information about application, refer to the recommendation given in the application guide of BituNILE

## STORAGE

The product must be stored in the upright position, protected from heat , frost and humidity. During cold seasons the product must be kept indoor, protected from frost and used promptly after delivery from warehouse.

## DISPOSAL

The product can be considered as household rubbish or industrial waste (identification code EWC 170302)



**Flexible sheets for Waterproofing  
Determination of Length, Width, and Straightness  
EN 1848-1:2000**

Date of testing : **07/02/2024 Wednesday**  
Report No. : **0495/1848-1/2024**

**Product Identification**

Product FULL name : NILOSHIELD SBS 15 PS & GF 450 Sand 4.50 mm S/E code:02745  
EOC # [ Client ] : NANOTEK - TURKEY  
Date of production : 06/02/2024 Tuesday  
Shift of production : Shift 2 Roll Length : 10 m m  
Compound type : SBS-15/A [9] Rolls/Pallet : 20 m R/P.  
Reinforcement type : Double Nanj FG 65+TDF 160  
  
Batch No. : 035 24 12  
Upper surfacing : (S00) Sand - Rashidi (200 micron)  
  
Lower surfacing : (E03) (Bitunil Printed English & English) HD PE Film Printed

**Sampling**

	Length	Width	Straightness
Sampling	According to EN 13416		
Number of samples	1 Sample for all		
Test Piece	1 complete undamaged roll		
Dimensions of samples	The dimension of the roll		
Measurements	Length of roll	Width of roll	Max. Deviation
Expression of results	Length nearest to 10 mm	Width nearest to 1 mm	Max. deviation nearest to 1 mm ( ğ -100 )
Conditioning before testing	Not Required except in case of dispute		

**Results**

	Length	Width	Straightness
Measured Value	10100.0 mm	1000.00 mm	103.0 mm
			( ğ -100 ) Max. deviation
Expressed Value	<b>10,100 mm</b>	<b>1,000.0 mm</b>	<b>3 mm</b>

**Laboratory Quality Control**

Chemist



Flexible sheets for Waterproofing  
**Determination of Thickness and Mass per Unit Area**  
 EN 1849-1:2000

Date of testing : 07/02/2024 Wednesday  
 Report No. : 0495/1849-1/2024

**Product Identification**

Product FULL name : NILOSHIELD SBS 15 PS & GF 450 Sand 4.50 mm S/E code:02746  
 EOC # [ Client ] : NANOTEK - TURKEY  
 Date of production : 06/02/2024 Tuesday  
 Shift of production : Shift 2 Roll Length : 10 m m  
 Compound type : SBS-15/A [9] Rolls/Pallet : 20 m R/P.  
 Reinforcement type : Double Nanj FG 65+TDF 160  
  
 Batch No. : 035 24 12  
 Upper surfacing : (S00) Sand - Rashidi (200 micron)  
  
 Lower surfacing : (E03) (Bitunil Printed English & English) HD PE Film Printed

**Sampling**

	Thickness	Mass per Unit Area
Sampling	According to EN 13416	
Number of samples	1 sample	3 cutting sample from 1
Test Piece	> 800 mm * 100 mm	> 800 mm * > 400mm
Dimensions of samples	use the test piece	100 mm * 100 mm
Measurements	10 places (values)	3 weights (values)
Expression of results	Mean of 10 values to nearest 0.1 mm	Mean of 3 values to nearest 0.1 g multiply by 10 expressed in Kg/m2
Conditioning before testing	Not Required except in case of dispute	20 hr. at (23 ± 2) <sup>o</sup> c and humidity (50±5)%

**Results**

	Thickness	Mass per Unit Area
Value 1	4.51 mm	62.50 g
Value 2	4.52 mm	64.30 g
Value 3	4.55 mm	65.20 g
Value 4	4.54 mm	
Value 5	4.54 mm	
Value 6	4.53 mm	
Value 7	4.55 mm	
Value 8	4.52 mm	
Value 9	4.51 mm	
Value 10	4.53 mm	
Average	4.53 mm	64.0 g
		\ 10 =
		6.4 Kg/m2

**Laboratory Quality Control**

Chemist



Flexible sheets for Waterproofing  
**Determination of Flexibility at Low Temperature**  
**EN 1109:2013**

Date of testing : 07/02/2024 Wednesday  
 Report No. : 0495/1109/2024

**Product Identification**

Product FULL name : NILOSHIELD SBS 15 PS & GF 450 Sand 4.50 mm S/E code:02746  
 EOC # [ Client ] : NANOTEK - TURKEY  
 Date of production : 06/02/2024 Tuesday  
 Shift of production : Shift 2 Roll Length : 10 m m  
 Compound type : SBS-15/A [9] Rolls/Pallet : 20 m R/P.  
 Reinforcement type : Double Nanj FG 65+TDF 160  
  
 Batch No. : 035 24 12  
 Upper surfacing : (S00) Sand - Rashidi (200 micron)  
  
 Lower surfacing : (E03) (Bitunil Printed English & English) HD PE Film Printed

**Sampling**

<b>Flexibility at Low Temperature</b>	
Sampling	According to EN 13416
Number of samples	10 sample (5 + 5)
Test Piece	Cut Longitudinal Direction away from edges 150 mm
Dimensions of samples	140±1 mm * 50±1 mm
Measurements	10 measurements (5 + 5)
Expression of results	Temp. degree in celliseous applied on upper and lower surfaces
Conditioning Before Testing	4 Hr. at 23±2 °c without PE film and separated samples on siliconized paper
Conditioning of Test specimens	1 Hr. ± 5 min. at desired Temp. immersed in Alcohol/water path

**Results**

	<b>Upper Surface (1-5)</b>		<b>Lower Surface (1*-5*)</b>	
Specimen 1/1*	-15	°c	-15	°c
Specimen 2/2*	-15	°c	-15	°c
Specimen 3/3*	-15	°c	-15	°c
Specimen 4/4*	-15	°c	-15	°c
Specimen 5/5*	-15	°c	-15	°c
<b>Result</b>	<b>-15</b>	°c	<b>-15</b>	°c

**Laboratory Quality Control**

Chemist

**Flexible sheets for Waterproofing**  
**Determination of Flow Resistance at Elevated temperature**  
**EN 1110:2010**

Date of testing : 07/02/2024 Wednesday  
 Report No. : 0495/1110/2024

**Product Identification**

Product FULL name : NILOSHIELD SBS 15 PS & GF 450 Sand 4.50 mm S/E code:02746  
 EOC # [ Client ] : NANOTEK - TURKEY  
 Date of production : 06/02/2024 Tuesday  
 Shift of production : Shift 2 Roll Length : 10 m m  
 Compound type : SBS-15/A [9] Rolls/Pallet : 20 m R/P.  
 Reinforcement type : Double Nanj FG 65+TDF 160  
  
 Batch No. : 035 24 12  
 Upper surfacing : (S00) Sand - Rashidi (200 micron)  
  
 Lower surfacing : (E03) (Bitunil Printed English & English) HD PE Film Printed

**Sampling**

Flow Resistance at Elevated temperature	
Sampling	According to EN 13416
Number of samples	3 samples
Test Piece	Cut rectangular samples away from edges 150 mm
Dimensions of samples	100±1 mm * 50±1 mm to 90mm
Measurements	Distance of whole sample before test and after test
Expression of results	Passed at desired temp. if distance ≤ 2.0 mm and no droplets observed
Conditioning Before Testing	2 Hr. at 23±2 °c without PE film and separated samples on siliconized paper
Duration of Testing	120±2 min. at desired temp.
Conditioning after testing before measuring	at least 120 min at 23±2 °c

**Results**

	Upper Surface (1)	Lower Surface (1*)
Specified temp.	100 °c	100 °c
I . Droplets observed	No droplets	No droplets
<b>II . Difference ΔX*</b>		
Specimen 1/1*	0.12 mm	0.15 mm
Specimen 2/2*	0.15 mm	0.13 mm
Specimen 3/3*	0.00 mm	0.14 mm
Mean	0.1 mm	0.1 mm
* Δx is the difference between initial length of the test specimen and the final length after the test period in mm.		
<b>Result</b>	<b>Passed</b>	<b>Passed</b>

**Laboratory Quality Control**

Chemist



**Flexible sheets for Waterproofing  
Determination of Visible defects  
EN 1850-1:2000**

Date of testing : 07/02/2024 Wednesday  
Report No. : 0495/1850/2024

**Product Identification**

Product FULL name : NILOSHIELD SBS 15 PS & GF 450 Sand 4.50 mm S/E code 02746  
 EOC # [ Client ] : NANOTEK - TURKEY  
 Date of production : 06/02/2024 Tuesday  
 Shift of production : Shift 2 Roll Length : 10 m m  
 Compound type : SBS-15/A [9] Rolls/Pallet : 20 m R/P.  
 Reinforcement type : Double Nanj FG 65+TDF 160  
 Batch No. : 035 24 12  
 Upper surfacing : (S00) Sand - Rashidi (200 micron)  
 Lower surfacing : (E03) (Bitunil Printed English & English) HD PE Film Printed

**Sampling**

	Visible Defects
Sampling	According to EN 13416
Number of samples	1 Complete roll
Test Piece	The Complete Roll
Dimensions of samples	Full Roll Dimension
Measurements	5 main visual examination
Expression of results	Visual information by naked eye
Conditioning Before Testing	Not required but in case of dispute conditioning at least 20 hr. at 23 ± 2 °C

**Results**

	Examination of Top Surface	Examination of Underside
Blisters	free	free
Cracks	free	free
Holes	free	free
Naked Spots	free	free
Other Noticeable defects	-	-

**Laboratory Quality Control**

Chemist



Flexible sheets for Waterproofing  
Determination of Watertightness  
EN 1928:2000

Date of testing : 08/02/2024 Thursday  
Report No. : 0495/1928/2024

**Product Identification**

Job with Initial type Test : 06013  
Product FULL name : NILOSHIELD SBS 15 PS & GF 450 Sand 4.50 mm S/E code:02746  
EOC # [ Client ] : NANOTEK - TURKEY  
Date of production : 06/02/2024 Tuesday  
Shift of production : Shift 2 Roll Length : 10 m m  
Compound type : SBS-15/A [9] Rolls/Pallet : 20 m R/P.  
Reinforcement type : Double Nanj FG 65+TDF 160  
Batch No. : 035 24 12  
Upper surfacing : (S00) Sand - Rashidi (200 micron)  
Lower surfacing : (E03) (BituNil Printed English & English) HD PE Film Printed

**Sampling**

Method	Determination of Watertightness	
	Method A	Method B (if Applied)
Sampling	According to EN 13416	According to EN 13416
Number of samples	3 from different roll parts	3 from different roll parts
Test Piece	3	3
Dimensions of samples	Circular with Diameter 200 ±2 mm	Equal to slotted plate at least 130 mm
Measurements	at 23±5 °c	at 23±5 °c
Expression of results	Pass:if no color change or Fail:if color change	Pass:if no color change or Fail:if color change
Conditioning before testing	6 Hrs. at 23±5 °c	6 Hrs. at 23±5 °c
Test Duration	24±1 hr.	Assesment after 1 hr. test duration
Pressure applied	60 kPs.	according to specified pressure

**Results**

	Applied Pressure for A		Applied Pressure for B	
	Color Change	Result	Evidence of leakadge	Result
Sample 1	No	PASS	-	-
Sample 2	No	PASS	-	-
sample 3	No	PASS	-	-

Tested and Reported by

191-CC-EN1928

Quality Control Responsible

Ver 0

Laboratory Manager

Date : 1/1/2015

Flexible sheets for Waterproofing  
Determination of Resistance to Static loading  
EN 12730:2015 Method A

Date of testing : 11/02/2024 Sunday  
Report No. : 0495/12730/2024

**Product Identification**

Join with Inatial Type Test : 00013  
Product FULL name : NILOSHIELD SBS 15 PS & GF 450 Sand 4.50 mm S/E  
EOC # [ Client ] : NANOTEK - TURKEY  
Date of production : 06/02/2024 Tuesday  
Shift of production : Shift 2  
Compound type : SBS-15/A [9]  
Reinforcement type : Double Nanj FG 65+TDF 160  
Batch No. : 035 24 12  
Upper surfacing : (S00) Sand - Rashidi (200 micron)  
Lower surfacing : (E03) (Bitunil Printed English & English) HD PE Film Printed

code:02746

Roll Length : 10 m m  
Rolls/Pallet : 20 m R/P.

**Sampling**

Determination of Resistance to Static loading	
Sampling	According to EN 13416
Number of samples	1 From part of roll with 10cm exclusion from both roll sides
Test Piece	3
Dimensions of samples	550 mm * 550 mm ±2 mm
Measurments	Visual check for cracks or Leakadge
Expression of results	No cracks or Pass at specified load in Kg
Conditioning before testing	24 hrs. at specified test condition (23 ±2 °c)
Support	Soft Support Polystyrene
Duration of Test	24 Hrs. at specified test condition (23 ±2 °c) for each loading interval.

**Results**

**Applied Loads**

	0	5	10	15	20	25	30	35	40	Kg
Sample 1	-	-	-	-	-	25	-	-	-	
Sample 2	-	-	-	-	-	25	-	-	-	
Sample 3	-	-	-	-	-	25	-	-	-	

Max. Load : 25 Kg

**Cracks or Leakage**

	0	5	10	15	20	25	30	35	40	Kg
Sample 1	-	-	-	-	-	No	-	-	-	
Sample 2	-	-	-	-	-	No	-	-	-	
Sample 3	-	-	-	-	-	No	-	-	-	

End Result : PASS

Tested and Reported by

*Emad G/h*

Quality Control Responsible

*Salma*

Laboratory Manager

*[Signature]*

Flexible sheets for Waterproofing  
**Determination of Resistance to Impact**  
EN 12691:2013 Method B

Date of testing : 08/02/2024 Thursday  
Report No. : 0495/12691/2024

**Product Identification**

Product FULL name : NILOSHIELD SBS 15 PS & GF 450 Sand 4,50 mm S/E  
EOC # [ Client ] : NANOTEK - TURKEY  
Date of production : 06/02/2024 Tuesday  
Shift of production : Shift 2  
Compound type : SBS-15/A [9]  
Reinforcement type : Double Nanj FG 65+TDF 160  
Batch No. : 035 24 12  
Upper surfacing : (S00) Sand - Rashidi (200 micron)  
Lower surfacing : (E03) (Bitunil Printed English & English) HD PE Film Printed

code:02745

**Sampling**

Determination of Resistance to Impact	
Sampling	According to EN 13416
Number of samples	1 From different positions of roll with 10cm exclusion from both roll sides
Test Piece	5
Dimensions of samples	150 mm * 150 mm
Measurments	Visual check for cracks or Leakadge
Expression of results	No cracks or leakadge at specified drop height in mm
Conditioning before testing	24 hrs. at specified test condition (23 ± 2 °c)
Support	Soft Support Polystyrene
Drop mass	500 ± 5 gm including Punchring tool
Punchring tool	Spherical with diameter 12.7 ± 1 mm

**Results**

**Applied Loads**

	300	350	400	450	500	600	700	800	900	1000	1250	1500
Sample 1	-	-	-	-	-	-	-	-	-	-	1250	-
Sample 2	-	-	-	-	-	-	-	-	-	-	1250	-
Sample 3	-	-	-	-	-	-	-	-	-	-	1250	-
Sample 4	-	-	-	-	-	-	-	-	-	-	1250	-
Sample 5	-	-	-	-	-	-	-	-	-	-	1250	-

Max. Load : 1250 mm

**Cracks or Leakage**

	300	350	400	450	500	600	700	800	900	1000	1250	1500
Sample 1	-	-	-	-	-	-	-	-	-	-	No	-
Sample 2	-	-	-	-	-	-	-	-	-	-	No	-
Sample 3	-	-	-	-	-	-	-	-	-	-	No	-
Sample 4	-	-	-	-	-	-	-	-	-	-	No	-
Sample 5	-	-	-	-	-	-	-	-	-	-	No	-

End Result : PASS

**Tested and Reported by**

*Emad G.H.*

FM-QC-1271-691

**Quality Control Responsible**

*Salma*

Ver. 0

**Laboratory Manager**

*M. S. A.*

Date: 1/1/2015

Flexible sheets for Waterproofing  
**Determination of Dimensional stability**  
**EN 1107-1:2000**

Date of testing : 11/02/2024 Sunday  
Report No. : 0495/1107-1/2024

**Product Identification**

Join with inatial Type Test : 00013

Product FULL name : NILOSHIELD SBS 15 PS & GF 450 Sand 4.50 mm S/E  
EOC # [ Client ] : NANOTEK - TURKEY  
Date of production : 06/02/2024 Tuesday  
Shift of production : Shift 2  
Compound type : SBS-15/A [9]  
Reinforcement type : Double Nanj FG 65+TDF 160  
Batch No. : 035/04/12  
Upper surfacing : (S00) Sand - Rashidi (200 micron)  
Lower surfacing : (E03) (Bitunil Printed English & English) HD PE Film Printed

code 02739

Roll Length : 10 m m  
Rolls/Pallet : 20 m R/P.

**Sampling**

Determination of Dimensional stability	
Sampling	According to EN 13416
Number of samples	1 Part of Roll taken test pieces from uniformly over the width in larger dimation with Longitudinal direction
Test Piece	5
Dimensions of samples	250 ± 1 mm * 50 ± 1 mm
Measurments	Measuring using optical device the difference distance between intial mark reference L <sub>0</sub> and second mark for each test specimen to nearest 0.05 mm
Expression of results	The % of the difference distance between intial mark reference L <sub>0</sub> and second mark with refereance to referance distance L <sub>0</sub> . it may be positive (+) expansion or negative (-) contraction.
Conditioning before testing	at 23±2 °c for 24 hr.
Conditioning during testing	at 80±2 °c for 24 hr. ± 10 min. duration
Conditioning just before measurments	at 23±2 °c for at least 4 hr.

**Results**

	Referance	Difference	% of change	Sign. Meaning
Sample 1	200	-0.34	-0.17	Contraction
Sample 2	200	-0.38	-0.19	Contraction
Sample 3	200	-0.38	-0.19	Contraction
Sample 4	200	-0.32	-0.16	Contraction
Sample 5	200	-0.34	-0.17	Contraction
Arthmatic Mean :			-0.18	Contraction

Result close to nearest 0.1 %

**-0.18**

**Tested and Reported by**

**Quality Control Responsible**

**Laboratory Manager**



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Alexandria . EGYPT

Tensile test extensometer EN 12311

Test type: Tensile Instron Corporation  
Operator name: EMAD GHONAME Series IX Automated Materials Testing System 8.24.00  
Sample Identification: 0352412 TEL Test Date: 07 February 2024  
Interface Type: 4200/4300/4400

Sample Rate (pts/secs): 10.0000 Humidity ( % ): 50  
Crosshead Speed: 100.0000 mm/min Temperature: 23 C  
Second Speed: 0.0000 mm/min  
Third Speed: 0.0000 mm/min  
Full Scale Load Range: 5.0000 kN

Membrane/Thickness NILOSHIELD-SBS 15CS&GF 4.5M S/E

Reinforcement Type \*\* NANJ -65 + 1DF-160 \*\*

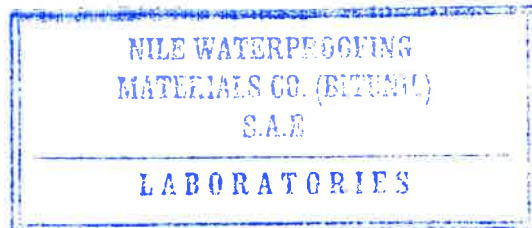
Compound / Batch no. SBS -15/A Batch No\*\*0352412\*\*

Production date 06/02/2024 II

Direction LONGITUDINAL

Sample comments:  
Conditioning at least 20 hrs

	Load at Max.Load ( N/5cm )	Load at Cursor Point I ( N/5cm )	% Strain at Max.Load (%)	% Strain at Cursor Point I (%)
1	897.200	850.200	3.436	29.798
2	961.700	912.750	9.044	31.583
3	955.700	946.970	30.750	31.141
4	916.500	902.550	30.670	31.543
5	963.100	942.280	2.040	32.805
Mean	938.840	910.950	15.188	31.374
S D	30.118	38.870	14.410	1.079



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 Alexandria . EGYPT

Tensile test extensometer EN 12311

Test type: Tensile Instron Corporation  
 Operator name: EMAD GHONAME Series IX Automated Materials Testing System 8.24.00  
 Sample Identification: 0352412 TEI Test Date: 07 February 2024  
 Interface Type: 4200/4300/4400

Sample Rate (pts/secs): 10.0000 Humidity ( % ):50  
 Crosshead Speed: 100.0000 mm/min Temperature: 23 C  
 Second Speed: 0.0000 mm/min  
 Third Speed: 0.0000 mm/min  
 Full Scale Load Range: 5.0000 kN

Membrane/Thickness NILOSHIELD-SBS 15CS&GF 4.5M S/E

Reinforcement Type \*\* NANJ -65 + TDF-160 \*\*

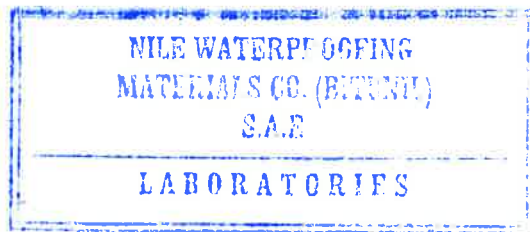
Compound / Batch no. SBS -15/A Batch No\*\*0352412\*\*

Production date 06/02/2024 II

Direction TRANSVERSAL

Sample comments:  
 Conditioning at least 20 hrs

	Load at Max.Load ( N/5cm )	Load at Cursor Point I ( N/5cm )	% Strain at Max.Load (%)	% Strain at Cursor Point I (%)
1	645.400	550.600	41.690	43.650
2	658.800	596.510	36.740	38.093
3	620.700	539.060	2.188	22.953
4	648.600	643.480	3.372	53.637
5	-636.000	598.920	50.630	53.503
Mean	641.900	585.714	26.924	42.367
S D	14.379	41.945	22.599	12.726



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Tensile test AS FM D-5147

Test type: Tensile Instron Corporation  
 Operator name: EMAD GHONAME Series IX Automated Materials Testing System 8.24.00  
 Sample Identification: 0352412 TAL Test Date: 07 February 2024  
 Interface Type: 4200/4300.4400

Sample Rate (pts/secs): 10.0000 Humidity ( % ):50  
 Crosshead Speed: 50.0000 mm/min Temperature: 23 C  
 Second Speed: 0.0000 mm/min  
 Third Speed: 0.0000 mm/min  
 Full Scale Load Range: 5.0000 kN

Membrane/Thickness NILOSHIELD-SBS 15CS&GF 4.5M S/E

Reinforcement Type \*\* NANJ -65 + TDF-160 \*\*

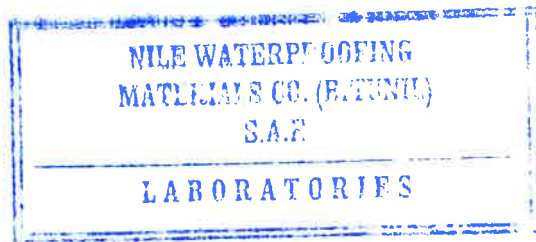
Compound / Batch no. SBS -15/A Batch No\*\*0352412\*\*

Production date 06/02/2024 II

Direction LONGITUDINAL

Sample comments:  
 Conditioning at least 20 hrs

	Load at Max.Load (N/5cm)	Load at Cursor Point 1 (N/5cm)	% Strain at Cursor Point 1 (%)	% Strain at Max.Load (%)	Load at Cursor Point 1 (kN/m)
1	782.800	394.880	24.592	18.147	7.898
2	801.400	757.300	41.136	14.520	15.146
3	955.200	824.680	25.483	4.653	16.494
4	892.600	717.300	30.705	11.533	14.346
5	845.200	703.080	24.149	9.427	14.062
6	880.800	840.520	37.337	35.840	16.810
Mean	859.667	706.293	30.567	15.687	14.126
S D	63.515	162.323	7.215	10.879	3.246



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Tensile test ASTM D-5147

Test type: Tensile  
 Operator name: EMAD GHONAME  
 Sample Identification: 0352412 TAT  
 Interface Type: 4200/4300/4400  
 Instron Corporation  
 Series IX Automated Materials Testing System 8.24.00  
 Test Date: 07 February 2024

Sample Rate (pts/secs): 10.0000  
 Crosshead Speed: 50.0000 mm/min  
 Second Speed: 0.0000 mm/min  
 Third Speed: 0.0000 mm/min  
 Full Scale Load Range: 5.0000 kN  
 Humidity (%): 50  
 Temperature: 23 C

Membrane/Thickness NILOSHIELD-SBS 15CS&GF 4.5M S/E

Reinforcement Type \*\* NANJ -65 + TDF-160 \*\*

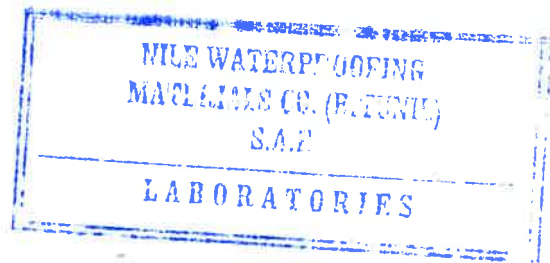
Compound / Batch no. SBS -15/A Batch No\*\*0352412\*\*

Production date 06/02/2024 II

Direction TRANSVERSAL

Sample comments:  
 Conditioning at least 20 hrs

	Load at Max. Load (N/5cm)	Load at Cursor Point I (N/5cm)	% Strain at Cursor Point I (%)	% Strain at Max Load (%)	Load at Cursor Point I (KN/m)
1	619.600	568.040	49.571	47.400	11.361
2	662.200	605.360	70.033	66.813	12.107
3	590.800	506.040	52.471	4.533	10.121
4	666.800	661.460	66.816	64.600	13.229
5	645.200	644.020	67.694	66.920	12.880
6	681.800	680.800	67.103	69.267	13.616
Mean	644.400	610.953	62.281	53.256	12.219
S.D.	33.782	65.426	8.843	25.154	1.309



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Alexandria . EGYPT

Tearing Strength ASTM D-4073-94

Test type: Tensile Instron Corporation  
Operator name: EMAD GHONAME Series IX Automated Materials Testing System 8.24.00  
Sample Identification: 0352412 RAL Test Date: 07 February 2024  
Interface Type: 4200/4300/4400

Sample Rate (pts/secs): 10.0000 Humidity ( % ): 50  
Crosshead Speed: 100.0000 mm/min Temperature: 23 C  
Second Speed: 0.0000 mm/min  
Third Speed: 0.0000 mm/min  
Full Scale Load Range: 5.0000 kN

Membrane/Thickness NILOSHIELD-SBS 15CS&GF 4.5M S/E

Reinforcement Type \*\* NANJ -65 + TDF-160 \*\*

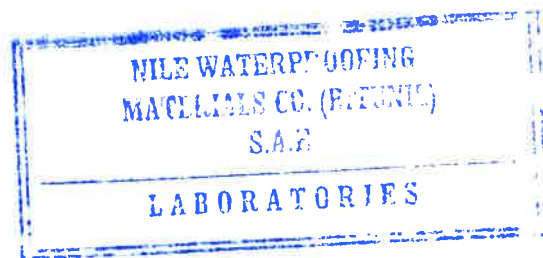
Compound / Batch no. SBS -15/A Batch No\*\*0352412\*\*

Production date 06/02/2024 II

Direction LONGITUDINAL

Sample comments:  
Conditioning at least 20 hrs

	Load at Max.Load (N)	Avg Ld Between Limits I (N)
1	955.700	843.144
2	931.800	848.879
Mean	943.750	846.012
S D	16.900	4.055





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Alexandria , EGYPT

Tearing Strength ASTM D-4073-94

Test type: Tensile  
Operator name: EMAD GHONAME  
Sample Identification: 0352412 RAT  
Interface Type: 4200/4300/4400

Instron Corporation  
Series IX Automated Materials Testing System 8.24.00  
Test Date: 07 February 2024

Sample Rate (pts/secs): 10.0000  
Crosshead Speed: 100.0000 mm/min  
Second Speed: 0.0000 mm/min  
Third Speed: 0.0000 mm/min  
Full Scale Load Range: 5.0000 kN

Humidity ( % ): 50  
Temperature: 23 C

Membrane/Thickness NILOSHIELD-SBS 15CS&GF 4.5M S/E

Reinforcement Type \*\* NANJ -65 + TDF-160 \*\*

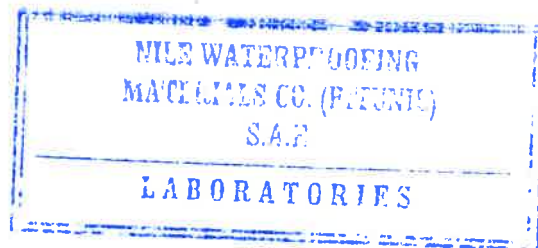
Compound / Batch no. SBS -15/A Batch No\*\*0352412\*\*

Production date 06/02/2024 II

Direction TRANSVERSAL

Sample comments:  
Conditioning at least 20 hrs

	Load at Max.Load (N)	Avg Ld Between Limits I (N)
1	729.700	573.647
2	667.900	571.733
Mean	698.800	572.690
S.D	43.699	1.353



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Alexandria , EGYPT

Tearing Strength EN 12310-1

Test type: Tensile  
Operator name: EMAD GHONAME  
Sample Identification: 0352412 REL  
Interface Type: 4200/4300/4400  
Instron Corporation  
Series IX Automated Materials Testing System 8.24.00  
Test Date: 07 February 2024

Sample Rate (pts/secs): 10.0000  
Crosshead Speed: 100.0000 mm/min  
Second Speed: 0.0000 mm/min  
Third Speed: 0.0000 mm/min  
Full Scale Load Range: 5.0000 kN  
Humidity (%): 50  
Temperature: 23 C

Membrane/Thickness NILOSHIELD-SBS 15C'S&GF 4.5M S/E

Reinforcement Type \*\* NANJ -65 + 1DF-160 \*\*

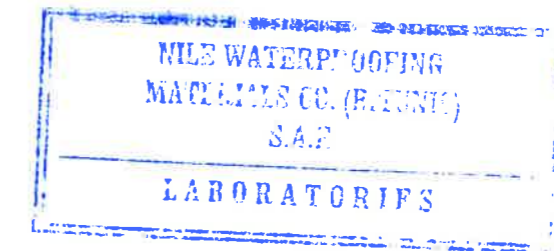
Compound / Batch no. SBS -15/A Batch No\*\*0352412\*\*

Production date 06/02/2024 II

Direction LONGITUDINAL

Sample comments:  
Conditioning at least 20 hrs

	Load at Max Load (N)	Avg Ld Between Limits I (N)
1	209.800	172.448
2	310.200	249.010
3	286.200	238.453
4	361.900	312.219
5	302.000	269.293
Mean	294.020	248.285
S.D.	54.971	50.934



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Alexandria , EGYPT

Tearing Strength EN 12310-1

Test type: Tensile  
Operator name: EMAD GHONAME  
Sample Identification: 0352412 RET  
Interface Type: 4200/4300/4400  
Instron Corporation  
Series IX Automated Materials Testing System 8,24.00  
Test Date: 07 February 2024

Sample Rate (pts/secs): 10.0000  
Crosshead Speed: 100.0000 mm/min  
Second Speed: 0.0000 mm/min  
Third Speed: 0.0000 mm/min  
Full Scale Load Range: 5.0000 kN  
Humidity ( % ): 50  
Temperature: 23 C

Membrane/Thickness NILOSHIELD-SBS 15CS&GF 4.5M S/E

Reinforcement Type \*\* NANJ -65 + TDF-160 \*\*

Compound / Batch no. SBS -15/A Batch No\*\*0352412\*\*

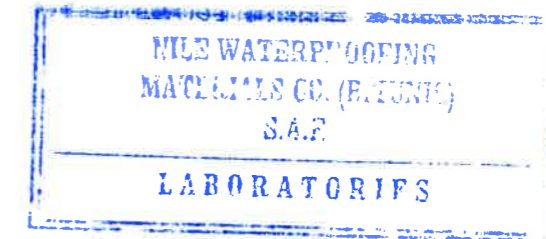
Production date 06/02/2024 II

Direction TRANSVERSAL

Sample comments:

Conditioning at least 20 hrs

	Load at Max.Load (N)	Avg Ld Between Limits I (N)
1	339.300	309.842
2	372.900	324.189
3	369.700	325.572
4	355.700	286.739
5	335.400	292.528
Mean	354.600	307.774
S.D.	17.080	17.786



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Shear resistance of Joint EN-12317-1

Test type: Tensile Instron Corporation  
 Operator name: EMAD GHONAME Series IX Automated Materials Testing System 8.24.00  
 Sample Identification: 0352412 JEL Test Date: 08 February 2024  
 Interface Type: 4200/4300/4400

Sample Rate (pts/secs): 10.0000 Humidity ( % ): 50  
 Crosshead Speed: 200.0000 mm/min Temperature: 23 C  
 Second Speed: 0.0000 mm/min  
 Third Speed: 0.0000 mm/min  
 Full Scale Load Range: 5.0000 kN

Membrane Thickness NILOSHIELD-SBS 15C S&GF 4.5M S/E

Reinforcement Type \*\* NANJ -65 + 1DF-160 \*\*

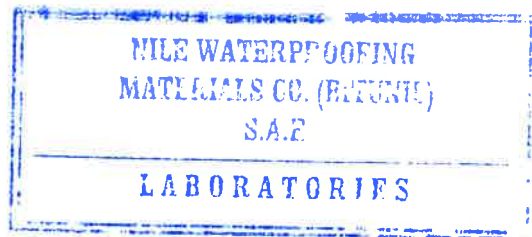
Compound / Batch no. SBS -15/A Batch No\*\*0352412\*\*

Production date 06/02/2024 II

Direction LONGITUDINAL

Sample comments:  
 Conditioning at least 20 hrs

	Load at Max.Load (N/5cm)	Load at Cursor Point I (N/5cm)	% Strain at Max.Load (%)	% Strain at Cursor Point I (%)
1	913.300	892.340	5.645	7.893
2	972.500	919.460	9.915	16.663
3	953.000	847.510	9.970	14.554
4	973.200	962.410	21.115	21.364
Mean	953.000	905.430	11.661	15.119
S D	28.074	-48.200	6.620	5.595



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Shear resistance of Joint EN-12317-1

Test type: Tensile  
 Operator name: EMAD GHONAME  
 Sample Identification: 0352412 JET  
 Interface Type: 4200/4300/4400

Instron Corporation  
 Series IX Automated Materials Testing System 8.24.00  
 Test Date: 08 February 2024

Sample Rate (pts/secs): 10.0000  
 Crosshead Speed: 200.0000 mm/min  
 Second Speed: 0.0000 mm/min  
 Third Speed: 0.0000 mm/min  
 Full Scale Load Range: 5.0000 kN

Humidity (%): 50  
 Temperature: 23 C

Membrane/Thickness NILOSHIELD-SBS 15CS&GF 4.5M S/E

Reinforcement Type \*\* NANJ -65 + 1DF-160 \*\*

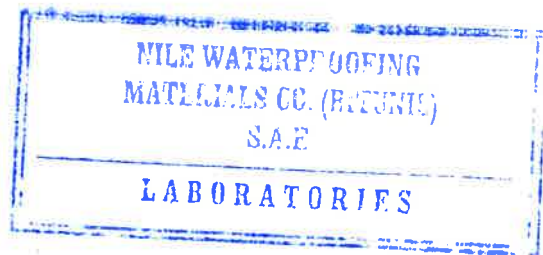
Compound / Batch no. SBS -15/A Batch No\*\*0352412\*\*

Production date 06/02/2024 II

Direction TRANSVERSAL

Sample comments:  
 Conditioning at least 20 hrs

	Load at Max.Load (N/5cm)	Load at Cursor Point 1 (N/5cm)	% Strain at Max.Load (%)	% Strain at Cursor Point 1 (%)
1	682.700	676.510	23.450	24.034
2	712.800	590.330	26.390	27.890
3	663.100	624.160	23.275	25.027
4	716.000	680.260	29.075	30.327
5	647.500	623.890	25.185	27.017
Mean	684.420	639.030	25.475	26.859
S.D	30.097	38.493	2.389	2.473





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Alexandria . EGYPT

Peeling @ 180 EN-12316-2

Test type: Tensile Instron Corporation  
Operator name: EMAD GHONAME Series IX Automated Materials Testing System 8.24.00  
Sample Identification: 0352412 PEL Test Date: 08 February 2024  
Interface Type: 4200/4300/4400

Sample Rate (pts/secs): 10.0000 Humidity ( %): 50  
Crosshead Speed: 100.0000 mm/min Temperature: 23 C  
Second Speed: 0.0000 mm/min  
Third Speed: 0.0000 mm/min  
Full Scale Load Range: 5.0000 kN

Membrane/Thickness NILOSHIELD-SBS 15CS&GF 4.5M S/E

Reinforcement Type \*\* NANJ -65 + TDF-160 \*\*

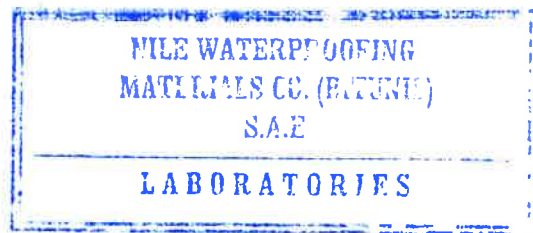
Compound / Batch no. SBS -15/A Batch No\*\*0352412\*\*

Production date 06/02/2024 II

Direction ( 5 x 40 ) Peeling @ 180

Sample comments:  
Conditioning at least 20 hrs

	Avg Ld Between Limits I ( N/5cm )	Load at Max Load ( N/5cm )
1	162.214	222.000
2	128.493	182.700
3	171.075	229.100
Mean	153.927	211.267
S D	22.468	24.993



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9 EL Saad El Aaly St. Wadi El Kamar  
Alexandria , EGYPT

Peeling @ 180 EN-12316-1

Test type: Tensile Instron Corporation  
Operator name: EMAD GHONAME Series IX Automated Materials Testing System 8.24.00  
Sample Identification: 0352412 PAL Test Date: 08 February 2024  
Interface Type: 4200/4300/4400

Sample Rate (pts/secs): 10.0000 Humidity ( % ):50  
Crosshead Speed: 100.0000 mm/min Temperature: 23 C  
Second Speed: 0.0000 mm/min  
Third Speed: 0.0000 mm/min  
Full Scale Load Range: 5.0000 kN

Membrane/Thickness NILOSHIELD-SBS 15CS&GF 4.5M S/E

Reinforcement Type \*\* NANJ -65 + TDF-160 \*\*

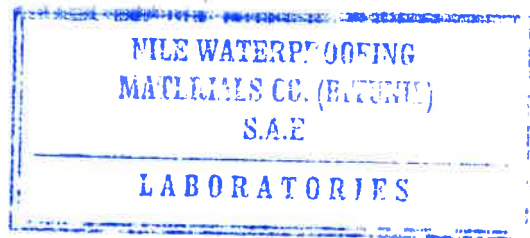
Compound / Batch no. SBS -15/A Batch No\*\*0352

Production date 06/02/2024 II

Direction Peeling @ 90 By : CONCRETE

Sample comments:  
Conditioning at least 20 hrs

	Avg Ld Between Limits 1 ( N/5cm )	Load at Max Load ( N/5cm )
	45.458	54.490
Mean	45.458	54.490
S D	0.000	0.000





Flexible sheets for Waterproofing  
Artificial ageing by long term exposure to elevated temperature  
EN 1296:2001

Date of report : 16/06/2024 Sunday  
Report No. : 0495/1296/2024

**Product Identification**

Join with Initial Type Test : 00013

Product FULL name : NILOSHIELD SBS 15 PS & GF 450 Sand 4.50 mm S/E code:02746  
EOC # [ Client ] : NANOTEK - TURKEY  
Date of production : 06/02/2024 Tuesday  
Shift of production : Shift 2 Roll Length : 10 m m  
Compound type : SBS-15/A [9] Rolls/Pallet : 20 m R/P.  
Batch No : 035 24 12  
Upper surfacing : (S00) Sand - Rashidi (200 micron)  
Lower surfacing : (E03) (Bitunil Printed English & English) HD PE Film Printed

**Sampling**

Artificial ageing by long term exposure to elevated temperature	
Sampling	According to EN 13416
Number of samples	Sufficient for Evaluating Test (1 specimen)
Dimensions of samples	Sufficient for Evaluating Test (40 cm * 40 cm)
Measurements	Visual Inspections before and After test
Expression of results	Visual inspection and evaluating test cold flexibility or heat flow test
Conditioning before testing	24 hrs. at 23±2 <sup>0</sup> c and Humidity 50±10%.
Oven Status	Calibrated according to Annex A
Exposure Duration	16 Weeks

**Evaluation Tests****Visual Defects**

	Upper Surface	Lower Surface	Reference
Blisters	NO.	NO.	EN 1850-1:2000
Cracks	NO.	NO.	
Holes	NO.	NO.	
Naked Spots	NO.	NO.	
Other Noticeable	NO.	NO.	

**Heat Flow Resistance**

		<sup>0</sup> c	Upper Surface	Lower Surface	Reference
After ageing	Sample 1	90	Pass	Pass	EN 1110:2010
	Sample 2		Pass	Pass	
	Sample 3		Pass	Pass	
	Result		Pass	Pass	

**Cold Flexibility**

		<sup>0</sup> c	Upper Surface	Lower Surface	Reference
After Ageing	Sample 1	-5	Pass	Pass	EN 1109:2013
	Sample 2		Pass	Pass	
	Sample 3		Pass	Pass	
	Sample 4		Pass	Pass	
	Sample 5		Pass	Pass	
	Result		Pass	Pass	

Tested and Reported by

Laboratory Manager

Reaction to Fire tests  
**Ignitability of products subjected to direct impingement of flame**  
 EN ISO 11925-2:2010

Date of testing : 08/02/2024 Thursday  
 Report No. : 0495/11925-2/2024

**Product Identification**

Join with Initial Type Test : 00013

Product FULL name : NILOSHIELD SBS 15 PS & GF 450 Sand 4.50 mm S/E code:02/46  
 EOC # [ Client ] : NANOTEK - TURKEY  
 Date of production : 06/02/2024 Tuesday  
 Shift of production : Shift 2 Roll Length : 10 m m  
 Compound type : SBS-15/A [9] Rolls/Pallet : 20 m R/P.  
 Reinforcement type : Double Nanj FG 65+TDF 160  
 Batch No. : 035 24 12  
 Upper surfacing : (S00) Sand - Rashidi (200 micron)  
 Lower surfacing : (E03) (BituNil Printed English & English) HD PE Film Printed

**Sampling and conditioning**

Ignitability of products subjected to direct impingement of flame	
Sampling	According to EN 13416
Number of samples	1 complete roll
Test Piece	6 Specimens (3 in Longitudinal + 3 in Transversal)
Dimensions of samples	250 mm * 90 mm
Measurements	Time (sec.) - Distance (mm) - Observations (visually)
Expression of results	Surface and Edge evaluation : [Time] Ignition occurrence > 3 sec. or less - [Distance] Propagation of flame reach to 150mm or less or more - [Flaming droplets] if any of flaming droplets - [Others] any other observations..
Conditioning before testing	Min. 48 Hrs. at 23 ± 2°c and 50 ± 5 RH at constant weight achieved
Substrate	No substrate (only applied for product)

**Intended application of the product**

Water proofing membrane as a Top layer in multilayer system

Product is defined as..

4.5 mm

Reinforcement as well as upper and lower surfaces as per described above.

**Results**

**Specimen 1**

(Longitudinal direction)

Time of Ignition : 15 sec.  
 Propagation distance of flame : 59 mm  
 Flaming Droplets : NO  
 Ignition Occurrence : NO  
 Other Observations : No Ignation of filter paper beneath the specimen

Specimen 2  
(Longitudinal direction)

Time of Ignition	:	15	sec.
Propagation distance of flame	:	62	mm
Flaming Droplets	:	NO	-
Ignition Occurrence	:	NO	-
Other Observations	:	No Ignation of filter paper beneath the specimen	

Specimen 3  
(Longitudinal direction)

Time of Ignition	:	15	sec.
Propagation distance of flame	:	64	mm
Flaming Droplets	:	NO	-
Ignition Occurrence	:	NO	-
Other Observations	:	No Ignation of filter paper beneath the specimen	

Specimen 4  
(Transversal direction)

Time of Ignition	:	15	sec.
Propagation distance of flame	:	58	mm
Flaming Droplets	:	NO	-
Ignition Occurrence	:	NO	-
Other Observations	:	No Ignation of filter paper beneath the specimen	

Specimen 5  
(Transversal direction)

Time of Ignition	:	15	sec.
Propagation distance of flame	:	59	mm
Flaming Droplets	:	NO	-
Ignition Occurrence	:	NO	-
Other Observations	:	No Ignation of filter paper beneath the specimen	

**Specimen 6**  
(Transversal direction)

Time of Ignition	: 15	sec.
Propagation distance of flame	: 60	mm
Flaming Droplets	: NO	
Ignition Occurrence	: NO	
Other Observations	: No Ignition of filter paper beneath the specimen	

**Impingement flame Information ..**

- Surface flame attack
- Exposure time 15 sec.
- Flame height 20 mm
- Gas used is Natural gas
- Gas pressure 20 kPa.
- Exposure angle tilted at 45° with respect to the vertical axes



**Final Results..**

- Pass

ACCORDING TO BS EN-13501-5-2016 + A1:2009, Fire classification of construction products and building elements, Part1 : Classification using data from reaction to fire test, the product can be classified as..

**CLASS E**

**Remark...**

*The test results relate to the behaviour of the test specimens of a product under the particular conditions of the test, they are not intended to be the sole criterion for assessing the potential fire hazard of the product in use.*

**Laboratory Adress**

Wadi AL Qamar Rd., Merghem - AL Max,  
Inside ASPPC compound company  
BiluNil waterproofing materials co.  
Alexandria, Egypt

**Tested and Reported by**

*Emad G.H.*

**Quality Control Responsible**

*Salma*

**Laboratory Manager**

*M. S. H.*





Flexible sheets for Waterproofing  
**Determination of Watertightness Against Artificial Ageing**  
EN 1296 afterwards to EN1928:2000

Date of testing : 16/06/2024 Sunday  
Report No. : 0495/1296\_1928/2024

**Product Identification**

Product FULL name : NILOSHIELD SBS 15 PS & GF 450 Sand 4.50 mm S/E code:02/16  
EOC # [ Client ] : NANOTEK - TURKEY  
Date of production : 06/02/2024 Tuesday  
Shift of production : Shift 2 Roll Length : 10 m m  
Compound type : SBS-15/A [9] Rolls/Pallet : 20 m R/P  
Reinforcement type : Double Nanj FG 65+TDF 160  
Batch No. : 035 24 12  
Upper surfacing : (S00) Sand - Rashidi (200 micron)  
Lower surfacing : (E03) (Bitunil Printed English & English) HD PE Film Printed

**Sampling**

	Artificial ageing by long term exposure to elevated temperature
Sampling	According to EN 13416
Number of samples	Sufficient for Evaluating Test (1 specimen)
Dimensions of samples	Circular with Diameter 200 ±2 mm
Measurements	Visual Inspections before and After test
Expression of results	Visual inspection and evaluating test cold flexibility or heat flow test
Conditioning before testin	24 hrs. at 23±2°C and Humidity 50±10%.
Oven Status	Calibrated according to Annex A
Exposure Duration	16 Weeks

**Evaluation Tests**

**Visual Defects**

	Upper Surface	Lower Surface	Reference
Blisters	NO.	NO.	EN 1850-1:2000
Cracks	NO.	NO.	
Holes	NO.	NO.	
Naked Spots	NO.	NO.	
Other Noticeable	NO.	NO.	

**Heat Flow Resistance**

	°c	Upper Surface	Lower Surface	Reference
After ageing	90	Pass	Pass	EN 1110:2010
		Pass	Pass	
		Pass	Pass	
		Result	Pass	



Flexible sheets for Waterproofing  
**Determination of Watertightness Against Artificial Ageing**  
EN 1296 afterwards to EN1928:2000

Date of testing : 16/06/2024 Sunday  
Report No. : 0495/1296\_1928/2024

**Product Identification**

Product FULL name : NILOSHIELD SBS 15 PS & GF 450 Sand 4.50 mm S/E code:02746  
EOC # [ Client ] : NANOTEK - TURKEY  
Date of production : 06/02/2024 Tuesday  
Shift of production : Shift 2 Roll Length : 10 m m  
Compound type : SBS-15/A [9] Rolls/Pallet : 20 m R/P.  
Reinforcement type : Double Nanj FG 65+TDF 160  
Batch No. : 035 24 12  
Upper surfacing : (S00) Sand - Rashidi (200 micron)  
Lower surfacing : (E03) (Bitunil Printed English & English) HD PE Film Printed

Cold Flexibility		°c	Upper Surface	Lower Surface	Reference
After Ageing	Sample 1	-5	Pass	Pass	EN 1109:2013
	Sample 2		Pass	Pass	
	Sample 3		Pass	Pass	
	Sample 4		Pass	Pass	
	Sample 5		Pass	Pass	
	<b>Result</b>		Pass	Pass	

**Sampling**

Determination of Watertightness Against Artificial Ageing		
Method	Method A	Method B (if Applied)
Sampling	According to EN 13416	According to EN 13416
Number of samples	3 from different roll parts	3 from different roll parts
Test Piece	3	3
Dimensions of samples	Circular with Diameter 200 ±2 mm	Equal to sloted plate at least 130 mm
Measurments	at 23±5 °c	at 23±5 °c
Expression of results	Pass:if no color change or Fail:if color change	Pass:if no color change or Fail:if color change
Conditioning before testing	6 Hrs. at 23±5 °c	6 Hrs. at 23±5 °c
Test Duration	24±1 hr.	Assesment after 1 hr. test duration
Presuure applied	60 kPs.	according to specified pressure



Flexible sheets for Waterproofing  
**Determination of Watertightness Against Artificial Ageing**  
 EN 1296 afterwards to EN1928:2000

Date of testing : 16/06/2024 Sunday  
 Report No. : 0495/1296\_1928/2024

Product Identification

Product FULL name : NILOSHIELD SBS 15 PS & GF 450 Sand 4.50 mm S/E code:02/46  
 EOC # [ Client ] : NANOTEK - TURKEY  
 Date of production : 06/02/2024 Tuesday  
 Shift of production : Shift 2 Roll Length : 10 m m  
 Compound type : SBS-15/A [9] Rolls/Pallet : 20 m R/P.  
 Reinforcement type : Double Nanj FG 65+TDF 160  
 Batch No. : 035 24 12  
 Upper surfacing : (S00) Sand - Rashidi (200 micron)  
 Lower surfacing : (E03) (Bitunil Printed English & English) HD PE Film Printed

Results

Applied Pressure for A	Applied Pressure for B
60KPa	100KPa

Sample	Coior Change	Result	Evidence of leakadge	Result
1	NO	PASS	NO	PASS
2	NO	PASS	NO	PASS
3	NO	PASS	NO	PASS

Watertightness Against Artificial Ageing : *Deviation of method B than EN norm is in the duration test specimens where it applied for 1 hr. assessment not 24 hr.*

Tested and Reported by

*Emad G.H.*

Quality Control Responsible

*Sahma*

Laboratory Manager

*MSCOL*

Flexible sheets for Waterproofing  
**Determination of Watertightness Against Chemical**  
 EN1847:2009 afterwards to EN 1928:2000

**Product Identification**

Product FULL name : NILOSHIELD SBS 15 PS & GF 450 Sand 4.50 mm S/E code:02786  
 Date of production : 06/02/2024 Tuesday  
 Shift of production : Shift 2 Roll Length : 10 m m  
 Compound type : SBS-15/A [9] Rolls/Pallet : 20 m R/P.  
 Reinforcement type : Double Nanj FG 65+TDF 160  
 Batch No. : 035 24 12  
 Upper surfacing : (S00) Sand - Rashidi (200 micron)  
 Lower surfacing : (E03) (Bitunil Printed English & English) HD PE Film Printed

**Sampling**

<b>Determination of exposure to liquid chemicals including water</b>	
<b>According to EN 13416</b>	
Sampling	
Number of samples	At Least 3 specimen
Dimensions of samples	Circular with Diameter 200 ±2 mm
Measurements	Visual Inspections before and After test
Quantity of test Liquid	At Least 2500 ml for 1 or more samples
Conditioning before testing	24 hrs. at 23±2 <sup>o</sup> c and Humidity 50±10%.
Exposure Duration	28 Days

<b>Mixture of Standard Aqueous Solution</b>	
Test Liquid	Notes
10% Sodium Chloride	10% by weight
Milk of Lime Ca(OH) <sub>2</sub>	saturated Solution
5% to 6% sulfurous Acid H <sub>2</sub> SO <sub>3</sub>	5% to 6% by weight



Flexible sheets for Waterproofing  
**Determination of Watertightness Against Chemical**  
EN1847:2009 afterwards to EN 1928:2000

**Product Identification**

Product FULL name : NILOSHIELD SBS 15 PS & GF 450 Sand 4.50 mm S/E code:02746  
Date of production : 06/02/2024 Tuesday  
Shift of production : Shift 2 Roll Length : 10 m m  
Compound type : SBS-15/A [9] Rolls/Pallet : 20 m R/P.  
Reinforcement type : Double Nanj FG 65+TDF 160  
Batch No. : 035 24 12  
Upper surfacing : (S00) Sand - Rashidi (200 micron)  
Lower surfacing : (E03) (Bitunil Printed English & English) HD PE Film Printed

**Determination of Watertightness**

EN 1928:2000

**Sampling**

<b>Determination of Watertightness Against Chemical</b>		
Method	Method A	Method B (if Applied)
Sampling	According to EN 13416	According to EN 13416
Number of samples	3 from different roll parts	3 from different roll parts
Test Piece	3	3
Dimensions of samples	Circular with Diameter 200 ±2 mm	Equal to slotted plate at least 130 mm
Measurments	at 23±5 °c	at 23±5 °c
Expression of results	Pass:if no color change or Fail:if color change	Pass:if no color change or Fail:if color change
Conditioning before testing	6 Hrs. at 23±5 °c	6 Hrs. at 23±5 °c
Test Duration	24±1 hr.	Assesment after 1 hr. test duration
Presuure applied	60 kPs.	according to specified pressure



Flexible sheets for Waterproofing  
**Determination of Watertightness Against Chemical**  
EN1347:2009 afterwards to EN 1928:2000

**Product Identification**

Product FULL name : NILOSHIELD SBS 15 PS & GF 450 Sand 4.50 mm S/E code:02746  
Date of production : 06/02/2024 Tuesday  
Shift of production : Shift 2 Roll Length : 10 m m  
Compound type : SBS-15/A [9] Rolls/Pallet : 20 m R/P.  
Reinforcement type : Double Nanj FG 65+TDF 160  
Batch No. : 025 24 12  
Upper surfacing : (S00) Sand - Rashidi (200 micron)  
Lower surfacing : (E03) (Bitunil Printed English & English) HD PE Film Printed

**Results**

Applied Pressure for A	Applied Pressure for B
60KPa	100KPa

Sample	Color Change	Result	Evidence of leakadge	Result
1	NO	PASS	NO	PASS
2	NO	PASS	NO	PASS
3	NO	PASS	NO	PASS

**Watertightness against chemicals:**

*Deviation of method B than EN norm is in the duration test specimens where it applied for 1 hr. assessment not 24 hr.*

Tested and Reported by

FM-QC-EN: 128

Quality Control Responsible

Ver 0

Laboratory Manager

Date : 1/1/2015



## CERTIFICATE OF QUALITY


**References..** Customer : To whom it may concern  
**Manufacturer :** Nile waterproofing Materials company "BituNil" S.A.E  
**Product Identification..** Standard Name : NILOSHIELD SBS 15 GF\_PS 4.5mm  
 Brand Name : NILOSHIELD SBS 15 GF\_PS  
 Description : NILOSHIELD SBS is Waterproofing Membrane particularly recommended in single or multi-layer systems mad of SBS Modified Bituminous Membrane double reinforced, using Sand Finish as upper surface and Polyethylene Film as lower surface  
 Roll Upper Ribbon : NILOSHIELD  
 Roll Middle Ribbon : 450  
 Roll Lower Ribbon : NILOSHIELD  
 Ref. Batches : As per production batch no.

This is to confirm and assure that the below mentioned values have been verified in the product according to statistical actual values conducted in BituNil laboratories using standard tolerance and sampling frequencies.

Properties	TEST	Measuring Unit	Test Method	Average Statistical Values	الإختبار	الخصائص	
Dimensional Properties	Thickness	mm	EN-1849	4.5	السمك	الأبعاد	
	Mass per Unit Area	Kg/m <sup>2</sup>	EN-1849	-	الوزن للمتر المربع		
	Width	m	EN-1848	1	العرض		
	Length	m	EN-1848	10	الطول		
	Ortometry	mm	EN-1848	± 10	درجة إستواء السطح		
Compound Properties	Softening Point (R&B)	°C	ASTM D-36	-	درجة التينة	خصائص المركب البيتوميني	
	Elongation at Break	%	UNI 8202/8	-	أقصى معدل بتمطلة للمركب		
Mechanical Properties	<b>Tensile Strength</b>					الخصائص الميكانيكية	
	Longitudinal	N/5cm	EN-12311	800	مقاومة الشد الطولي		
	Transverse	N/5cm	EN-12311	500	طوليًا		
	<b>Elongation @ Break</b>						عرضيًا
	Longitudinal	%	EN-12311	40	أقصى معدل الإمتطلة		
	Transverse	%	EN-12311	45	طوليًا		
	<b>Tearing Strength (Nail-Shank)</b>						عرضيًا
	Longitudinal	N	EN-12310	200	مقاومة التمزق		
	Transverse	N	EN-12310	250	طوليًا		
	<b>Static Puncturing</b>		Kg	EN-12370	25		عرضيًا
<b>Dynamic Puncturing</b>		mm	EN-12891	1250	مقاومة الإختراق الاستاتيكي		
Thermal Properties	Heat Flow	°C	EN-1110	100	مقاومة الإختراق الديناميكي	الخصائص الحرارية	
	Cold Temperature Flexibility	°C	EN-1109	-15	ثبات عند درجات الحرارة العالية		
	<b>Dimensional Stability</b>						المرونة عند درجات الحرارة المنخفضة
	Longitudinal	%	EN-1107	-0.3	ثبات الأبعاد		
Transverse	%	EN-1107	+0.3	طوليًا	عرضيًا		
Miscellaneous Properties	<b>Water Impermeability (Water tightness)</b>		50 Kpa	EN 1928 method A	Passed	عدم نفاذية الماء	
	<b>Water Impermeability at High Pressure</b>		kPa	EN 1928 Method B	500	درجة إمتصاص الماء	
	<b>External Fire Performance</b>		Class	ENV 1187/EN 13501-5	F roof	اداء النار الخارجية	
	<b>Vapour Permeability</b>		µ	EN-1931	40,000	نفاذية بخار الماء	
	<b>Form stability under cyclic Temp. Change</b>			EN 1108	-	شكل الإستقرار تحت تغير درجة الحرارة	
	<b>Reaction of Fire</b>		Class	EN 11925-2/EN 13501-1	E	تفاعل مع الحريق	
	<b>Resistance to root penetration</b>		Passed	EN 13948	NPD	مقاومة الإختراق الجذور	
	<b>Artificial ageing behaviour</b>					سارك الشيخوخة الاصطناعية	
	<b>Durability (Flexibility after artificial ageing)</b>		°C/ø mm *	EN 1296/EN1109	-5	المقاومة (المرونة بعد الشيخوخة الاصطناعية)	
	<b>Durability (Heat Flow after artificial ageing)</b>		°C	EN 1296/EN1110	90	المقاومة (تدفق الحرارة بعد الشيخوخة الاصطناعية)	
	<b>Durability (Visible defects after U.V ageing)</b>			UNI EN 1297/EN1850-1	Passed		
	<b>Fatigue Resistance on Cracks</b>		500 cycles	UNI 8202/13	-	مقاومة الكلال فوق الشقوق	
	<b>Shear Resistance Of Joint</b>		200 cycles			مقاومة الشد عند مناطق التركيب	
	Longitudinal		N/5cm	EN-12317 ,UNI 8202/30	800	طوليًا	
	Transverse		N/5cm	EN-12317 ,UNI 8202/30	500	عرضيًا	
	<b>Thermal Ageing in air (in oven 28 day at 70 ± 2oC)</b>			UNI 8202/26	-	الإختراء نتيجة للتعرض لدرجك الحرارة المنخفضة (28 يوما عند درجة حرارة 70 ± 2 °C)	
	<b>Ageing Due To Atmospheric Agents (U.V Test weathering)</b>			ASTM G 53 ,UNI 8202/29	-	الإختراء نتيجة للعوامل المناخية	
	<b>Fatigue Resistance at joints</b>		500 cycles	UNI 8202/32	-	مقاومة الكلال عند الفواصل	
	<b>Average Loss of Chips</b>		200 cycles			متوسط المفقود من حبيبات الميولال	
	<b>Adhesion to concrete (Torch applied)</b>		%	EN-12039	-	مقاومة الالتصاق بالإسطمخ الخرسانية (تسخين بالهيشوروي)	
<b>Adhesion to poured Structural Concrete, 22°C</b>		N/m	ASTM D-903(modified)	3400	مقاومة الالتصاق بالإسطمخ الخرسانية بعد الصب		
<b>Dangerous Substances</b>				Free	المواد الخطرة		

1. Tolerances for the above values are according to the UEAtc Directives.  
 2. Tolerances for Tensile - Tear Resistance & Tearing Strength is ± 30%  
 3. Conditioning of samples is mandatory at least 24hrs. Prior to test at 23±3°C and 50±5% humidity.

NILE WATERPROOFING  
MATERIALS CO (BITU NIL)  
S.A.E  
LABORATORIES

Prepared by,   
 Approval 