

## TÜRK STANDARDLARI ENSTİTÜSÜ

TÜRK STANDARDLARINA UYGUNLUK BELGESİ

## TURKISH STANDARDS INSTITUTION **CERTIFICATE OF CONFORMITY TO TURKISH STANDARDS**



BELGE NUMARASI REFERENCE NUMBER OF LICENCE

BELGENIN ILK VERILIŞ TARİHİ DATE OF FIRST ISSUE OF LICENCE

BELGENIN SON GECERLILIK TARIHI LICENCE VALID UNTIL

BELGE SAHİBİ KURULUŞUN ADI NAME OF THE LICENCE HOLDER

BELGE SAHIBI KURULUSUN ADRESI ADRESS OF THE LICENCE HOLDER

ÜRETİM YERİ ADI NAME OF THE MANUFACTURING PLACE

**ÜRETİM YERİ ADRESİ** ADRESS OF THE MANUFACTURING PLACE

**IPTAL EDILEN BELGE NUMARASI (Varsa)** INDICATION OF SUPERSEDED LICENCE (if any)

**TESCILLI TICARI MARKASI** REGISTERED TRADE MARK

**ILGILI TÜRK STANDARDI** RELATED TURKISH STANDARD

**BELGE KAPSAMI** SCOPE OF LICENCE

> Cerrahi önlükler, standard performans, tek kullanımlık Cerrahi örtüler, standard performans, tek kullanımlık

030701-TSE-01/04

08.09.2015

08.09.2023

BAYTEKS TEKNİK TEKSTİL SANAYİ VE TİCARET ANONİM SIRKETI

BAŞPINAR(ORGANİZE)OSB MAH. O.S.B. 4.BÖLGE 83404 NOLU CAD. NO:15 /0 SEHITKAMIL GAZIANTEP/TÜRKIYE

BAYTEKS TEKNİK TEKSTİL SANAYİ VE TİCARET ANONİM SİRKETİ

ORGANİZE SAN. BÖL. 19 NOLU CAD.NO:9 KİLİS / TÜRKİYE

030701-TSE-01/03

BAYMED

TS EN 13795-1 / 30.09.2019

#### e-imzalı/e-signed

06.09.2022

Belgelendirme Merkezi Başkanı Adına HÜSAMETTIN ERBILGIN

#### GAZIANTEP BELGELENDIRME MÜDÜR V.

\*Bu belge, belgelendirilen ürünün, üretim yerinin Enstitümüzün belirlediği şartları karşıladığını da gösterir. \*Bu belge, hiç bir suretle tahrif edilemez, kısmen veya okunmasını zorlaştıracak şekilde çoğaltılamaz, kazıntı ve silinti yapılamaz. \*TSE GAZIANTEP BELGELENDIRME MÜDÜRLÜĞÜ \*Adres: 2.Organize Sanayi Bölgesi Hacı Sani Konukoğlu Bulvarı No:9 Başpınar 27120 Şehitkamil GAZIANTEP \* Telefon: 0.342.337 95.03 (Pbx)\* Faks: 0.342.337.95.08

TSE BELGELENDIRME MERKEZ BAŞKANLIĞI: Adres: Necatibey Cad. No:112 06100 Bakanlıklar/ANKARA – Telefon: 0 312 416 64 81 / 416 64 27. Faks: 0 312 416 66 17 E-posta :bmb@tse.org.tr , web : www.tse.org.tr



https://evrakkontrol.tse.org.tr/BelgeDogrulama.aspx?p=led9vuzh adresinden belgenin doğruluğunu ve geçerliliğini sorgulayınız.

1/1

LSTO NO	OTEKS LABORATUVAR ve GÖZETİM HİZMETLERİ A.Ş. senyurt Firuzköy Bulvarı No:29 34325 Avcılar İstanbul/ TÜRKİYE TEST REPORT DENEY RAPORU	VEST TEXT TO 20035727         -ing       10-20	
Customer name:	BAYTEKS TEKNİK TEKSTİL SAN. VE	TİC. A.Ş	
Address:	-		
Buyer name:	ORGANİZE SAN. MAH. 19 NOLU CAD	. NO:11 MERKEZ /KİLİS	
Contact Person:	KADİR KARAGÜN		
Order No:	REF:SG-01222-05 LOT:50815		
Article No: Name and identity of test item:	PROTECTED SURGICAL APRON Coated medical blue surgical gown.		
The date of receipt of test item: Re-submitted/re-confirmation date:	29.09.2020		
Date of test: Remarks:	29.09.2020-12.10.2020		
Sampling:	The results given in this report belong to the received sample by vendor.		
End-Use:	-		
Care Label:	Care Label: Not specified.		
Number of pages of the report:	Number of pages of the report: 7		
	ncy (TURKAK) is signatory to the multilate ion (EA) and of the International Laborate ts.		
EKOTEKS LABORATUVAR ve number [AB-0583-T] for ISO 170	GÖZETİM HİZMETLERİ A.Ş. accredite 25:2017 as test laboratory.	d by TÜRKAK under registration	
The test and/or measurement results, the uncertainties (if applicable) with confidence probability and test methods are given on the following pages which are part of this report.			
Seal Date 12.10.202	0 Customer Representative Hatice ACARALP	<i>Head of Testing Laboratory</i> Sevim A. RAZAK 12.10.2020	

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20035727 -ing	
10-20	

REQUIRED TESTS	RESULT	COMMENTS
PHYSICAL PROPERTIES		
Tensile Strength / Dry	Р	
Tensile Strength / Wet	Р	
Bursting Strength / Dry	Р	
Bursting Strength / Wet	Р	
Water Permeability	Р	
MICROBIOLOGICAL TESTS		
Microbial Cleanliness (Bioburden)	Р	
Wet-Bacterial Penetration	Р	
Dry-Bacterial Penetration	Р	
P: Pass		
F: Fail		

R: Refer to retailer technologist.

<sup>(1)</sup>Test results were evaluated according to EN 13795-1:2019 Standard Performance Properties Critical Sample Group limit values (Table 1)

REMARK: Original samples are kept for 3 months and all technical records are kept for 5 years unless otherwise specified. If requested, measurement uncertainty will be reported. But unless otherwise specified, measurement uncertainty is not considered while stating compliance with specification or limit values The reported uncertainty is based on a standard uncertainty multiplied by a coverage factor k=2, providing a level of confidence of approximately 95 %. Tests marked (\*) in this report are not included in the accreditation schedule.



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#### **TEST RESULTS**

#### **TENSILE STRENGTH; EN 29073-3:1996**

Instron 5969 (Load: 50 kN), Strip Method. Speed: 100 mm/min±10, Gauge length 200 mm. Pre-load was not applied. Without wetting samples. The average results are given for weft and warp direction of five samples Performed in the conditioned room (20±2°C-65%±4). **Dry ; RESULT** 

	<b>KESULI</b>
Weft	72.5 N
Warp	162.8 N

#### **TENSILE STRENGTH; EN 29073-3:1996**

Instron 5969 (Load: 50 kN), Strip Method. Speed: 100 mm/min±10, Gauge length 200 mm. Pre-load was not applied. With wetting samples. The average results are given for weft and warp direction of five samples Performed in the conditioned room (20±2°C-65%±4). **Wet ;** 

	<u>RESULT</u>
Weft	75.1 N
Warp	160.1 N

#### BURSTING STRENGTH;; ISO 13938-1:1999

SDL ATLAS M229 tester. Test area: 30.5 mm diameter Rate of increase in volume; 29 cm<sup>3</sup>/min. The average results are given of five samples. Performed in the conditioned room  $(20\pm2^{\circ}C-65\%\pm4)$ .

	<u>RESULT</u>
Dry ;	201.4 kPa

Height at Burst\*

14.9 mm

#### **REQUIREMENT**

 $\frac{\textbf{REQUIREMENT}}{\geq 20N \text{ (Dry)}}$  $\geq 20N \text{ (Dry)}$ 

 $\geq 20N \text{ (Wet)}$  $\geq 20N \text{ (Wet)}$ 

#### **REQUIREMENT**

 $\geq$  40 kPa (Dry)

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#### TEST RESULTS

#### **TEST METHOD: EN 13795-1: 2019**

#### SURGICAL CLOTHING AND DRAPES – REQUIREMENTS AND TEST METHODS

#### ANNEX 1: SURGICAL CLOTHING AND DRAPES;

#### BURSTING STRENGTH; ISO 13938-1:1999

SDL ATLAS M229 tester. Test area: 30.5 mm diameter Rate of increase in volume;  $45.2 \text{ cm}^3/\text{min}$ . The average results are given of five samples. Performed in the conditioned room ( $20\pm2^\circ\text{C-}65\%\pm4$ ).

Wet;	<u>RESULT</u> 190.2 kPa
Height at Burst*	13.8 mm

## WATER PERMEABILITY; ISO 811:2018

Hydrostatic Head Tester, Textest marka Fx 3000 model Temperature of water 20°C. Pressure increase ratio 10 mbar/min. Performed in the conditioned room  $(20\pm2^{\circ}C-65\%\pm4)$ 

	<u>RESULT</u>	
Sample 1	147.0 cmSS	
Sample 2	150.0 cmSS	
Sample 3	157.2 cmSS	
Sample 4	163.3 cmSS	
Sample 5	160.1 cmSS	

Average

REQUIREMENT

 $\frac{\textbf{REQUIREMENT}}{\geq 40 \text{ kPa (Wet)}}$ 

 $\geq 100 \text{cmSS}$ 

158.6 cmSS

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#### **TEST RESULTS**

#### **TEST METHOD : EN 13795-1:2019**

#### SURGICAL CLOTHING AND DRAPES - REQUIREMENTS AND TEST METHODS

#### ANNEX 1: SURGICAL CLOTHING AND DRAPES (\*);

#### MICROBIAL CLEANLINESS (Bioburden)

Test Metod: Ref: EN ISO 11737-1:2018 (\*)

The sample is put in extraciton liquid after shaking well, inoculated on the agar. After incubation at  $30 \pm 1$  ° C for 72 hours, growth microorganisms are counted on the agar.

	RESULTS	REQUIREMENT
Microbial cleanliness (cfu/g)	32 cfu/g	≤300 cfu/g Type I and Type II mask

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10-20

#### **TEST RESULT**

**Test Method: BS EN 22610: 2006** (Surgical drapes, garments and fresh air clothes used as medical devices for patients, hospital staff and equipment - Test method for determination of resistance to wet bacterial permeability) (\*)

A test sample is placed on the agar plate on a rotating disc. Bacteria carrier material and coating film are placed on the test sample and all parts are fixed on the disk. A finger is placed on the test sample to apply a certain force  $(3N \pm 0.02)$ . The finger moves on the test sample over the entire surface of the agar within 15 minutes. 5 studies are carried out for 15 minutes. 6. The study is repeated by inverting the sample.

Sample amount:	5 pieces 25x25cm2	
Carrier Material:	30 µm thin, 25x25cm2 Polyurethane Film	
Coating Material:	25x25cm2 HDPE Film	
Microorganism:	Staphylococcus aureus ATCC 29213	
Bacterial Concentration (kob / ml):	2x104 kob / ml	
Incubation Conditions:	$(36 \pm 1)$ ° C 48 hours	

	RESU	JLTS	
Number of Populating Ba	cteria (cfu)	Per	netration Rate
<b>X</b> <sub>1</sub>	0	R <sub>CUM1</sub>	0
X <sub>2</sub>	0	R <sub>CUM2</sub>	0
X <sub>3</sub>	0	R <sub>CUM3</sub>	0
X4	0	R <sub>CUM4</sub>	0
X <sub>5</sub>	0	R <sub>CUM5</sub>	0
Z	459		
Т		459	
$R_{CUM2} = (X2 + X1)/T$ $R_{CUM3} = (X3 + X2 + X1)/T$ $R_{CUM4} = (X4 + X3 + X2 + X1)/T$ $R_{CUM5} = (X5 + X4 + X3 + X2 + X1)/T$	r		
	BARRIER	NDEX (IB)	
	Re	sult	Expected value (*)
lв		6	≥2,8
$I_B = 6 - (CUM1 + CUM2 + CUM3 + * EN 13795-1:2019 Surgical gowns Table-1.$		ements and test meth	ods are evaluated according to

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## Test Method: ISO 22612: 2005 (Clothing for protection against infectious agents - Test method for resistance to dry microbial penetration)

Samples and containers are sterilized. Agar plates are placed in each container. Samples are placed aseptically in the apparatus. The covers are closed. After making a pot in the sample with the piston, the pistons are removed and  $0.5 \text{ g} \pm 0.1 \text{ g}$  are added to five samples from the powder contaminated with bacteria and the six to the non-contaminated powder. Then all openings are closed with a plastic bag. The device is operated to give 20,800 vibrations per minute. The test time is 30 minutes. After the test is over, all agar plates are incubated at 35 ° C for 24 hours.

Sample amount:	6 pieces 2	0x20 cm <sup>2</sup>	
Mikroorganism:	Bacillus subtilis ATCC 9372		
Bacterial concentration (cfu/ml):	1x10 <sup>8</sup>		
Incubation conditions:	35°C / 24 hours		
	RESULTS		
Number	r of Populat	iong Bacteria (cfu)	
1		1	
2		2	
3		1	
4		3	
5		2	
6 (Control)		0	
Total		9	
Logarithm		0.9	5
* EN 13795-1:2019 Surgical gowns and drapes - Requirements and test methods are evaluated according to			evaluated according to
Table-1.			
	RES	ULT	
Result (	cfu/g)		Expected Value
9 kot	o/gr		≤300kob/gr



Kiwa Belgelendirme Hizmetleri A.Ş. İTOSB 9. Cadde No: 15 Tepeören Tuzla İstanbul / Türkiye

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Sertifikalar periyodik ara denetimlerin başarılı ile tamamlanması kaydıyla geçerlidir. Detaylı bilgi için yukarıdaki numaralara başvurulabilir.



## BAYTEKS TEKNİK TEKSTİL SANAYİ VE TİCARET A.Ş.

ORGANİZE SANAYİ BÖLGESİ 19 NOLU CAD. NO: 11 MERKEZ - KİLİS - TÜRKİYE

#### TEK KULLANIMLIK STERİL VE NON-STERİL CERRAHİ ÖNLÜKLERİ, ÖRTÜLERİ VE SET ÜRETİMİ, DEPOLAMASI, DAĞITIMI VE SATIŞI

kapsamında

## EN ISO 13485:2016

Uluslararası Tıbbi Cihazlar Kalite Yönetim Sistemi Standardına uygun bir yönetim sistemi kurmuştur.

"Standardın aşağıda verilen maddeleri hariç tutulmuştur" "7.5.3" "7.5.4" "7.5.9.2"

Sertifika No	: M 10892
İlk Belgelendirme Tarihi	: 12 Ocak 2018
Sertifika Tarihi	: 01 Şubat 2021
Son Geçerlilik Tarihi	: 31 Ocak 2024

Genel Müdür



Sertifika Son Güncelleme Tarihi : 01 Şubat 2021 - R 02



## BAYTEKS TEKNİK TEKSTİL SANAYİ VE TİCARET A.Ş.

ORGANİZE SANAYİ BÖLGESİ 19 NOLU CAD. NO: 11 MERKEZ - KİLİS - TURKEY

#### PRODUCTION, STORAGE, DISTRIBUTION AND SALES OF DISPOSABLE STERILE AND NON STERILE SURGICAL GOWNS, DRAPES AND SETS

with a scope of

## EN ISO 13485:2016

Has established a management system in accordance with international Medical Devices Quality Management System Standard *"Following elements of the standard are excluded" "7.5.3" "7.5.4" "7.5.9.2"* 

Certificate No	: M 10892
Initial Certification Date	: 12 January 2018
Certification Date	: 01 February 2021
Expiration Date	: 31 January 2024

**General Manager** 



Last Modified: 01 February 2021 - R 02

Kiwa Belgelendirme Hizmetleri A.Ş. ITOSB 9. Cadde No. 15 Tepeören Tuzla Istanbul / Turkey

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Certificate is valid till expiration date, subject to successful completion of periodical surveillance audits. Please contact above numbers for detailed information.



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21001832	
01-21	

REQUIRED TESTS	RESULT	COMMENTS
PHYSICAL PROPERTIES TESTS		
Lint and Other Particles Generation From	P	
Nonwoven		
P: Pass		

F: Fail

R: Refer to retailer technologist.

Test results were evaluated according to EN 13795-1:2019 Standard Performance Properties Critical Sample Group limit values (Table 1)

**REMARK:** Original samples are kept for 3 months and all technical records are kept for 5 years unless otherwise specified. If requested, measurement uncertainty will be reported. But unless otherwise specified, measurement uncertainty is not considered while stating compliance with specification or limit values The reported uncertainty is based on a standard uncertainty multiplied by a coverage factor k=2, providing a level of confidence of approximately 95 %. The declaration of conformity was given in accordance with the Simple Acceptance Decision Rule. Tests marked (\*) in this report are not included in the accreditation schedule.



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Sayfa 2/3

21001832 01-21

#### **TEST RESULTS**

#### LINT AND OTHER PARTICLES GENERATION FROM NONWOWEN; Test Metod: ISO 9073-10: 2003 (\*)

5 test samples that in cross direction are maintained to twisting and compression action with Gelbo Flex for inner and outer surface in a clean room condition (according to ISO 14644-1 Class 5).

Lint and particles detached from the sample are counted with counter device and classified to size range.

Min. measuring size of SOLAIR 3100 particles measuring device: 0.3 µm,

Max. measuring size of SOLAIR 3100 particles measuring device: 25 µm,

Air flow:  $28,3 \pm 1,4$  L/min

Working mode: 30 s x 10 consecutive periods

SAMPLE, INNER SURFACETotal linting: 23Standard deviation: 4Coefficient of variation: 18%Coefficient of linting (CL):1		SAMPLE, OUTER SURFACE (3 μm - 25 μm)Total linting: 16Standard deviation: 7Coefficient of variation: 46%Coefficient of linting (CL): 1
	SAMPLE,	MATERIAL (TOTAL)
Total linting	:39	
Coefficient of linting (CL)*	:2	

\*According to EN ISO EN ISO 13795-1:2019, Coefficient of linting (*CL*) (log 10) should be  $\leq$ 4 for analysis of critical product area and less critical product area of both standard performance and high performance testing.



#### EC Certificate Production Quality Assurance System according to Medical Devices Directive 93/42/EEC Annex-V Certificate Number: 1984-MDD-18-479

We hereby declare that an examination has been carried out following the requirements of the national legislation to which the undersigned is subject, transposing Annex-V of the Directive 93/42/EEC on medical devices. We certify that the production quality system conforms with the relevant provisions of the aforementioned legislation.

Organization:

#### BAYTEKS TEKNİK TEKSTİL SANAYİ VE TİCARET ANONİM ŞİRKETİ

Organize Sanayi Bölgesi 19 nolu Cad. No:9 Merkez / Kilis - Turkey

**Products:** Sterile Disposable Surgical Gown, Sterile Disposable Surgical Drapes, Sterile Disposable Surgical Packs

The certificate is valid till expiration date, subject to successful completion of periodical surveillance audits. Please contact Kiwa for details.

Report Number:M.5035.03Date of first issue:12 January 2018Date of last issue:16 September 2020Revision Number:03Expiry Date:27 May 2024

Kiwa Belgelendirme Hizmetleri A.Ş. has audited the quality system restricted to the aspects of manufacture concerned with securing and maintaining sterile conditions in accordance with MDD Annex V and found that the quality system meets the applicable requirements in MDD Annex V.

Kiwa Belgelendirme Hizmetleri A.Ş. is Notified Body under Council Directive 93/42/EEC concerning medical devices with identification number: 1984

Muhteşem Gökhan Yücel Head of Notified Body

16 September 2020, Istanbul, Turkey

Kiwa Belgelendirme Hizmetleri A.Ş. ITOSB 9. Cad. No:15 Tepeören, Tuzla, Istanbul, Turkey Tel.: +90 216 593 25 75 , Fax: +90 216 593 25 74 Web: www.kiwa.com.tr , e-mail: posta@kiwa.com

## Certificate

Standard Certificate Registr. No.	<b>ISO 14001:2015</b> 01 104 2115858
Certificate Holder:	BAYTEKS TEKNİK TEKSTİL SANAYİ VE TİCARET AŞ. ORGANİZE SANAYİ BÖLGESİ 19 NO'LU CAD. NO:9 79000 MERKEZ / KİLİS Turkey
Scope:	Non-woven fabric production, storage, marketing and sales Proof has been furnished by means of an audit that the requirements of ISO 14001:2015 are met.
Validity:	The certificate is valid from 2021-08-23 until 2024-08-22. First certification 2021
	2021-08-23 TÜV Rheinland Cert GmbH Am Grauen Stein · 51105 Köln
UNER OF MULTILAT	







EKOTEKS LABORATUVAR ve GÖZETİM HİZMETLERİ A.Ş Esenyurt Firuzköy Bulvan No:29 34325 Avcılar İstanbul/ TÜRKİYE

> TEST REPORT DENEY RAPORU

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TSI	EN ISO	
	AB-	0583-

21012425-

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		04-21
Customer name:	BAYTEKS TEKNİK TEKSTİL SAN. VE TİC. AŞ.	
Address:	ORGANİZE SANAYİ BÖLG.19 NO'LU CAD.NO:11 M	/IERKEZ/KİLİS
Buyer name:	-	
Contact Person: Order No:	KADİR KARAGÜN REF:SD-04210-18/LOT:0000016139	
Article No: Name and identity of test item:	REINFORCED SURGICAL CLOTH(HIGH PERFORM One sample blue surgical gown.(Claimed to be;4 Pieces Color	1ANCE) ;Medikal Blue)
The date of receipt of test item:	12.04.2021	
Re-submitted/re-confirmation	-	
date: Date of test:	12.04.2021-26.04.2021	
Remarks: Sampling: End-Use: Care Label:	- The results given in this report belong to the received s -	ample by vendor.

Number of pages of the report: 9

The Turkish Accreditation Agency (TURKAK) is signatory to the multilateral agreements of the European co-operation for the Accreditation (EA) and of the International Laboratory Accreditation (ILAC) for the Mutual recognition of test reports.

Mutual recognition of test reports. EKOTEKS LABORATUVAR ve GÖZETİM HİZMETLERİ A.Ş. accredited by TÜRKAK under registration number [AB-0583-T] for ISO 17025:2017 as test laboratory.

number [AB-0585-1] for ISO 1/025:2017 as less laboratory. The test and/or measurement results, the uncertainties (if applicable) with confidence probability and test methods are given on the following pages which are part of this report.



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REQUIRED TESTS	RESULT	COMMENTS
MICROBIOLOGICAL TEST		
Microbial Cleanliness (Bioburden)	Р	
Resistance to Bacterial Penetration-Wet Method	P	
Resistance to Microbial Penetration-Dry Method	Р	
PHYSICAL PROPERTIES TESTS		
Tensile Stregth / Dry	Р	
Tensile Stregth / Wet	Р	
Bursting Strength / Dry	Р	
Bursting Strength / Wet	Р	
Water Permeability	Р	
Blood Splash Resistance	Р	
Lint And Other Particles Generation From	Р	
Nonwoven		
P: Pass		
F: Fail		
R: Refer to retailer technologist.		
Test results were evaluated according to EN 13795-1	:2019(*) High Perform	nance Properties Critical Sample Group
limit values (Table 1)		

**REMARK:** Original samples are kept for 3 months and all technical records are kept for 5 years unless otherwise specified. If requested, measurement uncertainty will be reported. But unless otherwise specified, measurement uncertainty is not considered while stating compliance with specification or limit values The reported uncertainty is based on a standard uncertainty multiplied by a coverage factor k=2, providing a level of confidence of approximately 95%. The declaration of conformity was given in accordance with the Simple Acceptance Decision Rule. Tests marked (\*) in this report are not included in the accreditation schedule



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#### **TEST RESULTS**

#### MICROBIAL CLEANLINESS (Bioburden) ; EN ISO 11737-1:2018

The sample is put in extraciton liquid after shaking well after shaking well (250 rpm,5 min), inoculated on the suitable agar. The plates are incubated for 3 days at  $30 \pm 1$  ° C for 72 hours, and 7 days at (20 to 25) °C for TSA and SDA plates respectively. Total microoragnisms counts are calculated.

RESULTS

REQUIREMENT ≤300 cfu/100 cm<sup>2</sup>

Microbial cleanliness (cfu/100 cm<sup>2</sup>)

\*cfu= Colony forming unit.

7 cfu/100 cm<sup>2</sup>

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04-21

#### **TEST RESULTS**

#### RESISTANCE TO BACTERIAL PENETRATION-WET METHOD ; BS EN ISO 22610: 2006

A test sample is placed on the agar plate on a rotating disc. Bacteria carrier material and coating film are placed on the test sample and all parts are fixed on the disk. A finger is placed on the test sample to apply a certain force  $(3N \pm 0.02)$ . The finger moves on the test sample over the entire surface of the agar within 15 minutes. 5 studies are carried out for 15 minutes. 6. The study is repeated by inverting the sample.

Sample amount: Carrier Material: Coating Material: Microorganism: Bacterial Concentration (kob / ml): Incubation Conditions: 5 pieces 25x25cm230 µm thin, 25x25cm2 Polyurethane Film 25x25cm2 HDPE Film Staphylococcus aureus ATCC 29213  $5x10^3$  kob/ml  $(36 \pm 1) \circ C$  48 hours

	RESU	LTS	
Number of Populating	Bacteria (cfu)	Penetratio	on Rate
X1	0	RCUM1	0
X <sub>2</sub>	0	RCUM2	0
X <sub>3</sub>	0	RCUM3	0
X4	0	RCUM4	0
X5	0	RCUM5	0
Z	462		
Т		162	

 $X_1$  .....  $X_5$ : Number of colonies growing in 5 parallel petri in the same sample Z: number of colonies growing in the sixth petri dish T:  $X_1 + X_2 + X_3 + X_4 + X_5 + Z$ 

 $\begin{aligned} R_{\text{CUM1}} &= X_1/T \\ R_{\text{CUM2}} &= (X_2 + X_1)/T \\ R_{\text{CUM3}} &= (X_3 + X_2 + X_1)/T \\ R_{\text{CUM4}} &= (X_4 + X_3 + X_2 + X_1)/T \\ R_{\text{CUM5}} &= (X5 + X_4 + X_3 + X_2 + X_1)/T \end{aligned}$ 

	Result	Expected value (*)
IB	6	≥6

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#### TEST RESULTS

#### **RESISTANCE TO MICROBIAL PENETRATION-DRY METHOD;** ISO 22612:2005

Samples and containers are sterilized. Agar plates are placed in each container. Samples are placed aseptically in the apparatus. The covers are closed. After making a pot in the sample with the piston, the pistons are removed and  $0.5 \text{ g} \pm 0.1 \text{ g}$  are added to five samples from the powder contaminated with bacteria and the six to the non-contaminated powder. Then all openings are closed with a plastic bag. The device is operated to give 20,800 vibrations per minute. The test time is 30 minutes. After the test is over, all agar plates are incubated at 35 ° C for 24 hours.

Sample amount: Mikroorganism: Bacterial concentration (cfu/ml): Incubation conditions: 6 pieces 20x20 cm<sup>2</sup> Bacillus subtilis ATCC 9372 1x10<sup>8</sup> kob/ml 35°C / 24 hours **RESULTS** 

Number of Populati	iong Bacteria (cfu)
1	0
2	0
3	0
4	0
5	0
6 (Control)	0
Total	0
Logarithm	

RESULT Result (cfu/g)

0 cfu/g

Expected Value ≤300 cfu/g

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#### **TEST RESULTS**

#### TENSILE STRENGTH; EN 29073-3:1996

Instron 5969 (Load: 5 kN), Strip Method. Speed: 100 mm/min $\pm$ 10, Gauge length 200 mm. Pre-load was not applied. Without wetting samples. The average results are given for width and length direction of three samples Performed in the conditioned room ( $20\pm2^{\circ}C-65\%\pm4$ ). Dry ;

	RESULT	REQUIREMENT
Width	151.1 N	$\geq$ 20N (Dry)
Length	149.9 N	$\geq 20N (Dry)$

#### TENSILE STRENGTH; EN 29073-3:1996

Instron 5969 (Load: 5 kN), Strip Method. Speed: 100 mm/min±10, Gauge length 200 mm. Pre-load was not applied. Without wetting samples. The average results are given for width and length direction of three samples Performed in the conditioned room  $(20\pm2^{\circ}C-65\%\pm4)$ . Wet;

	RESULT	REQUIREMENT
Width	149.3 N	$\geq$ 20N (Wet)
Length	154.6 N	≥ 20N (Wet)

#### BURSTING STRENGTH;; ISO 13938-1:1999

SDL ATLAS M229 tester. Test area: 30.5 mm diameter The average results are given of 3 samples. Performed in the conditioned room  $(20\pm2^{\circ}C-65\%\pm4)$ .

RESULT	REQUIREMENT
310.6 kPa	$\geq$ 40 kPa (Dry)

Height at Burst\*

Dry;

10.4 mm

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## TEST RESULTS

## BURSTING STRENGTH;; ISO 13938-1:1999

SDL ATLAS M229 tester. Test area: 30.5 mm diameter The average results are given of 3 samples. Performed in the conditioned room  $(20\pm2^{\circ}C-65\%\pm4)$ .

Wet :	RESULT	REQUIREMENT
wet,	332.0 kPa	$\geq$ 40 kPa (Wet)
Height at Burst*	12.4 mm	

### WATER PERMEABILITY; ISO 811:2018

Hydrostatic Head Tester, Textest marka Fx 3000 model Temperature of water 20°C. Pressure increase ratio 10 mbar/min. Performed in the conditioned room (20±2°C-65%±4)

Sample 1	<u><b>RESULT</b></u> 555.9 cm H <sub>2</sub> O	REQUIREMENT
Sample 2	587.5 cm H <sub>2</sub> O	$\geq 100 \text{ cm H}_2\text{O}$
Sample 3	562.0 cm H <sub>2</sub> O	
Sample 4	560.0 cm H <sub>2</sub> O	
Sample 5	578.3 cm H <sub>2</sub> O	
Average		
Average	568.7 cm H <sub>2</sub> O	

## TEST RESULTS

DETERMINA FLUIDS-USIN	TION OF TH	IE RESISTANCE T FIC BLOOD; ISO 1	<b>TO PENETRATIO</b> 6603:2004	N BY BLOOD A	ND BODY	
Textest, FX 3000-	IV model + Extern	nal Blood Cell ± 10% relative humidity		st 24 hours before test	ing	
Test Procedure Applied:		A procedure B procedure (Only extensible or elastomeric materials)				
11	Time	Test Result				
	(Min.)	Test 1	Test 2	Test 3		
0	5	PASS	PASS	PASS	_	
14	1	PASS	PASS	PASS		
0	4	PASS	PASS	PASS		
The time of failure (sn) Thickness of material tested (mm): Weight of material tested (g/m <sup>2</sup> ) :		-	-	_	PASS	
		0.61	0.61	0.61	-	
		0.88	0.88	0.88		

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#### **TEST RESULTS**

SOLAIR 3100 particles measuring Min. measuring size: 0,3 $\mu$ m, Maks. measuring size: 25 $\mu$ m Air Flow: : 28,3 ± 1,4 L/dk Working mode: 30 sec x 10 conse				
SAMPLE (INNER SURFACE)		SAMPLE (OUTER SURFACE)		
Total linting :	86	Total linting :	26	
Standard deviation :	50	Standard deviation :	20	
Coefficient of variation :	%58	Coefficient of variation :	%78	
Coefficient of linting (CL):	2	Coefficient of linting (CL):	1	
	SAM	PLE (TOTAL)		
Total linting :	112			
Coefficient of linting (CL)*	2			

**LINT AND OTHER PARTICLES GENE**RATION FROM NONWOVEN; ISO 9073-10: 2003 5 samples in longitudinal direction (separate for inner and outer surface) are tested. The samples are placed in the Gelbo Flex device, which makes twisting and compression movements, in a clean room in Class 5 category according to ISO 14644-1.

Lint and particles detached from the sample are counted with counter device and classified to size range.

\* According to EN ISO EN ISO 13795-1:2019, Coefficient of linting (CL) (log 10) should be  $\leq$ 4 for analysis of critical product area and less critical product area of both standard performance and high performance testing.