



MEDICAL

- Health Care
- Doctor
- Hospital
- Pharmacist
- Nurse
- Surgeon
- First Aid
- Emergency



MEDICAL

# Kusumgar Corporates Pvt Ltd

Personal Protective Equipment (PPE) Fabrics



# Why us ?



## Quality Control

Integrated manufacturing unit , with in house testing and quality control



## Woven Fabric

Nylon / Polyester base woven fabric with high strength



effective protection



## Specialized Coating

Resistant to synthetic blood Penetration , Waterproof and water repellent yet breathable for added comfort



## Accreditation

ISO 16603 Level 5, ASTM 1670F, AAMI Level I,II and III




# Advantages of Kusumgar Fabric over Conventional Fabrics

Parameters	Test Method	Conventional Fabric	Kusumgar Fabric
<b>Mechanical Properties</b>		<b>Weak and Tearable</b>	<b>Strong and Durable</b>
• Tear Strength	IS 7016 - III (M-A1)	5 N	20 N
• Tensile Strength	IS 7016 - II	30 N	250 N
<b>Performance Properties</b>			
• Synthetic Blood Resistance	ISO 16603	Level 3	Level 5/6
• Water and Liquid Resistance	IS 390	No	80 min.
• Breathable		No	Yes
• Washable		No	Yes*

\* It can withstand Synthetic Blood Penetration Resistance up to 15 washes with 1% NaOCL disinfectant solution, under testing and establishment



# DRDO Accreditation

	<b>Test Report No INMAS/SBPRT/05052020/26 Dt 05.05.2020</b> <b>Institute of Nuclear Medicine &amp; Allied Sciences, Delhi-54</b> <b>Phone: 011-23905105; Fax : 011-23919509</b> <b>E-mail ID: director@inmas.drdo.in</b> <b>Synthetic Blood Penetration Resistance Test</b> <b>For Bio-Protective Fabric/Garment</b>
	Sample Details: Coverall Sampling Details: NA Mode/Sample Receiving Date: INMAS Reception Reference and Date: Nil & 04.05.2020 Acceptante Cretrion: ISO 16603 class 3, or equivalent as communicated by HLL to DRDO vide their email dated 17.04.2020 Manufacturer / Developer: Kusumgar Corporates Pvt Ltd, 101 Manjushree, VM Road, JPVD, Vile Parle (W) Mumbai-400056, Email: info@kusumgar.com, nitesh@kusumgar.com; Ph: 61125100 Period of Testing: 05/05/2020 Test & Evaluation by: Dr. AmitAlok, Mr. S. K. Singh, Mr. Vipin VS Results Reviewed & Report Prepared by: Dr. AmitAlok, Mr. S. K. Singh, Mr. Vipin VS Final Test Report Reviewed & Approved by: Director, INMAS

- Aim:** To determine the resistance of protective clothing materials to penetration by blood and body fluids using synthetic blood
- Chemicals and Materials:** Synthetic blood
- Equipment/Instrument:** Synthetic blood penetration resistance tester, (model: TN 140, Make: Testex, Hong Kong)
- SBPRT Test reference:** Samples were tested as per ISO 16603:2004; Procedure D involving the use of retaining screen.

#### 5. Test parameters:

##### a) Synthetic blood (supplied by DRDE Gwalior)

S. No.	Parameters	Specified value	Observed value
1	Surface tension	0.042 ± 0.002 N/m	0.043 N/m
2	Temperature	28 °C	28 °C
3	pH	7.3 ± 0.1	7.3

##### b) Test conditions

S. No.	Parameters	Values
1	Conditioning	Not done
2	Temperature	28 ± 1 °C
3	Sample dimension	75 mm x 75 mm
4	Test duration	300 sec at each pressure level (0, 1.75, 3.5, 7, 14, 20 KPa)
5	Sealing of test specimen	Done with taping the edges of specimen and using the gaskets
6	Sterilization of fabric	Not done
7	Total number of specimen swatches	As mentioned in test results



#### 6. Test Results: Kusumgar Corporates Pvt Ltd;

Report No: INMAS/SBPRT/05052020/26

S. No	Sample Details	Unique/ Sample Code	Thick-ness (mm)	Fabric Mass GSM	Observation, Fabric Swatch Class qualified/ Total class (Location of specimen)	Observation, Fabric Seam Swatch Class qualified/ Total class (Location of specimen)	*Result for Garment/ fabric Class qualified/ Total class	Acceptance/ Non Acceptance*
1.	White coverall (Polyster with PU coating) with Transparent tape, woven (H)	COVID19/ INMAS/05052 0-27/KUS-01	0.1	77	6/6 (Left Chest)	6/6 (Right Leg, Single Joint) 6/6 (Neck, cross joint)	6/6	Pass
2.	White coverall (Polyster with PU coating) with Transparent tape, woven (G)	COVID19/ INMAS/05052 0-28/KUS-02	0.1	74	6/6 (Left Arm)	6/6 (Right Arm, Single Joint) 6/6 (Neck, cross joint)	6/6	Pass

\*Notes: Acceptance criteria communicated to DRDO by HLL wide email dated 17/4/2020

- The final result of SBPRT for the garment will be lowest class of the test results obtained for fabric & joint (seam), if any.
- The test does not apply to all forms or conditions of blood-borne pathogen exposure. Users of the product must review modes for work/clothing exposure and assess the appropriateness of the product for their specific application.
- The results address only the performance of materials or certain material constructions (for example, seams) used in protective clothing. These results do not address the design, overall construction and components, or interfaces of garments, or other factors which may affect the overall protection offered by the protective clothing.
- These results do not purport to address all of the safety concerns, if any, associated with use of final product. It is the responsibility of the user to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.

#### Classes

	Exposure Pressure (kPa)
6	20
5	14
4	7.0
3	3.5
2	1.75
1	0

- Exposure time is 5 min at each pressure level; Leakage is visually confirmed



# SITRA Accreditation



## THE SOUTH INDIA TEXTILE RESEARCH ASSOCIATION

CENTRE OF EXCELLENCE FOR MEDICAL TEXTILES  
Physical, Chemical & Biological Testing Laboratories  
(ISO/IEC 17025 NABL ACCREDITED)  
13/37, Avinashi Road, Aerodrome Post, Coimbatore - 641 014, INDIA



### CoE - PHYSICAL LABORATORY

XXVII / P / E / 2541 / 20

ULR: TC69442060000569F

To  
Kusumgar Corporates Pvt Ltd  
Plot No 1809, UU Road  
3rd Phase GIDC Vapi  
Vapi, Gujarat, India  
Pincode : 396195  
Contact No(s) : 8910074874  
Email : bapara.ackak@kusumgar.com

Inward / Report No : P2000314  
UCC Code : S-NW-CF200412P0314-A4  
Inward Date : 12-04-2020  
Report Date : 13-04-2020

Dear Sir / Madam,

This has reference to the sample(s) submitted by you for testing vide your letter reference no : 11.4.2020.

The results pertaining to your sample(s) are enclosed herewith.

payment not recd.  
Q2000124 12.4.2020

Encl : Bill

This is a computer generated report, hence does not require signature.

#### IMPORTANT

This report is strictly CONFIDENTIAL. Its use for publicity, advertisement or as evidence in legal disputes is forbidden. Reference of content(s) given by the party. The above results are related to the samples tested. The report shall not be reproduced except in full, without the written approval of the laboratory.



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Kusumgar Corporates Pvt Ltd, Ref: 11.4.2020

ULR: TC69442060000569F

(Sample Tested at: @ W: 65% +/- 2% and Temp: 27 Degree C +/- 1 Degree C)

Synthetic Blood Penetration Test  
ASTM F 1670/F 1670M-08(2014)

P2000314-1

Described by the Customer : Fabric sample Code-4063

Result

Pass

Note: COVD 19 Warning - The above report pertains only to the sample submitted by the customer and the samples are not drawn by SITRA. These results need not be indicative of the results of bulk lots of the articles under consideration. The issue of maintaining the Traceability between the sample submitted for testing and the bulk lot supplied lies with the customer / supplier. Samples may be drawn from the bulk lot by neutral organizations and the same shall be tested to ensure their compliance with the respective quality requirements.

- End of Report -




- Kusumgar Corporates is a technical textile manufacturer based out at Mumbai, India. We manufacture and supply over 20 million meters fabric annually across the globe. Our factories are in the state of Gujarat with state-of-the-art manufacturing and testing facilities.
- In our endeavor to serve the people, we design and develop the best quality material to match the specific needs. To cater the immediate national and global needs to fight COVID 19, we have forayed into the manufacturing of PPE Coveralls Fabrics for the frontline doctors and paramedics.
- While our facilities are equipped to manufacture 100,000 meters fabric per day, the fabric is manufactured with utmost care, quality consciousness and following the best industry practices.



## Way Ahead ...

# Thank You

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