HILTEX
INDUSTRIAL FABRICS

# PPE

## Breathable PPE Suit
### Hooded Protective Coverall
### with Shoe Cover for Corona Warriors

## SALIENT FEATURES

- **Light Weight** - Complete suit including shoe cover, weighing only 300 gms approx.
- **Unique barrier coating** on outside and smooth, flexible and comfortable nano coating on inside, which allows **moisture vapour transmission & breathability.**
- Anti- Bacterial finish on the outside which disallows bacteria.
- Closely Woven, Compact Polyester Fibre of High Strength.
- **Seams are sealed** with sealing tape using a high frequency automatic machine
- *Design, **Developed and manufactured** in association with **DMSRDE, Kanpur** (Wing of DRDO)*

- High Level of protection for Healthcare Professionals and frontline response personnel in most impacted regions of Corona Virus
- Blood Penetration test as per ISO 16603:2004 with highest rating
- Unique certificate code (UCC Code) BPT000104XXXX
- Can be used after disinfecting for upto 5 times
- Comes in **various colours** for nurses, police personnel and safai karmi.

## Disinfecting Procedure

First method

1. Disinfect by dipping in a cold bleach solution.
   5 teaspoons of home bleach in 5 litres water
   (5 / 6 % Chlorine)
   Do not wriggle wash. Plain dipping for 2/3 minutes
2. Rinse with normal water
3. Air dry

Second method

1. Fogging of used coverall with 11% Hydrogen Peroxide solution in a sealed room.

Note: Use upto 5 times. Do not use IPA based disinfectants.

26/50, Birhana Road, Kanpur- 208001 | +91 9838200186 | www.hiltexoverseas.com

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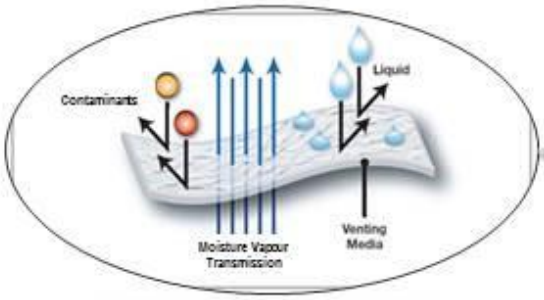
# HILTEX PPE COVERALL




**Breathable & Water Proof Coating**

**Hood Back View**

**Seam Sealed Finishing**

**Long Shoe Cover**

**Taped Front Flap**

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# Best Quality PPE Kit developed by DMSRDE (DRDO Kanpur)

## 5 times reusable + and most economical, only Rs.200/- per use

## Comparison between Non-Woven Suit and Our Suit

| Parameters | Non-Woven Laminated | Our Polyester woven fabric (reusable) | Remarks |
|---|---|---|---|
| **Weight of PPE Kit** | 500 gms | 300 gms | Our suit is light weight by 40% |
| **Strength** | 100 N( gets torn easily) | 300 N | strength is higher by 300% |
| **Breathability** | Zero | Dissipates body heat | Provides Comfort |
| **Moisture Vapour Transmission** | No | Yes | Provides Comfort |
| **How many times can use** | One time | Upto 5 times after disinfecting | Cost per use is as low as Rs. 200 |
| **Biodegradable** | Has to be burned | Recyclable | Eco-friendly |
| **Anti-Bacterial** | NO | Yes | Provides higher safety |

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# Specification for fabric for making Anti Viral Nano Coated Fabric for making Bio / Medical Suit and Shoe Cover

| Sl No. | Testing Parameter | Requirement | Method of Test |
|---|---|---|---|
| 1 | Nature of Material | Polyester /Nylon | IS: 667 |
| 2 | Mass of Fabric | 60Gsm to 90 Gsm | IS: 7016 Pt. 1 |
| 3 | Tensile Strength N/5 | Warp > 450 | IS: 7016 Pt. 2 |
| | | Weft > 200 | |
| 4 | Tearing Strength | Warp > 15 N | IS: 7016 Pt. III |
| | | Weft > 15 N | |
| 5 | Water Repellancy | >80 | IS: 390 |
| 6 | Water proofness (Coated Side) * Note : observation in respect of wetting etc. with in 5 mm of inside of gasket will be ignored. | No percolation of water through the fabric or wetting of the outer surface* | IS: 7016 Pt. VII |
| 7 | Water Vapour Transmission (Breathability) Option 'B', Temp-230C, Humidity in cup - 100%, Humidity in chamber- 50% and Air flow - 2.5 m/sec | 2 $mg/cm^2$ /hour (max.) | As per ASTM-96-95 |

FAX / SPEEDPOST / REGISTERED/**BY HAND**


| | | | | |
|---|---|---|---|---|
| Telephone | : | 0512-2451759-78 | | No:- DRDO/DMSRDE/ACS/Coverall/01 |
| Telegram | : | LABDEV | | Government of India, Ministry of Defence |
| Telex | : | 325-385 DMSRD IN | | Defence Research & Development Organization |
| Fax | : | **0512-2453212** | | Defence Materials & Stores Research & Development Establishment |
| email : dmsrde@sanchar.net.in | | | | DMSRDE P.O., GT Road, Kanpur - 208013 |


| | |
|---|---|
| All correspondence to be addressed to the Director and this Estt. Reference be quoted invariably, while replying. | Date : 23.04.2020 |

To

**M/s HILLTEX Industrial Fabrics Pvt. Ltd.**
26/50, Birhana Road, Kanpur, India

Sub: **Issue of Unique Certification Code (BPT0001042020)**

Dear Sir

Your industry's developed '**Anti-Covid SUIT-I**' based on the polyester material under the technological support of DMSRDE, Kanpur is now tested for synthetic blood penetration test at Small Arm Factory (SAF), Kanpur vide our establishment Letter No. DRDO/DMSRDE/ACS/01 Dated 12/04/2020. The test result is indicating excellent level of protection against the penetration of Corona Virus and as the material is qualifying the requirement, a Unique Certification Code **(BPT0001042020)** is generated for the Suit (both fabric and sealed & stitched seam). This UCC is specifically allotted to this product **(Anti-Covid SUIT-I)** only.

This is for your kind information, please and your valuable support in this crucial phase of 'Corona Virus Pandemic' is highly acknowledged.

BR Das
23/04/2020

(**Dr. Biswa Ranjan Das**)
Sc 'D', DTT (DMSRDE), Kanpur
For Director

Dr. Biswa Ranjan Das
Scientist 'D' & Asst. Director
Govt. of India, MoD (DRDO)
DMSRDE, G.T. Road, Kanpur-208013

OFB

**Small Arms Factory, Kalpi Road, Kanpur**
Ph. No. 0512-2295042-46, Fax No. 0512-2296229

Report on Resistance of Materials used in Protective Clothing to Penetration using Synthetic Blood

Test Report No SAF/QC(LG)/Lab/0001,Date:17.04.2020

| | |
|---|---|
| Sample details with Ref. no. and date | ANTI-COVID SUIT-I<br>No. DRDO/DMSRDE/ACS/01, Dated 12/04/2020 |
| Manufacture/Developer | DRDO, GT Road Kanpur-208013 |

1. **Aim of the test:** To determine the resistance of protective clothing materials to penetration by blood and bodily fluids using Synthetic Blood
2. **Equipment used for testing:** Blood Penetration Resistance Testing Equipment
3. **Test Reference:** ISO 16603 - 2004 : Unique Certification Code(UCC) - BPTocc1042c20
4. **Materials used for testing:**

**Synthetic Blood:**

| S. No. | Parameter | Value |
|---|---|---|
| 1 | Surface Tension | 0.040 N/m |
| 2 | pH | 7.22 |

5. **Environmental Conditions**

| S. No. | Parameter | Value |
|---|---|---|
| 1 | Temperature | 25°c |
| 2 | Relative Humidity | 65% |

6. **Test Results:**

| S. No. | Sample Nomenclature | Sample Code | #Result as per ISO 16603-2004, Procedure C |
|---|---|---|---|
| 1 | Coverall fabric | A | 5/6 (PASS) |
| 2 | Coverall Arm Sleeve Seam | A | 5/6 (PASS) |
| | B- Coverall Side Seam | A | N/A |
| | C- Coverall Leg Seam | A | 6/6 (PASS) |

#Samples have been tested as submitted and may not represent the batch/lot

Note: *The procedures enumerated at Para-3 and 4 of the instructions of Ministry of Textiles, Government of India issued vide letter no. F. No. 8/4/2020-R&D dated 06.04.2020 must be strictly complied with regards to use of this certification.*

Examiner

17.4.2020
Authorized Signatory