INSTITUTE OF OCCUPATIONAL MEDICINE
Research Avenue North, Riccarton, Edinburgh, EH14 4AP

Report to client

Testing carried out: Type 6 testing in accordance with ISO 17491-4:2008, Method A Determination of resistance to penetration by a spray of liquid (spray test)

Model tested:	Protective Coverall TTK-A01
IOM contract no.:	S12434
Submitted by:	BSI Group Kitemark House Maylands Avenue Hemel Hempstead HP2 4SQ
Contact:	David Tuplin
Date received:	08th May 2020
Date tested:	08th May 2020

Authorised: _____ **Date:** 13th May 2020

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UKAS TESTING
0374

1. INTRODUCTION

The samples have been tested for resistance to penetration by a spray of liquid in accordance with the protocol defined in ISO17491-4:2008, Method A.

2. REQUIREMENTS

Compliance limits are specified in BS EN 13034:2005.

3. TEST METHOD

The wearer is familiar with the use of this type of device.

The physical dimensions of the wearer(s) are shown below;

Wearer	Height (cm)	Chest (cm)	Suit size
JA	182	98	XL

Undergarments were as detailed in the standard, a "Sontara" absorbent suit was worn directly under the test garment.

The device is a white material one-piece hooded coverall with blue external taped seams. The device incorporates elasticated cuffs, ankles, waist and hood. There is a single action zip at the front of the suit running from the crotch to the neck, covered during use by a white material flap which is sealed to the suit with integral double sided tape.

At the request of the client the coveralls were taped, using 50 mm wide PVC electrical insulating tape, onto chemical resistant gloves, wellington boots and a Scott "Promask" facepiece.

4. TEST RESULTS

The standard calls for testing to be carried out using three suits.

In response to the question "does the suit fit", the test subject answered "yes"

After testing in accordance with the practical movements defined in the specified standard (see Section 2) no damage was observed to the test suits.

Surface tension measurements of the test solution were recorded in the reservoir and from the nozzle before and after testing and these ranged from 52.6 to 53.1 $Nm^{-1} \times 10^{-3}$ and 51.7 to 52.0 $Nm^{-1} \times 10^{-3}$, respectively.

Temperature measurements were recorded in the test chamber before and after testing and these ranged from 21.3 to 21.6°C

An example of a fully dressed wearer is shown below.

Fully dressed wearer

Suit worn with Scott "ProMask" facepiece

No leakage stains were observed on the dosimeter suits for any of the three suits tested.

Leakage results in terms of area of leakage stain(s) on the dosimeter suit as a ratio of the calibration stain are shown in the following table:

Leakage of liquid into clothing

Suit number	(1) Calibration stain (cm^2)	(2) Total leakage stain (cm^2)	Ratio of (2) to (1)
1	5.65	0	-
2	5.65	0	-
3	5.65	0	-

5. ASSESSMENT OF COMPLIANCE

BS EN 13034:2005 states that:

"All suits shall pass the test, i.e. the total stain area on any one undergarment of each suit shall be less than or equal to three times the total calibrated stain area."

For this suit type, no leakage stains were observed on the dosimeter suits for any of the three suits tested.

Complies with the requirements of BS EN 13034:2005.

Any opinions and interpretations expressed herein are outside the scope of our UKAS accreditation

6. ADDITIONAL COMMENTS

There are no additional comments.

*** END OF REPORT ***