

Test Report No. PPE 152053(1)/SM/11

Date: 31 October 2011

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REPRESENTACIONES INTERNACIONALES J Y R, SA DE CV
CAMINO AL MILAGRO 104
EL MILAGRO, APODACA, NL
CP 66634, MÉXICO

Attention: REPRESENTACIONES INTERNACIONALES J Y R, SA DE CV

The following sample was submitted and identified by the client as:

Sample Description: Sample of Microporus protective overall

Details of Sample:




Date Sample(s) Received: 26th September 2011

Testing Period: Tested between 03/10/2011 and 28/10/2011

Test(s) Requested: EN 13034: 2005 + A1:2009 Protective clothing against chemicals -
Chemical protective clothing offering limited protective performance
against liquid chemicals (Type 6)

Test Results: Detailed in Appendix A

Signed for and on behalf of
SGS United Kingdom Ltd


Stephanie Mackenzie B.Sc. (Hons)
Textile Technologist, Softlines Dept.

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Appendix A: Test Results

BS EN 13034:2005 + A1:2009 Protective clothing against chemicals -Chemical protective clothing offering limited protective performance against liquid chemicals (Type 6)

Section 4: Performance classification of materials

BS EN 14325:2004 Protective clothing against chemicals

Test Methods and performance classification of chemical protective clothing materials, seams, joins and assemblages.

Clause	Test Method	Result	Class	Comments
4.2	Pre-conditioning (5 cycles of cleaning)	Not Applicable Limited Use	-	-
4.4	Abrasion Resistance#	EN 530 Method 2	>10 Cycles (Visual assessment)	Unclassified Moderate abrasion damage with small tears observe of 0.5mm diameter
4.7	Trapezoidal tear resistance#	ISO 9073-4	A = 29N B = 41N	2
4.9	Tensile strength\$	ISO 13934-1	A = 72.9N B = 90.9N	2
4.10	Puncture resistance#	EN ISO 6530:2005*	7N	1
4.12	Repellency to liquids~	EN ISO 6530:2005*		
		30% H ₂ SO ₄	94.6%	3
		10% NaOH	96.3%	3
		o-Xylene	95.4%	3
4.13	Resistance to penetration by liquids~	EN368		
		30% H ₂ SO ₄	0.0%	3
		10% NaOH	0.0%	3
		o-Xylene	0.0%	3
	Butan-1-ol	0.0%	3	

* supersedes EN 368: 1992, which is withdrawn

Section 4.2: Performance requirements for seams joins and assemblages

Clause	Test Method	Result	Class	Comments
5.2	Pre-conditioning (5 cycles of cleaning)	Not applicable Limited Use	-	-
5.5	Seam Strength\$	ISO 13935-2	Leg seam = 109.6N Arm seam = 102.9N Front seam = 121.9N Rise seam = 125.6N	3 FT FT FT FT

Note: FT = Fabric tears

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Section 5 Performance requirements for whole suit

Testing in accordance with ISO 17491-4; Determination of resistance to penetration by liquids in the form of a light spray (mist test) «

Test Method: The test method used was the total inward leakage method defined in ISO 17491-4

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

Compliance limits are specified in BS EN 13034:2005 + A1:2009 for type 6 clothing.

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

Wearer	Height (cm)	Chest (cm)	Suit Size
RMcK	175	102	XL

Undergarments as detailed in ISO 17491-4 and a “Sontara” absorbent suit were worn directly under the test garment.

The device is a white material one piece coverall incorporating elasticated cuffs, ankles, waist and hood. There is a double action zip at the front of the suit which runs from crotch to the neck and is covered during use by a flap which is sealed onto the suit material by means of integral double sided adhesive tape.

At the request of the client the coveralls were taped onto a scott “promask” full face mask, wellington boots and rubber gloves.

The wearers were dressed in accordance with the manufacturer’s dressing procedures.

Test Results:

In response to the question “does the suit fit”, the test subject answered “Yes”.

After testing in accordance with the practical movements defined in BS EN13034 for type 6 clothing no damage was observed on the suit.

Surface tension measurements of the test solution were recorded in the reservoir and at the nozzle before and after testing and these ranged from 50.0 to 51.5Nm⁻¹x10⁻³ and 50.6 to 51.3Nm⁻¹ x10⁻³ respectively.

The temperature measurement in the test chamber before and after testing and these ranged from 19.6 to 20.6°C

A Leakage stain was observed at the left rear waist area on the dosimeter suit of the first suit tested.

No leakage staining was observed on the dosimeter suits of the other two suits tested.

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Leakage results in terms of area of leakage stains(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 of stain (cm ²)	(2) Total leakage stain (cm ²)	Ratio of (2) to (1)
1	8.36	6.55	0.78
2	8.36	0	-
3	8.36	0	-

Assessment of Compliance

BS EN 13034:2005 + A1:2009 for type 6 clothing states that “All suits shall pass the test, i.e. the total 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, the penetration staining was recorded on suit number 1 and was measured as 6.55cm. This stain is 0.78 times the calibration stain of 8.36cm².

Therefore the sample **complies** with the requirements of EN13034 for type 6 clothing.

~Testing performed by UKAS accredited laboratory No. 1066.

#Testing performed by UKAS accredited laboratory No. 1756.

\$Testing performed by UKAS accredited laboratory No. 2001.

«Testing performed by UKAS accredited laboratory No. 0374.

***** End of Report*****

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