



**AirTec™**

**ONYX III**  
**New Generation**  
**Chemical Splash Suit**  
with Hydrophobic  
PTFE Membrane

**Instruction Manual &  
Decontamination Log Book**



national  
electrical and  
communications  
association



## **ONYX III New Generation Chemical Splash Suit with Hydrophobic PTFE Membrane**

The new Airtec™ chemical splash suit range has been designed by HTT from industry feedback, to be fit for tough Australian industrial working conditions where extreme heat and humidity are a problem.

Featuring a high comfort PTFE membrane liner, heat and moisture transfers away from the body.

**More comfort. Less stress.**

# Airtec™ ONYX III Description

## Features

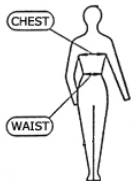
- Innovative hood design with 3-point Velcro ease adjustment.
- Velcro-sealed flap with heavy-duty zipper
- Hi-Viz reflective tape
- Adjustable cuffs
- Breathable hydrophobic PTFE membrane liner
- Adjustable leg gusset
- Reinforced knee section for greater durability
- Certified ISO-6530:2005 chemical penetration test methods for material fabrics in contact with liquid chemicals
- Certified ASTM F903-03 standard test method for resistance of materials used in protective clothing for penetration of liquid chemicals

# Applications

- Transport
- Hazardous waste clean-up
- Industrial haz-mat teams
- Petro-chemical
- Heavy-duty industrial cleaning
- Areas where heat stress is a concern
- Chemical handling/clean-up

## Airtec™ Fabric Benefits

- Chemical barrier
- Microporous - breathable
- High comfort levels
- Reduces potential heat stress
- Provides chemical seal over approved chemical gloves
- Fits over protective gumboots



## Airtec™ Size Chart (cm)

Measurement	S	M	L	XL	2XL	3XL	4XL	5XL
Chest	120	125	130	135	140	145	150	155
Waist	112	117	122	127	132	137	142	147

# Airtec™ User Information

## Maintenance and Care

Use only in accordance with manufacturer's specifications and instructions. DO NOT use for liquid deluge, continuous chemical exposure or against gases or hazardous vapours. It is the responsibility of the wearer of this garment to ensure that Airtec™ Chemical Splash Suits are suitable for the intended application. If in doubt, consult with your site safety supervisor.

## Laundry

Machine wash separately in cool water on a standard wash cycle with a mild powdered detergent and rinse thoroughly after washing. Tumble dry on a low heat setting or alternatively drip dry out of direct sunlight. Do NOT dry clean. Do NOT use bleach on the suit fabric. Do NOT fold away wet.

Appropriate decontamination procedures implemented by the site supervisor or authorised person should be followed by the user upon exposure of the garment to any hazardous chemicals.

If uncertain that decontamination of the garment has been successful then the garment should be removed from service for further evaluation.

**Decontamination logs are located at the back of the booklet.**

## **Pre-Use Suit Inspection**

Before AirTec™ Chemical Splash coveralls are used against a potential chemical hazard, the internal lining of the suit should be checked for any permeation defects:

- Discoloration of the grey fabric backing
- And/or holes, rips or tears
- Zipper running mechanism should also be checked for full operational travel length
- The suit outer fabric should also be inspected for any obvious chemical damage through discoloration, punctures, rips or tears before use and after decontamination and laundering

## **Decontamination**

Appropriate decontamination procedures implemented by the site supervisor or authorized person should be followed by the user upon exposure of the garment to any hazardous chemicals. If uncertain that decontamination of the garment has been successful then the garment should be removed from service for further evaluation. Decontamination logs are provided with the garment

## **Disclaimer**

It is the wearer's responsibility to inspect the Airtec™ suit for any defects, tears or holes in the fabric material and or seams prior to donning and after any laundry of the garment. HTT Corp takes no responsibility for the incorrect use of Airtec™ chemical splash suits.

**WARNING**  
**Failure to follow cleaning & maintenance instructions could cause the garment or material to fail.**

**WARNING**

Use this garment for protection from liquid chemical splashes only. This garment provides limited chemical penetration protection and only against known and tested liquid chemical hazards. This garment does not provide protection against hazardous vapours or gases. Liquids can give off vapours at certain temperatures and this garment will NOT protect you from contact with these vapours.

DO NOT use this garment if risk of exposure to potential hazardous vapours is present. If uncertain of this garment's suitability for the application please contact the manufacturer &/or consult with your site safety department.

This garment is NOT suitable for use against radiological, biological or cryogenic agents or for use against chemical warfare agents. Chemical contamination of this suit may warrant its disposal.

# Material Data Specifications

<b>Outer Fabric</b>	300 Denier Polyester Woven approx 150g/m <sup>2</sup> dyed
<b>Barrier Protection</b>	High performance PTFE membrane giving high moisture vapour transmission, liquid chemical barrier resistance, low weight and flexibility
<b>Backing Fabric</b>	Membrane protected by a dot laminated 30g/m <sup>2</sup> polyamide warp knit
<b>Fabric Weight</b>	250g/m <sup>2</sup> - ISO 2286
<b>Tear Strength</b>	Warp / Weft 80 N / 50mm minimum ISO 4674 A1 - Typical Performance level > 100 N / 50mm
<b>Tensile Strength</b>	Warp / Weft 1100N / 50mm minimum ISO 1421 - Typical Performance level >1400 N / 50mm
<b>Shrinkage / Dimensional Stability</b>	After 3 washes @ 40 degrees - Warp / Weft <3% ISO 6330 5A - Typical performance warp -1%; weft -1.5%
<b>Light Fastness</b>	3 for Fluorescents and 4 for other colours but should be checked for each new shade as very colour dependent
<b>Colour Fastness</b>	Dry 4 / Wet 4 ISO 105
<b>Hydro Head</b>	Minimum 500cm ISO 811 - Typical performance level > 800cm After martindale abrasion 500cm minimum ISO 811 - Typical performance level > 700cm After crumple flex 500cm minimum ISO 7854 - Typical performance level > 700cm



## Chemical Test Standard ISO 6530-2005 Performance Results

This ISO internationally-recognised test performance method is a measurement of chemical penetration, absorption and repellency for chemical fabrics and materials.

Test Liquid	%	Penetration	Repellency	Absorption
Sodium Hydroxide	50	0.0	98.2%	0.0
Hydrochloric Acid	37	0.0	91.4%	1.0
Sulphuric Acid	30	0.0	98.4%	0.0
Sulphuric Acid	98	0.0	97.9%	1.9
Nitric Acid	50	0.0	98.5%	0.6
Xylene	100	0.0	91.2%	2.1
Jet Fuel A1	100	0.0	93.8%	5.4

## Chemical Test Standard ASTM F903-03 Performance Results

Resistance of materials used in protective clothing to penetration by liquids. Procedure C: 0 psig for 5 minutes followed by 2psig (13.8kPa) for 1 minutes followed by 0psig for 54 minutes

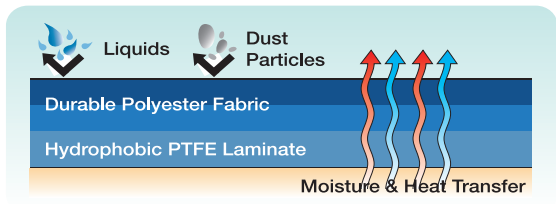
Samples of the fabric are clamped over a PTFE test cell and held vertically so that the face of the fabric forms one side of the cell. The cell is filled with the test liquid and a stopwatch started. At all times the fabric is observed for penetration by the liquid.

The fabric is said to fail if a droplet of liquid appears indicating penetration of liquid through to the viewing side of the specimen. Identification of penetration of droplets is effected by use of blotting paper.

Test Liquid	%	Result	Test Liquid	%	Result
Sodium Hydroxide	50	PASS	Nitric Acid	50	PASS
Sulphuric Acid	98	PASS	Xylene	100	PASS
Sulphuric Acid	30	PASS	Jet Fuel A1	100	PASS
Butan-1-ol	100	PASS	Phenol	90	PASS

# Airtec™ Fabric Barrier

Airtec™ breathable chemical splash fabric has been tested to ISO-11092 for water vapour resistance. This test is a way of measuring the ability of textile fabrics to transfer body heat and moisture vapour away from the body through protective fabric layers. Measuring water vapour resistance of a chosen fabric is a key way of showing the benefits of wearing garments which can alleviate and reduce potential metabolic heat loss.



## Airtec™ Chemical Fabric Protective Suit Options

**Onyx III General Purpose  
Chemical Splash  
Protection (Red)**



**Flamegard Carbon III  
Flame Resistant/Antistatic  
Chemical Protection (Orange)**



# Airtec™ Suit Maintenance Exposure and Inspection Log Schedule

DATE

GARMENT ID #

COMMENTS

NAME & INITIALS

DATE	GARMENT ID #	COMMENTS	NAME & INITIALS

