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ABN: 55 34I 038 233

T-CHEM 2

TORANT® CHEMICAL RESISTANT, ANTI-STATIC/ FLAME RESISTANT WATERPROOF/ BREATHABLE FABRIC

T-Chem 2 General Information

Liquid chemical splash protection. These garments offer liquid splash, anti-static & flame resistant protection against a wide range of chemicals including many common use acids and bases, aqueous solutions, polymers, and organic solvents, being waterproof it also offers excellent foul weather protection exclusive of chemical exposure. The garments should be used only for those situations where vapour protection is not needed or where vapour exposure is determined to be acceptable by an industrial safety professional.

Breathable. The suit allows perspiration to evaporate through the chemical barrier to the outside. This reduces the build up of heat and sweat inside the suit thereby reducing potential heat stress and allowing the wearer to continue their task in comfort.

Whole garment integrity. Glanda chemical splash suits are seam sealed and sewn with high quality components. These components ensure there are no weak points in the garment construction. The garments have been carefully designed for maximum chemical run off.

WARNING

Chemical

The Chemical Splash Protective garment does not provide protection for all chemicals or conditions. These garments should only be worn in conditions that have specifically identified as appropriate by people trained in the relevant hazard. It is the user's responsibility to determine the suitability and fitness for use. Consult a trained professional in industrial safety when determining fitness for use. These suits are not suitable for protection against liquid escaping from pressurised systems.

Chemical Penetration Data

Hydogen Peroxide (30%)

Sulphuric Acid (32%) Sulphuric Acid (98%)	PASS PASS	Compliance	
Hydrochloric Acid (30%)	PASS	AS/NZS 4602.1:2011	High Visibility
Sodium Hydroxide (50%)	PASS	EN1149-1:2006	Surface Resistivity
Caustic Soda	PASS	AS2755.1:1985	Ease of Ignition
White Spirt	PASS	AS2755.2:1985	Flame Spread
Jet Fuel A (Kerosene)	PASS	AS/NZS ISO 6530:2006	Liquid Chemicals
Nitric Acid (70%)	PASS		
Ammonia Solution (30%)	PASS	Sizes Available XSM-4X	(L

Please contact us to discuss any chemical splash requirements.

PASS

Test Result









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1st Floor, 191 Racecourse Road, Flemington, Victoria 3031 P.O. Box 240, North Melbourne, Victoria 3051 Phone (03) 9371 2400 Fax (03) 9371 2499

TEST REPORT

GLANDA INTERNATIONAL 149 NORTHERN ROAD CNR BAMFIELD ROAD

WEST HEIDELBERG VIC 3081

TEST NUMBER : 7-596777-BV ISSUE DATE : 07/04/2014 PRINT DATE : 07/04/2014

SAMPLE DESCRIPTION Clients Ref: "T-Chem 2"

Yellow woven fabric with black conductive thread

laminated to grey knitted backing

AS 2755.1-1985 Determination of Ease of Ignition of vertically

oriented specimens

TEST CONDITIONS:-

Barometric pressure: 1018 hPa Gas used: Propane Relative Humidity: 45 $\,\%\,$ Specimen size: 20 Burner orientation: Surface Temperature: 21 Specimen size: 200 x 80 mm Temperature: 21 degC

Test Results As Received

Number of Number of Weft Number of Number of Warp Ignitions Non Ignitions Time (s) Time (s) Ignitions Non Ignitions 14 0 14 15 3 15 3 1 16 16 0

> Warp: Mean Ignition Time: Weft: Mean Ignition Time: 15.0 s Minimum Ignition Time: 15.0

206443 1 END OF REPORT) PAGE 1

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This Laboratory is accredited by the National Association of Testing Authorities, Australia, for:
-Chemical Testing of Textiles & Related Products : Accreditation No. 983
-Mechanical Testing of Textiles & Related Products : Accreditation No. 983
-Heat & Temperature Measurement : Accreditation No. 1356

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MICHAEL A. JACKSON B.Sc.(Hons)

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TEST REPORT

CLIENT : GLANDA INTERNATIONAL 149 NORTHERN ROAD CNR BAMFIELD ROAD

WEST HEIDELBERG VIC 3081

TEST NUMBER : 7-596768-BV ISSUE DATE : 04/04/2014 PRINT DATE : 04/04/2014

SAMPLE DESCRIPTION Clients Ref: "T-Chem 2"

Yellow woven fabric with black conductive thread

laminated to grey knitted backing

AS 2755.2-1985 Measurement of flame spread properties of Vertically oriented specimens
As Received Face tested: Test Conditions:

Face Barometric Pressure 1018 hPa Gas used Propane Relative Humidity 45 Ignition Time Vertical Burner Orientation Temperature 22 degC Width Test Results: Length Mean Severence Time To 1st marker thread FTBT FTBT To 2nd marker thread FTBT FTBT To 3rd marker thread FTBT FTBT Mean Flame Spread Time 1st marker to 2nd marker thread 2nd marker to 3rd marker thread FTBT FTBT FTBT FTBT 1st marker to 3rd marker thread FTBT FTBT

FTBT = Failed to Burn to

Observations: Length:

4 specimens failed to burn to 1st marker thread specimens failed to burn to 2nd markekr thread

6 specimens were tested

Width:

3 specimens failed to burn to 1st marker thread

3 specimens were tested

Flame application caused a hole to be burnt or melted on face of specimen. No flame reaches the vertical edge of specimen. No flaming debris fell below the bottom edge of the frame and continued

to burn.

(END OF REPORT) 206444 1 PAGE 1

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MICHAEL A JACKSON B Sc (Hons) MANAGING DIRECTOR



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TEST REPORT

CLIENT : GLANDA INTERNATIONAL 126-128 BAMFIELD ROAD

WEST HEIDELBERG VIC 3081

: 7-598506-MV TEST NUMBER ISSUE DATE : 25/07/2014 PRINT DATE : 25/07/2014

SAMPLE DESCRIPTION Clients Ref: "T-Chem 2" Yellow woven fabric with black conductive thread

laminated to grey knitted backing

Protective Clothing - Protection Against Liquid Chemicals - Determination of Resistance of Materials to Penetration AS/NZS ISO 6530

by Liquids

Test liquid Sodium Hydroxide Sulphuric Acid	% 50 98	Spec 1 2 3 1 2	Index of 1 Length 0.0 0.0 0.0 0.0 0.0	Penetration Width 0.0 0.0 0.0 0.0 0.0 0.0 0.0
Test Liquid Sodium Hydroxide Sulphuric Acid	% 50 98	Spec 1 2 3 1 2 3 3	Index of I Length 97.3 97.0 97.0 96.4 97.5 96.9	Repellency Width 96.9 97.1 96.7 97.9 97.8
Sodium Hydroxide	50	1 2	0.0	Absorption 0.0 0.0
Sulphuric Acid	98	2 3 1 2 3	0.0 1.7 2.3 2.3	0.0 2.8 2.4 2.3

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TEST REPORT

GLANDA INTERNATIONAL 126-128 BAMFIELD ROAD CLIENT :

WEST HEIDELBERG VIC 3081

TEST NUMBER : 7-598506-MV PRINT DATE : 25/07/2014

Specimens preconditioned at 50degC and conditioned at 20+/-2degC and 63+/-3% RH prior to testing.

Tested at ambient laboratory conditions: 20+/-3degC

Flow rate of test liquid: 10mL in 10 +/- 1 sec

Mass per unit area: 350 g/m2

Single layer tested.

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TEST REPORT

Client: Glanda International

126-128 Bamfield Road West Heidelberg VIC 3081 Test Number : 14-001850 Issue Date : 24/12/2014

24/12/2014

Print Date

Sample Description

Clients Ref : "Torant T-Chem 2"

Woven fabric with conductive grid laminated to grey knitted backing

Colour : Fluorescent Yellow End Use : Protective Clothing

ASNZS ISO 6530-2006

Protective Clothing - Protection Against Liquid Chemicals - Determination of Resistance of Materials to Penetration of Liquids

Test Liquid

3

Sodium Hypochlorite Solution (8.0-12.5%

Available Chlorine)

Index of Penetration	Length			
1	0.0	0.0	%	
2	0.0	0.0	%	
3	0.0	0.0	%	
Index of Repellency	Length			
1	98.9	98.7	%	
2	99.1	99.2	%	
3	98.9	98.7	%	
Index of Absorption	Length			
1	0.8	0.7	%	
2	0.5	0.5	%	

Mass per unit area 366 g/m²

0.7

Specimens preconditioned at 50° C and conditioned at $20\pm2^{\circ}$ C and $65\pm3\%$ relative humidity prior to testing.

Tested at ambient laboratory conditions of 20±3°C.

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TEST REPORT

Client: Glanda International

126-128 Bamfield Road West Heidelberg VIC 3081 Test Number : 14-001850 Issue Date : 24/12/2014

Print Date : 24/12/2014

Due to the difficulty to hold and maintained the needle in place. An aperture of 2.0mm approximately was used.

ASNZS ISO 6530-2006

Protective Clothing - Protection Against Liquid Chemicals - Determination of Resistance of Materials to Penetration of Liquids

Test Liquid	98% Sulphuric Acid		
Index of Penetration	Length		
1	0.0	0.0	%
2	0.0	0.0	%
3	0.0	0.0	%
Index of Repellency	Length		
1	98.6	99.9	%
2	99.4	99.3	%
3	98.9	99.3	%
Index of Absorption	Length		
1	1.7	1.8	%
2	1.8	2.0	%
3	2.3	2.0	%

Specimens preconditioned at 50°C and conditioned at 20±2°C and 65±3% relative humidity prior to testing.

Tested at ambient laboratory conditions of 20±3°C.

Mass per unit area

Due to the difficulty to hold and maintained the needle in place. An aperture of 2.0mm approximately was used.

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366 g/m²

AWTA Product Testing

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TEST REPORT

Client: Glanda International

126-128 Bamfield Road West Heidelberg VIC 3081 Test Number : 14-001850

Issue Date : 24/12/2014
Print Date : 24/12/2014

ASNZS ISO 6530-2006

Protective Clothing - Protection Against Liquid Chemicals - Determination of Resistance of Materials to Penetration of Liquids

Test Liquid 30% Ammonia Solution.		on.	
Index of Penetration	Length		
1	0.0	0.0	%
2	0.0	0.0	%
3	0.0	0.0	%
Index of Repellency	Length		
1	89.2	92.6	%
2	89.5	91.6	%
3	91.9	91.1	%
Index of Absorption	Length		
1	1.2	1.0	%
2	0.9	0.7	%
3	0.9	0.9	%
Mass per unit area		366	g/m²

Specimens preconditioned at 50°C and conditioned at 20±2°C and 65±3% relative humidity prior to testing.

Tested at ambient laboratory conditions of 20±3°C.

Due to the difficulty to hold and maintained the needle in place. An aperture of 2.0mm approximately was used.

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TEST REPORT

Client: Glanda International

126-128 Bamfield Road West Heidelberg VIC 3081 Test Number : 14-001850

24/12/2014

Print Date : 24/12/2014

ASNZS ISO 6530-2006

Protective Clothing - Protection Against Liquid Chemicals - Determination of Resistance of Materials to Penetration of Liquids

Test Liquid 50% Sodium Hydroxide Solution (Caustic

Soda)

Issue Date

 Index of Penetration
 Length

 1
 0.0
 0.0
 %

 2
 0.0
 0.0
 %

 3
 0.0
 0.0
 %

Index of Repellency Length
1 97.1

 1
 97.1
 97.1
 %

 2
 97.2
 98.2
 %

 3
 97.6
 95.9
 %

Index of Absorption Length
1 0.6 0.5 %

2 0.6 0.5 % 3 0.6 0.5 %

Mass per unit area 366 g/m²

Specimens preconditioned at 50°C and conditioned at 20±2°C and 65±3% relative humidity prior to testing.

Tested at ambient laboratory conditions of 20±3°C.

Due to the difficulty to hold and maintained the needle in place. An aperture of 2.0mm approximately was used.

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TEST REPORT

Client: Glanda International Test Number: 14-001850

 126-128 Bamfield Road
 Issue Date
 : 24/12/2014

 West Heidelberg VIC 3081
 Print Date
 : 24/12/2014

ASNZS ISO 6530-2006

Protective Clothing - Protection Against Liquid Chemicals - Determination of Resistance of Materials to Penetration of Liquids

Test Liquid	32% Hydrochloric A	Acid	
Index of Penetration	Length		
1	0.0	0.0	%
2	0.0	0.0	%
3	0.0	0.0	%
Index of Repellency	Length		
1	97.2	94.6	%
2	96.2	94.2	%
3	95.4	95.8	%
Index of Absorption	Length		
1	1.9	3.5	%
2	2.1	2.4	%
3	3.3	2.3	%
Mass per unit area		366	g/m²

Specimens preconditioned at 50°C and conditioned at 20±2°C and 65±3% relative humidity prior to testing.

Tested at ambient laboratory conditions of 20±3°C.

Due to the difficulty to hold and maintained the needle in place. An aperture of 2.0mm approximately was used.

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TEST REPORT

Client: Glanda International

126-128 Bamfield Road West Heidelberg VIC 3081 Test Number : 14-001850 Issue Date : 24/12/2014

Print Date : 24/12/2014

ASNZS ISO 6530-2006

Protective Clothing - Protection Against Liquid Chemicals - Determination of Resistance of Materials to Penetration of Liquids

Test Liquid	30% Hydrogen Peroxide Solution		
Index of Penetration	Length		
1	0.0	0.0	%
2	0.0	0.0	%
3	0.0	0.0	%
Index of Repellency	Length		
1	99.1	98.6	%
2	99.4	98.2	%
3	98.1	98.3	%
Index of Absorption	Length		
1	1.3	0.6	%
2	0.8	0.7	%
3	0.8	0.8	%

Specimens preconditioned at 50°C and conditioned at 20±2°C and 65±3% relative humidity prior to testing.

Tested at ambient laboratory conditions of 20±3°C.

Mass per unit area

Due to the difficulty to hold and maintained the needle in place. An aperture of 2.0mm approximately was used.

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366 g/m²

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TEST REPORT

Client: Glanda International

126-128 Bamfield Road West Heidelberg VIC 3081 **Test Number** : 14-001850

Issue Date : 24/12/2014
Print Date : 24/12/2014

ASNZS ISO 6530-2006

Protective Clothing - Protection Against Liquid Chemicals - Determination of Resistance of Materials to Penetration of Liquids

Test Liquid	70% Nitric Acid		
Index of Penetration	Length		
1	0.0	0.0	%
2	0.0	0.0	%
3	0.0	0.0	%
Index of Repellency	Length		
1	98.9	99.1	%
2	96.5	99.1	%
3	99.5	99.1	%
Index of Absorption	Length		
1	1.0	1.2	%
2	1.0	1.4	%
3	1.0	1.1	%
Mass per unit area		366	g/m²

Specimens preconditioned at 50°C and conditioned at 20±2°C and 65±3% relative humidity prior to testing.

Tested at ambient laboratory conditions of 20±3°C.

Due to the difficulty to hold and maintained the needle in place. An aperture of 2.0mm approximately was used.

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Test Report

Test Result

Surface Resistivity of Fabric

(EN 1149-1:2006)

Test Condition:

Applied Voltage and time:100V for 15 seconds Temperature 23 ± 1 °C, Relative Humidity 25 ± 5 %

Back

Surface Resistance(ohm)

2.4x108

Date: Mar 15, 2013

Page 2 of 2

Surface Resistivity (ohm)

4.8x10⁹

*** End of Report ***

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