



Private Mail Bag 3
Salisbury SA 5108

Hodgson Road
Bolivar SA 5110

Tel: 1300 653 366
Fax: 61 8 8259 0220

Internet: www.awqc.com.au
Email: awqc@sawater.com.au

Our Reference :130351-0001
Enquiries :M.Glasson
Telephone :(08) 8259 0332
Facsimile :(08) 8259 0228
Date :27th September 2004

Attached is a report to AS/NZS 4020:2002 for the Liquid rubber submitted for testing. The products passed the non-metallic requirements of the Standard at an exposure of 5000 mm² per Litre.

Should you have any enquiries about the report or any other matters pertaining to the Standard please contact Sam Loveder or myself on (08) 8259 0332.

Yours sincerely,

M Glasson

M. Glasson
SENIOR TECHNICAL OFFICER



TEST REPORT FOR AS/NZS 4020:2002**SUMMARY OF RESULTS**

REPORT NUMBER 4007/92.1567
SAMPLE REFERENCE 130351-0001
DATE 17/09/2004
PRODUCT DESIGNATION LIQUID RUBBER.
COMPOSITION OF PRODUCT ASPHALT RUBBERISED EMULSION.
PRODUCT MANUFACTURER LAFARGE ENGINEERED COATINGS, CANADA.
SUBMITTING ORGANISATION INTERNATIONAL BUILDING SOLUTIONS PTY LTD, INDY COURT,
NERANG, QLD.
USE OF PRODUCT MEMBRANE/LINER/SEALANT.

APPENDIX**RESULTS**



Private Mail Bag 3
Salisbury SA 5108

Hodgson Road
Bolivar SA 5110

Tel: 1300 653 366
Fax: 61 8 8259 0220

Internet: www.awqc.com.au
Email: awqc@sawater.com.au

TEST REPORT

REPORT NUMBER 4007/92.1567

SAMPLE REFERENCE 130351-0001

DATE 17/09/2004

PRODUCT DESIGNATION LIQUID RUBBER.

COMPOSITION OF PRODUCT ASPHALT RUBBERISED EMULSION.

PRODUCT MANUFACTURER LAFARGE ENGINEERED COATINGS, CANADA.

SUBMITTING ORGANISATION INTERNATIONAL BUILDING SOLUTIONS PTY LTD, INDY COURT, NERANG, QLD.

USE OF PRODUCT MEMBRANE/LINER/SEALANT.

TESTING REQUESTED **AS/NZS 4020:2002**
TESTING OF PRODUCTS FOR USE IN CONTACT WITH DRINKING WATER

SAMPLES SAMPLES WERE PREPARED AND CONTROLLED AS DESCRIBED IN APPENDIX A OF AS/NZS 4020:2002

EXTRACTS EXTRACTS WERE PREPARED AS DESCRIBED IN APPENDICES C - G AS INDICATED (NON-METALLIC PRODUCT).

TEST REPORT

COMMENCES ON PAGE 2. PLEASE NOTE THAT THIS REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL

THE RESULTS STATED IN THIS REPORT RELATE TO THE SAMPLE OF THE PRODUCT SUBMITTED FOR TESTING. ANY CHANGES IN THE MATERIAL FORMULATION, PROCESS OF MANUFACTURE, THE METHOD OF APPLICATION, OR THE SURFACE AREA-TO-VOLUME RATIO IN THE END USE, COULD AFFECT THE SUITABILITY OF THE PRODUCT FOR USE IN CONTACT WITH DRINKING WATER.

M. Glasson

M. GLASSON
APPROVED SIGNATORY

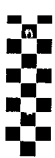
Michael Glasson
Team Leader Product Testing



This laboratory is accredited by the National Association of Testing Authorities, Australia. The Test(s) reported herein have been performed in accordance with its terms of accreditation. This document shall not be reproduced except in full.

Accreditation No 1115 Chemical Testing
Accreditation No 1390 Biological Testing



**TEST REPORT FOR AS/NZS 4020:2002****SUMMARY OF RESULTS**

REPORT NUMBER 4007/92.1567
SAMPLE REFERENCE 130351-0001
DATE 17/09/2004
PRODUCT DESIGNATION LIQUID RUBBER.
COMPOSITION OF PRODUCT ASPHALT RUBBERISED EMULSION.
PRODUCT MANUFACTURER LAFARGE ENGINEERED COATINGS, CANADA.
SUBMITTING ORGANISATION INTERNATIONAL BUILDING SOLUTIONS PTY LTD, INDY COURT,
NERANG, QLD.
USE OF PRODUCT MEMBRANE/LINER/SEALANT.

APPENDIX	RESULTS
C - TASTE OF WATER EXTRACT	Passed at an exposure of 5000 mm ² per Litre.
D - APPEARANCE OF WATER EXTRACT	Passed at an exposure of 5000 mm ² per Litre.
E - GROWTH OF AQUATIC MICRO-ORGANISMS	Passed at an exposure of 5000 mm ² per Litre.
F - CYTOTOXIC ACTIVITY OF WATER EXTRACT	Passed at an exposure of 5000 mm ² per Litre.
G - MUTAGENIC ACTIVITY OF WATER EXTRACT	Passed at an exposure of 5000 mm ² per Litre.
H - EXTRACTION OF METALS	Not applicable.

TEST REPORT FOR AS/NZS 4020:2002**CLAUSE 6.2 - TASTE OF WATER EXTRACT**

TESTING LABORATORY	AUSTRALIAN WATER QUALITY CENTRE HODGSON ROAD, BOLIVAR, SOUTH AUSTRALIA (NATA Accreditation No. 1390)
REPORT NUMBER	4007/92.1567
SAMPLE REFERENCE	130351-0001
DATE	17/09/2004
PRODUCT DESIGNATION	LIQUID RUBBER.
COMPOSITION OF PRODUCT	ASPHALT RUBBERISED EMULSION.
PRODUCT MANUFACTURER	LAFARGE ENGINEERED COATINGS, CANADA.
SUBMITTING ORGANISATION	INTERNATIONAL BUILDING SOLUTIONS PTY LTD, INDY COURT, NERANG, QLD.
USE OF PRODUCT	MEMBRANE/LINER/SEALANT.
DESCRIPTION OF SAMPLE	The sample consisted of a panel with dimensions 50 mm x 50 mm providing a total surface area of 5000 mm ² per Litre. Extracts were prepared using 1000 mL volumes of test water.
TEST METHOD	AS/NZS 4020:2002 TASTE OF WATER EXTRACT (APPENDIX C)
SCALING FACTOR	Not applied.
RESULTS	No tastes were detected in the controls or in the extracts prepared at an exposure of 5000 mm ² per Litre with chlorinated and unchlorinated water.
EVALUATION	The product passed the requirements of clause 6.2 when tested at an exposure of 5000 mm ² per Litre.
NUMBER OF SAMPLES	Two samples were tested.

**APPROVED SIGNATORY**Sam Loveder
Technical Officer

TEST REPORT FOR AS/NZS 4020:2002**CLAUSE 6.3 - APPEARANCE OF WATER EXTRACT**

TESTING LABORATORY AUSTRALIAN WATER QUALITY CENTRE
HODGSON ROAD, BOLIVAR, SOUTH AUSTRALIA
(NATA Accreditation No. 1115)

REPORT NUMBER 4007/92.1567

SAMPLE REFERENCE 130351-0001

DATE 17/09/2004

PRODUCT DESIGNATION LIQUID RUBBER.

COMPOSITION OF PRODUCT ASPHALT RUBBERISED EMULSION.

PRODUCT MANUFACTURER LAFARGE ENGINEERED COATINGS, CANADA.

SUBMITTING ORGANISATION INTERNATIONAL BUILDING SOLUTIONS PTY LTD, INDY COURT,
NERANG, QLD.

USE OF PRODUCT MEMBRANE/LINER/SEALANT.

DESCRIPTION OF SAMPLE The sample consisted of a panel with dimensions 50 mm x 50 mm providing a total surface area of 5000 mm² per Litre.

Extracts were prepared using 1000 mL volumes of test water.

TEST METHOD AS/NZS 4020:2002 APPEARANCE OF WATER EXTRACT
(APPENDIX D)

SCALING FACTOR Not applied.

RESULTS

<u>First Extract</u>	Test (- Blank)	Maximum Allowed	
Colour	< 1	5.0	HU
Turbidity	< 0.10	0.5	NTU

EVALUATION The product passed the requirements of clause 6.3 when tested at an exposure of 5000 mm² per Litre.

NUMBER OF SAMPLES One sample was tested.


APPROVED SIGNATORY

Phil Thomas
Senior Chemist

TEST REPORT FOR AS/NZS 4020:2002**CLAUSE 6.5 – CYTOTOXIC ACTIVITY OF WATER EXTRACT**

TESTING LABORATORY AUSTRALIAN WATER QUALITY CENTRE
HODGSON ROAD, BOLIVAR, SOUTH AUSTRALIA
(NATA Accreditation No. 1390)

REPORT NUMBER 4007/92.1567

SAMPLE REFERENCE 130351-0001

DATE 17/09/2004

PRODUCT DESIGNATION LIQUID RUBBER.

COMPOSITION OF PRODUCT ASPHALT RUBBERISED EMULSION.

PRODUCT MANUFACTURER LAFARGE ENGINEERED COATINGS, CANADA.

SUBMITTING ORGANISATION INTERNATIONAL BUILDING SOLUTIONS PTY LTD, INDY COURT,
NERANG, QLD.

USE OF PRODUCT MEMBRANE/LINER/SEALANT.

DESCRIPTION OF SAMPLE The sample consisted of a panel with dimensions 50 mm x 50 mm providing a total surface area of 5000 mm² per Litre.

Extracts were prepared using 1000 mL volumes of test water.

TEST METHOD AS/NZS 4020:2002 CYTOTOXIC ACTIVITY OF WATER
EXTRACT (APPENDIX F)

SCALING FACTOR Not applied.

RESULTS Confluent growth of regularly-shaped cells was observed in the containers with the negative control and test extracts. Cell death was observed in the positive control.

EVALUATION No cytotoxic response was detected; accordingly the product passed the requirements of clause 6.5 relating to cytotoxic activity when tested at an exposure of 5000 mm² per Litre.

NUMBER OF SAMPLES One sample was tested.

**APPROVED SIGNATORY**David Damiano
Research Officer

TEST REPORT FOR AS/NZS 4020:2002**CLAUSE 6.6 – MUTAGENIC ACTIVITY OF WATER EXTRACT**

TESTING LABORATORY	AUSTRALIAN WATER QUALITY CENTRE HODGSON ROAD, BOLIVAR, SOUTH AUSTRALIA (NATA Accreditation No. 1390)	
REPORT NUMBER	4007/92.1567	
SAMPLE REFERENCE	130351-0001	
DATE	17/09/2004	
PRODUCT DESIGNATION	LIQUID RUBBER.	
COMPOSITION OF PRODUCT	ASPHALT RUBBERISED EMULSION.	
PRODUCT MANUFACTURER	LAFARGE ENGINEERED COATINGS, CANADA.	
SUBMITTING ORGANISATION	INTERNATIONAL BUILDING SOLUTIONS PTY LTD, INDY COURT, NERANG, QLD.	
USE OF PRODUCT	MEMBRANE/LINER/SEALANT.	
DESCRIPTION OF SAMPLE	The sample consisted of a panel with dimensions 50 mm x 50 mm providing a total surface area of 5000 mm ² per Litre. Extracts were prepared using 1000 mL volumes of test water.	
TEST METHOD	AS/NZS 4020:2002	MUTAGENIC ACTIVITY OF WATER EXTRACT (APPENDIX G)
SCALING FACTOR	Not applied.	

TEST REPORT FOR AS/NZS 4020:2002**CLAUSE 6.6 – MUTAGENIC ACTIVITY OF WATER EXTRACT**

REPORT NUMBER 4007/92.1567
SAMPLE REFERENCE 130351-0001
DATE 17/09/2004
TEST METHOD AS/NZS 4020:2002 **MUTAGENIC ACTIVITY OF WATER EXTRACT (APPENDIX G)**

RESULTS**BACTERIAL STRAIN****NUMBER OF REVERTANTS per PLATE**

	S9	Blank	Sample Extract	Positive Controls	
				<u>NPD</u> (20ug)	<u>2-AF</u> (20ug)
<i>Salmonella typhimurium</i> TA98 Mean ± Standard deviation	-	18, 17, 16 17.0 ± 1.0	27, 16, 12 18.3 ± 7.8	1347,1359,1560 1422.0 ± 119.7	
	+	37, 21, 28 28.7 ± 8.0	19, 28, 37 28.0 ± 9.0	- -	1183,1239,1424 1282.0 ± 126.1
<i>Salmonella typhimurium</i> TA100 Mean ± Standard deviation	-	108,110,129 115.7 ± 11.6	110,110,105 108.3 ± 2.9	404,353,416 391.0 ± 33.5	
	+	145,137,123 135.0 ± 11.1	138,121,117 125.3 ± 11.2	- -	1340,1249,1122 1237.0 ± 109.5
<i>Salmonella typhimurium</i> TA102 Mean ± Standard deviation	-	248,186,220 218.0 ± 31.0	208,229,233 223.3 ± 13.4	1105,1135,1081 1107.0 ± 27.1	
	+	247,247,213 235.7 ± 19.6	257,236,236 243.0 ± 12.1		

AZIDE
(1.0ug)2-AF
(20ug)MITOMYCIN C
(2ug)**COMMENTS**

S9 was used as a metabolic activator. NPD (4-nitro-*o*-phenylenediamine), Azide, and Mitomycin C are specific positive controls for strains TA 98, TA 100 and TA102 respectively while 2 - AF (2-aminofluorene) when used in conjunction with S9 is a positive control for both TA98 and TA100.

EVALUATION

The differences in the mean number of revertants between the blank and test extracts do not exceed two standard deviations; accordingly there is no evidence of any mutagenic effect. The product passed the requirements of clause 6.6 relating to genetic toxicity when tested at an exposure of 5000 mm² per Litre.

NUMBER OF SAMPLES

One sample was tested.


APPROVED SIGNATORY

Sam Loveder
Technical Officer

END OF REPORT

TEST REPORT FOR AS/NZS 4020:2002**CLAUSE 6.4 - GROWTH OF AQUATIC MICRO-ORGANISMS**

TESTING LABORATORY AUSTRALIAN WATER QUALITY CENTRE
HODGSON ROAD, BOLIVAR, SOUTH AUSTRALIA
(NATA Accreditation No. 1115)

REPORT NUMBER 4007/92.1567

SAMPLE REFERENCE 130351-0001

DATE 17/09/2004

PRODUCT DESIGNATION LIQUID RUBBER.

COMPOSITION OF PRODUCT ASPHALT RUBBERISED EMULSION.

PRODUCT MANUFACTURER LAFARGE ENGINEERED COATINGS, CANADA.

SUBMITTING ORGANISATION INTERNATIONAL BUILDING SOLUTIONS PTY LTD, INDY COURT,
NERANG, QLD.

USE OF PRODUCT MEMBRANE/LINER/SEALANT.

DESCRIPTION OF SAMPLE The sample consisted of a panel with dimensions 50 mm x 50 mm providing a total surface area of 5000 mm² per Litre.

Extracts were prepared using a 1000 mL volume of test water.

TEST METHOD AS/NZS 4020:2002 GROWTH OF AQUATIC MICRO-ORGANISMS (APPENDIX E)

INOCULUM The volume of inoculum was 100 mL.

SCALING FACTOR Not applied.

RESULTS

Mean Dissolved Oxygen	Control	7.4	mg/L
Mean Dissolved Oxygen Difference	Positive Reference	5.3	mg/L
	Negative Reference	0.1	mg/L
	Test	1.5	mg/L

EVALUATION The Mean Dissolved Oxygen Difference in the extracts did not exceed the maximum allowed. Accordingly the product passed the requirements of clause 6.4 at an exposure of 5000 mm² per Litre.

NUMBER OF SAMPLES One sample was tested.


APPROVED SIGNATORYPhil Thomas
Senior Chemist