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TEST REPORT

REPORT NUMBER 4007/92.1222

SAMPLE REFERENCE 130255-0001

DATE 31/10/2002

TRADE NAME OF PRODUCT CHEMSET 801.

COMPOSITION OF PRODUCT EPOXY RESIN.

PRODUCT MANUFACTURER RAMSET FASTENERS, MAROONDAH HWY, MOOROOLBARK, VIC.

SUBMITTING ORGANISATION RAMSET FASTENERS, MAROONDAH HWY, MOOROOLBARK, VIC.

USE OF PRODUCT CHEMICAL ANCHOR.

TESTING REQUESTED **AS/NZS 4020:1999**
PRODUCTS FOR USE IN CONTACT WITH DRINKING WATER

SAMPLES SAMPLES WERE PREPARED AND CONTROLLED AS DESCRIBED IN APPENDIX A OF AS/NZS 4020:1999

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
APPROVED SIGNATORY

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 4020:1999

SUMMARY OF RESULTS

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USE OF PRODUCT CHEMICAL ANCHOR.

<u>APPENDIX</u>	<u>RESULTS</u>
C - TASTE OF WATER EXTRACT	Passed at an exposure of 3000 mm ² per Litre.
D – APPEARANCE OF WATER EXTRACT	Passed at an exposure of 3000 mm ² per Litre.
E - GROWTH OF AQUATIC MICRO-ORGANISMS	Passed at an exposure of 3000 mm ² per Litre.
F - CYTOTOXIC ACTIVITY OF WATER EXTRACT	Passed at an exposure of 3000 mm ² per Litre.
G - MUTAGENIC ACTIVITY OF WATER EXTRACT	Passed at an exposure of 3000 mm ² per Litre.
H – EXTRACTION OF METALS	Not applicable.

TEST REPORT FOR AS/NZS 4020:1999

CLAUSE 6.2 - TASTE OF WATER EXTRACT

TESTING LABORATORY	AUSTRALIAN WATER QUALITY CENTRE HODGSON ROAD, BOLIVAR, SOUTH AUSTRALIA (NATA Accreditation No. 1390)
REPORT NUMBER	4007/92.1222
SAMPLE REFERENCE	130255-0001
DATE	31/10/2002
TRADE NAME OF PRODUCT	CHEMSET 801.
COMPOSITION OF PRODUCT	EPOXY RESIN.
PRODUCT MANUFACTURER	RAMSET FASTENERS, MAROONDAH HWY, MOOROOLBARK, VIC.
SUBMITTING ORGANISATION	RAMSET FASTENERS, MAROONDAH HWY, MOOROOLBARK, VIC.
USE OF PRODUCT	CHEMICAL ANCHOR.
DESCRIPTION OF SAMPLE	Each sample consisted of a panel of dimensions 100mm x 30mm with a thickness of 5mm, providing a total surface area of approximately 3000 mm ² per Litre. The sample was cured for 7 days at 25 ^o C prior to testing. Extracts were prepared using 1000 mL volumes of 50 mg/L hardness water.
TEST METHOD	AS/NZS 4020:1999 TASTE OF WATER EXTRACT (APPENDIX C)
SCALING FACTOR	Not applied.
RESULTS	No tastes were detected in the final extracts prepared with both controls with chlorinated and non-chlorinated water or from the controls.
EVALUATION	The product passed the requirements of clause 6.2 when tested at an exposure of 3000 mm ² per Litre.
NUMBER OF SAMPLES	Two samples were tested.


APPROVED SIGNATORY

TEST REPORT FOR AS/NZS 4020:1999

CLAUSE 6.3 - APPEARANCE OF WATER EXTRACT

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

REPORT NUMBER 4007/92.1222

SAMPLE REFERENCE 130255-0001

DATE 31/10/2002

TRADE NAME OF PRODUCT CHEMSET 801.

COMPOSITION OF PRODUCT EPOXY RESIN.

PRODUCT MANUFACTURER RAMSET FASTENERS, MAROONDAH HWY, MOOROOLBARK, VIC.

SUBMITTING ORGANISATION RAMSET FASTENERS, MAROONDAH HWY, MOOROOLBARK, VIC.

USE OF PRODUCT CHEMICAL ANCHOR.

DESCRIPTION OF SAMPLE Each sample consisted of a panel of dimensions 100mm x 30mm with a thickness of 5mm, providing a total surface area of approximately 3000 mm² per Litre. The sample was cured for 7 days at 25^oC prior to testing.

Extracts were prepared using 1000 mL volumes of 50 mg/L hardness water.

TEST METHOD AS/NZS 4020:1999 APPEARANCE OF WATER EXTRACT
(APPENDIX D)

SCALING FACTOR Not applied.

RESULTS

	Test (- Blank)	Maximum Allowed	
Colour	< 1.0	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 3000 mm² per Litre.

NUMBER OF SAMPLES One sample was tested.



APPROVED SIGNATORY

TEST REPORT FOR AS/NZS 4020:1999

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 4007/92.1222

SAMPLE REFERENCE 130255-0001

DATE 31/10/2002

TRADE NAME OF PRODUCT CHEMSET 801.

COMPOSITION OF PRODUCT EPOXY RESIN.

PRODUCT MANUFACTURER RAMSET FASTENERS, MAROONDAH HWY, MOOROOLBARK, VIC.

SUBMITTING ORGANISATION RAMSET FASTENERS, MAROONDAH HWY, MOOROOLBARK, VIC.

USE OF PRODUCT CHEMICAL ANCHOR.

DESCRIPTION OF SAMPLE Each sample consisted of a panel of dimensions 100mm x 30mm with a thickness of 5mm, providing a total surface area of approximately 3000 mm² per Litre. The sample was cured for 7 days at 25⁰C prior to testing.

Extracts were prepared using a 1000 mL volume of water.

TEST METHOD AS/NZS 4020:1999 GROWTH OF AQUATIC MICRO-ORGANISMS (APPENDIX E)

INOCULUM The volume of inoculum was 100 mL.

SCALING FACTOR Not applied.

RESULTS

Mean Dissolved Oxygen	Control	7.5	mg/L
Mean Dissolved Oxygen Difference	Positive Reference	5.4	mg/L
	Negative Reference	0.1	mg/L
	Test	0.2	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 3000 mm² per Litre.

NUMBER OF SAMPLES One sample was tested.


APPROVED SIGNATORY

TEST REPORT FOR AS/NZS 4020:1999

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 4007/92.1222

SAMPLE REFERENCE 130255-0001

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SUBMITTING ORGANISATION RAMSET FASTENERS, MAROONDAH HWY, MOOROOLBARK, VIC.

USE OF PRODUCT CHEMICAL ANCHOR.

DESCRIPTION OF SAMPLE Each sample consisted of a panel of dimensions 100mm x 30mm with a thickness of 5mm, providing a total surface area of approximately 3000 mm² per Litre. The sample was cured for 7 days at 25⁰C prior to testing.

Extracts were prepared using 1000 mL volumes of 50 mg/L hardness water.

TEST METHOD AS/NZS 4020:1999 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 3000 mm² per Litre.

NUMBER OF SAMPLES One sample was tested.



APPROVED SIGNATORY

TEST REPORT FOR AS/NZS 4020:1999

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	4007/92.1222	
SAMPLE REFERENCE	130255-0001	
DATE	31/10/2002	
TRADE NAME OF PRODUCT	CHEMSET 801.	
COMPOSITION OF PRODUCT	EPOXY RESIN.	
PRODUCT MANUFACTURER	RAMSET FASTENERS, MAROONDAH HWY, MOOROOLBARK, VIC.	
SUBMITTING ORGANISATION	RAMSET FASTENERS, MAROONDAH HWY, MOOROOLBARK, VIC.	
USE OF PRODUCT	CHEMICAL ANCHOR.	
DESCRIPTION OF SAMPLE	Each sample consisted of a panel of dimensions 100mm x 30mm with a thickness of 5mm, providing a total surface area of approximately 3000 mm ² per Litre. The sample was cured for 7 days at 25 ⁰ C prior to testing. Extracts were prepared using 1000 mL volumes of 50 mg/L hardness water.	
TEST METHOD	AS/NZS 4020:1999	MUTAGENIC ACTIVITY OF WATER EXTRACT (APPENDIX G)
SCALING FACTOR	Not applied.	

TEST REPORT FOR AS/NZS 4020:1999

CLAUSE 6.6 – MUTAGENIC ACTIVITY OF WATER EXTRACT

REPORT NUMBER 4007/92.1222
SAMPLE REFERENCE 130255-0001
DATE 31/10/2002
TEST METHOD AS/NZS 4020:1999 MUTAGENIC ACTIVITY OF WATER EXTRACT (APPENDIX G)

RESULTS

BACTERIAL STRAIN

NUMBER OF REVERTANTS per PLATE

	S9	Blank	Neat Sample	Positive Controls	
				<u>NPD</u> (20ug)	<u>2-AF</u> (20ug)
<i>Salmonella typhimurium</i> TA98	-	27, 36, 27	29, 29, 37	2549,2640,2589	
Mean ± Standard deviation		30.0 ± 5.2	31.7 ± 4.6	2592.7 ± 45.6	
	+	21, 28, 29	26, 24, 17	-	762,756,830
Mean ± Standard deviation		26.0 ± 4.4	22.3 ± 4.7	-	782.7 ± 41.1
				<u>AZIDE</u> (1.0ug)	<u>2-AF</u> (20ug)
<i>Salmonella typhimurium</i> TA100	-	183,153,159	172,163,169	453,458,445	
Mean ± Standard deviation		165.0 ± 15.9	168.0 ± 4.6	452.0 ± 6.6	
	+	137,146,188	158,164,141	-	475, 464, 424
Mean ± Standard deviation		157.0 ± 27.2	154.3 ± 11.9	-	454.3 ± 26.8
				<u>MITOMYCIN C</u> (2ug)	
<i>Salmonella typhimurium</i> TA102	-	315,317,316	315,314,269	1948,1552,1572	
Mean ± Standard deviation		316.0 ± 1.0	299.3 ± 26.3	1690.7 ± 223.1	
	+	337,330,343	280,314,319		
Mean ± Standard deviation		336.7 ± 6.5	304.3 ± 21.2		

COMMENTS

Clause G7.3.1 is currently under evaluation and was not conducted in this test method. 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 3000 mm² per Litre.

NUMBER OF SAMPLES

One sample was tested.


APPROVED SIGNATORY

END OF REPORT