



Our Reference : REF130086-0005  
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Date : 7th November 2000

Xypex Australia  
PO Box 255  
Lavington 2641

Dear Sir,

Attached is a report to AS/NZS 4020 -1999 for the Xypex Concentrate submitted for testing. The product passed all the requirements of the Standard at an exposure of 15000 mm<sup>2</sup> per Litre.

Should you have any enquiries about the report or any other matters pertaining to the Standard please contact Marilena Marchesan or Michael Glasson on 08 8259 0332.

A handwritten signature in blue ink that reads 'M. Marchesan'.

Marilena Marchesan  
SENIOR TECHNICAL OFFICER



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

## CERTIFICATE OF TEST

**REPORT NUMBER** 4007/92.698  
**SAMPLE REFERENCE** 130086-0005  
**DATE** 27/10/00  
**TRADE NAME OF PRODUCT** XYPEX CONCENTRATE  
**COMPOSITION OF PRODUCT** CEMENTITIOUS.  
**PRODUCT MANUFACTURER** XYPEX AUSTRALIA, UNION RD, LAVINGTON, NSW.  
**SUBMITTING ORGANISATION** XYPEX AUSTRALIA, UNION RD, LAVINGTON, NSW.  
**USE OF PRODUCT** APPLIED COATING - WATERPROOF CONCRETE.  
**TESTING REQUESTED** **AS/NZS 4020:1999**  
**PRODUCTS FOR USE IN CONTACT WITH DRINKING WATER**  
  
(ON SAMPLES RECEIVED AT THE AUSTRALIAN WATER QUALITY CENTRE)  
**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 PRODUCTS).

### 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 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. MARCHESAN  
APPROVED SIGNATORY



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A BUSINESS UNIT OF THE SOUTH AUSTRALIAN WATER CORPORATION

**TEST REPORT FOR AS/NZS 4020:1999**

**CLAUSE 6.2 - TASTE OF WATER EXTRACT**

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

**REPORT NUMBER** 4007/92.698

**SAMPLE REFERENCE** 130086-0005

**DATE** 27/10/00

**TRADE NAME OF PRODUCT** XYPEX CONCENTRATE

**COMPOSITION OF PRODUCT** CEMENTITIOUS.

**PRODUCT MANUFACTURER** XYPEX AUSTRALIA, UNION RD, LAVINGTON, NSW.

**SUBMITTING ORGANISATION** XYPEX AUSTRALIA, UNION RD, LAVINGTON, NSW.

**USE OF PRODUCT** APPLIED COATING - WATERPROOF CONCRETE.

**DESCRIPTION OF SAMPLE** The sample was prepared, as instructed by the submitting organisation. The product was applied to the surface of two glass panels with dimensions 75 x 100 mm at a thickness of 1.25 mm and providing a total surface area of 15000 mm<sup>2</sup> per Litre. After 48 hours a second coat was applied and the samples were then cured for 7 days at 25°C.

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

**CEMENTITIOUS PRODUCTS** A standard moist-curing of 28 days at 22°C was performed in accordance with AS 1012.8. After curing the samples were pre-conditioned with water with an aggressivity index of 12.6. Seven sequential soakings were performed to obtain a pH < 9.0

**TEST METHOD** AS/NZS 4020:1999 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 15000 mm<sup>2</sup> per Litre with chlorinated and non-chlorinated water.

**EVALUATION** The product passed the requirements of clause 6.2 when tested at an exposure of 15000 mm<sup>2</sup> per Litre.

**NUMBER OF SAMPLES** Two samples were tested.



**M. MARCHESAN - SENIOR TECHNICAL OFFICER**  
**APPROVED SIGNATORY**

## **TEST REPORT FOR AS/NZS 4020:1999**

### **CLAUSE 6.3 - APPEARANCE OF WATER EXTRACT**

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

**REPORT NUMBER** 4007/92.698

**SAMPLE REFERENCE** 130086-0005

**DATE** 27/10/00

**TRADE NAME OF PRODUCT** XYPEX CONCENTRATE

**COMPOSITION OF PRODUCT** CEMENTITIOUS.

**PRODUCT MANUFACTURER** XYPEX AUSTRALIA, UNION RD, LAVINGTON, NSW.

**SUBMITTING ORGANISATION** XYPEX AUSTRALIA, UNION RD, LAVINGTON, NSW.

**USE OF PRODUCT** APPLIED COATING - WATERPROOF CONCRETE.

**DESCRIPTION OF SAMPLE** The sample was prepared, as instructed by the submitting organisation. The product was applied to the surface of two glass panels with dimensions 75 x 100 mm at a thickness of 1.25 mm and providing a total surface area of 15000 mm<sup>2</sup> per Litre. After 48 hours a second coat was applied and the samples were then cured for 7 days at 25°C.

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

**CEMENTITIOUS PRODUCTS** A standard moist-curing of 28 days at 22°C was performed in accordance with AS 1012.8. After curing the samples were pre-conditioned with water with an aggressivity index of 12.6. Seven sequential soakings were performed to obtain a pH < 9.0

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


**SCALING FACTOR** A scaling factor of .45 applied.

### **RESULTS**

Test (- Blank)	Maximum Allowed	
Colour < 2.0	5.0	HU
Turbidity < 0.49	0.5	NTU

**EVALUATION** The mean value of the test extract minus the blank for the final extract passed the requirements of clause 6.3 when tested at an exposure of 6600 mm<sup>2</sup> per Litre with a scaling factor of .45 applied.

**NUMBER OF SAMPLES** One sample was tested.

  
**P.M.THOMAS - SENIOR CHEMIST**  
**APPROVED SIGNATORY**

**TEST REPORT FOR AS/NZS 4020:1999**

**CLAUSE 6.4 - GROWTH OF AQUATIC MICRO-ORGANISMS**

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

**REPORT NUMBER** 4007/92.698

**SAMPLE REFERENCE** 130086-0005

**DATE** 27/10/00

**TRADE NAME OF PRODUCT** XYPEX CONCENTRATE

**COMPOSITION OF PRODUCT** CEMENTITIOUS.

**PRODUCT MANUFACTURER** XYPEX AUSTRALIA, UNION RD, LAVINGTON, NSW.

**SUBMITTING ORGANISATION** XYPEX AUSTRALIA, UNION RD, LAVINGTON, NSW.

**USE OF PRODUCT** APPLIED COATING -WATERPROOF CONCRETE.

**DESCRIPTION OF SAMPLE** The sample was prepared, as instructed by the submitting organisation. The product was applied to the surface of two glass panels with dimensions 75 x 100 mm at a thickness of 1.25 mm and providing a total surface area of 15000 mm<sup>2</sup> per Litre. After 48 hours a second coat was applied and the samples were then cured for 7 days at 25°C.

Extracts were prepared using a 1000 mL volume of water.

**CEMENTITIOUS PRODUCTS** A standard moist-curing of 28 days at 22°C was performed in accordance with AS 1012.8. After curing the samples were pre-conditioned with water with an aggressivity index of 12.6. Seven sequential soakings were performed to obtain a pH < 9.0

**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	6.7	mg/L
Mean Dissolved Oxygen Difference	Positive Reference	4.9	mg/L
	Negative Reference	0.2	mg/L
	Test 0.1	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 15000 MM<sup>2</sup> per Litre.

**NUMBER OF SAMPLES** One sample was tested.

  
**P.M.THOMAS - SENIOR CHEMIST**  
**APPROVED SIGNATORY**

**TEST REPORT FOR AS/NZS 4020:1999**

**CLAUSE 6.5 - CYTOTOXIC ACTIVITY OF WATER EXTRACT**

**TESTING LABORATORY**

INSTITUTE OF MEDICAL AND VETERINARY SCIENCE  
FROME ROAD, ADELAIDE, SOUTH AUSTRALIA  
(NATA Accreditation No. 2348)

**REPORT NUMBER** 4007/92.698

**SAMPLE REFERENCE** 130086-0005

**DATE** 27/10/00

**TRADE NAME OF PRODUCT**

XYPEX CONCENTRATE

**COMPOSITION OF PRODUCT** CEMENTITIOUS.

**PRODUCT MANUFACTURER**

XYPEX AUSTRALIA, UNION RD, LAVINGTON, NSW.

**SUBMITTING ORGANISATION** XYPEX AUSTRALIA, UNION RD, LAVINGTON, NSW.

**USE OF PRODUCT** APPLIED COATING - WATERPROOF CONCRETE.

**DESCRIPTION OF SAMPLE**

The sample was prepared, as instructed by the submitting organisation. The

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product was applied to the surface of two glass panels with dimensions 75 x 100 mm at a thickness of 1.25 mm and providing a total surface area of 15000 mm<sup>2</sup> per Litre. After 48 hours a second coat was applied and the samples were then cured for 7 days at 25°C.

**CEMENTITIOUS PRODUCTS**

accordance

A standard moist-curing of 28 days at 22°C was performed in

with AS 1012.8. After curing the samples were pre-conditioned with water with an aggressivity index of 12.6. Seven sequential soakings were performed to obtain a pH < 9.0

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**

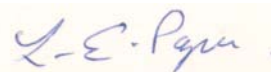
**Confluent** growth of regularly-shaped cells was observed in the containers with the control and test extracts.

**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 15000 MM<sup>2</sup> per Litre.

**NUMBER OF SAMPLES**

One sample was tested.



**L. PAYNE – SENIOR TECHNICIAN**  
**APPROVED SIGNATORY**

**TEST REPORT FOR AS/NZS 4020:1999**

**CLAUSE 6.6 - MUTAGENIC ACTIVITY OF WATER EXTRACT**

**TESTING LABORATORY**

AUSTRALIAN WATER QUALITY CENTRE

PORT WAKEFIELD ROAD, BOLIVAR, SOUTH AUSTRALIA

(NATA Accreditation No. 1390)

**REPORT NUMBER** 4007/92.698

**SAMPLE REFERENCE** 130086-0005

**DATE** 27/10/00

**TRADE NAME OF PRODUCT**

XYPEX CONCENTRATE

**COMPOSITION OF PRODUCT**

CEMENTITIOUS.

**PRODUCT MANUFACTURER**

XYPEX AUSTRALIA, UNION RD, LAVINGTON, NSW.

**SUBMITTING ORGANISATION** XYPEX AUSTRALIA, UNION RD, LAVINGTON, NSW.

**USE OF PRODUCT** APPLIED COATING -WATERPROOF CONCRETE.

**DESCRIPTION OF SAMPLE**

The sample was prepared, as instructed by the submitting organisation. The product was applied to the surface of two glass panels with dimensions 75 x 100 mm at a thickness of 1.25 mm and providing a total surface area of 15000 mm<sup>2</sup> per Litre. After 48 hours a second coat was applied and the samples were then cured for 7 days at 25°C.

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

**CEMENTITIOUS PRODUCTS**

A standard moist-curing of 28 days at 22°C was performed in accordance with AS 1012.8. After curing the samples were pre-conditioned with water with an aggressivity index of 12.6. Seven sequential soakings were performed to obtain a pH < 9.0

**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** 4007/92.698

**SAMPLE REFERENCE** 130086-0005

**DATE** 27/10/00

**TEST METHOD** AS/NZS 4020:1999 MUTAGENIC ACTIVITY OF WATER EXTRACT (APPENDIX G)

**RESULTS**

BACTERIAL STRAIN	NUMBER OF REVERTANTS per PLATE					
	S9	Blank	Filtrate	Concentrate NPD (20ug)	Positive Controls	2-AF (20ug)
Salmonella typhimurium TA98	-	28, 16, 22	19, 19, 29	27, 25, 23	1050,1050,548	
Mean ± Standard deviation			22.0 ± 6.0	22.3 ± 5.8	25.0 ± 2.0	869.3 ± 279.0
+		29, 24, 19	24, 41, 26	16, 26, 24	-	675,929,1060
Mean ± Standard deviation			24.0 ± 5.0	30.3 ± 9.3	22.0 ± 5.3	-
888.0 ± 195.7						
Salmonella typhimurium TA100	-		156,185,177	128,144,140	175,153,110	596,603,612
Mean ± Standard deviation			172.7 ± 15.0	137.3 ± 8.3	146.0 ± 33.1	603.7 ± 8.0
+		141,160,140	145,161,129	152, 163,132	-	824,904,984
Mean ± Standard deviation			147.0 ± 11.3	145.0 ± 16.0	149.0 ± 15.7	-
904.0 ± 80.0						
					<u>MITOMYCIN C</u> (tug)	
Salmonella typhimurium TA102	-			253,244,287	292,204,287	273,205,199
802,904,1041						
Mean ± Standard deviation				261.3 ± 22.7	261.0 ± 49.4	225.7 ± 41.1
915.7 ± 119.9						
Salmonella typhimurium TA102	+			223,277,220	268,295,197	320,188,286
Mean ± Standard deviation				240.0 ± 32.1	253.3 ± 50.6	264.7 ± 68.5

**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 15000 mm<sup>2</sup> per Litre.

**NUMBER OF SAMPLES** One sample was tested.

  
**M. MARCHESAN - SENIOR TECHNICAL OFFICER**  
**APPROVED SIGNATORY**

**END OF REPORT**