PO Box 1751
Adelaide SA 5001

250 Victoria Square
Adelaide SA 5000

Tel: 1300 653 366
Fax: 1300 883 171

Internet: www.awqc.com.au

Email: producttesting@awqc.com.au

Nextep Miyama Pty Ltd
Attn: Ben Collins
34 Fairey Road
South Windsor
NSW 2756
AUSTRALIA

10/02/2021

Dear Ben,

Please find the attached report to AS/NZS 4020:2018 for Fibreglass Pultrusion Profile (Yellow Coloured - Representative Sample) submitted for testing.

Should you have any enquiries about the report or any other matters pertaining to the Standard please contact the laboratory on 61 8 7424 1512

Yours sincerely,

Michael Glasson
Supervisor Product Testing

PO Box 1751
Adelaide SA 5001

250 Victoria Square
Adelaide SA 5000

Tel: 1300 653 366
Fax: 1300 883 171

Internet: www.awqc.com.au

Email: producttesting@awqc.com.au

FINAL REPORT

Report ID : 302427

Report Information

Submitting Organisation :	00109389 : Nextep Miyama Pty Ltd
Account :	130369 : Nextep Miyama Pty Ltd - AS/NZS 4020 Testing
AWQC Reference :	130369-2020-CSR-1 : Prod Test: FRP
Project Reference :	PT-4450
Product Designation :	Fibreglass Pultrusion Profile (Yellow Coloured - Representative Sample)
Composition of Product :	Vinyl Ester Resin - Glass Fibre Strands.
Product Manufacturer :	Jiangsu Aulland New Material Co., Ltd, Nantong, CHINA.
Use of Product :	In-Line/Assembly of Ladders, Handrails, Grating and Platforms.
Sample Selection:	As provided by the submitting organisation.
Testing Requested :	**AS/NZS 4020 TESTING OF PRODUCTS FOR USE IN CONTACT WITH DRINKING WATER**
Product Type :	Composite
Samples :	Samples were prepared and controlled as described in Appendix A of AS/NZS 4020:2018
Extracts :	Extracts were prepared as described in Appendix/Clause C, D, E, F, H, 6.8.
Project Completion Date :	10-Feb-2021
Project Comment :	The results presented herein demonstrate compliance of Fibreglass Pultrusion Profile (Yell ow Coloured - Representative Sample) to AS/NZS 4020 when exposed at area to volume ratios up to 10,800mm²/L at 20°C ± 2°C.

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

Michael Glasson
APPROVED SIGNATORY

NATA
WORLD RECOGNISED ACCREDITATION

Corporate Accreditation No.1115
Chemical and Biological Testing
Accredited for compliance with ISO/IEC 17025

ilac-MRA

PO Box 1751
Adelaide SA 5001

250 Victoria Square
Adelaide SA 5000

Tel: 1300 653 366
Fax: 1300 883 171

Internet: www.awqc.com.au

Email: producttesting@awqc.com.au

AWQC

FINAL REPORT

Report ID : 302427

Summary of Results

APPENDIX/CLAUSE	RESULTS
C – Taste	Passed at an exposure of 10,800 mm² per Litre.
D – Appearance	Passed at an exposure of 15,000 mm² per Litre.
E – Growth of Aquatic Micro-organisms	Passed at an exposure of 15,000 mm² per Litre.
F – Cytotoxic Activity	Passed at an exposure of 15,000 mm² per Litre.
H – Metals	Passed at an exposure of 10,800 mm² per Litre with a 0.72 scaling factor applied.
6.8 – Organic Compounds	Passed at an exposure of 15,000 mm² per Litre.

Test Methods

Test(s) in Appendix	AWQC Test Method	Reference Method
C	T0320-01	AS/NZS 4020:2018
D	TO029-01 & TO018-01	APHA 2120c & APHA 2130b
E	TO014-03	APHA 4500 O G
F	TM-001	AS/NZS 4020:2018
H	TIC-006	EPA 200.8

Organic Test Methods

Test(s) in Clause	Test Method	Reference Method
Clause 6.8	TMZ-M36	USEPA524.2
	EP239	USEPA521
	EP132-LL	USEPA_SW846-8270D
	EP075C	USEPA_SW846-8270D
	EP075ASIM	USEPA_SW846-8270D

Summary Comment : Not applicable.

PO Box 1751
Adelaide SA 5001

250 Victoria Square
Adelaide SA 5000

Tel: 1300 653 366
Fax: 1300 883 171

Internet: www.awqc.com.au

Email: producttesting@awqc.com.au

AWQC

FINAL REPORT

Report ID : 302427

CLAUSE 6.2 Taste

Sample Description	The sample consisted of a single panel with dimensions 50 mm x 145 mm and 2 mm thickness providing a total surface area of approximately 10,800 mm²/L. Extracts were prepared using 1340 mL volumes of 50 mg/L hardness water.
Extraction Temperature	20°C ± 2°C.
Test Method	Taste (Appendix C)
Test Information	
Scaling Factor	Not applicable.
Results	Not detected (sample and controls).
Evaluation	The product passed the requirements of clause 6.2 when tested at an exposure of 10,800 mm² per Litre.
Number of Samples	2.
Test Comment	Not applicable.

Michael Glasson
APPROVED SIGNATORY

NATA
WORLD RECOGNISED ACCREDITATION

Corporate Accreditation No.1115
Chemical and Biological Testing
Accredited for compliance with ISO/IEC 17025

ilac-MRA

PO Box 1751
Adelaide SA 5001

250 Victoria Square
Adelaide SA 5000

Tel: 1300 653 366
Fax: 1300 883 171

Internet: www.awqc.com.au

Email: producttesting@awqc.com.au

FINAL REPORT

Report ID : 302427

CLAUSE 6.3 Appearance

Sample Description The sample consisted of a single panel with dimensions 50 mm x 145 mm and 2 mm thickness providing a total surface area of approximately 15,000 mm²/L. Extracts were prepared using 970 mL volumes of 50 mg/L hardness water.

Extraction Temperature 20°C ± 2°C.

Test Method Appearance (Appendix D)

Scaling Factor Not applicable.

Results

	Test (- Blank)	Maximum Allowed	Units
Colour	<1	5	HU
Turbidity	<0.1	0.5	NTU

Evaluation The product passed the requirements of clause 6.3 when tested at an exposure of 15,000 mm² per Litre.

Number of Samples 1.

Test Comment Not applicable.

Dzung Bui
APPROVED SIGNATORY

NATA
WORLD RECOGNISED ACCREDITATION

Corporate Accreditation No.1115
Chemical and Biological Testing
Accredited for compliance with ISO/IEC 17025

ilac-MRA

PO Box 1751
Adelaide SA 5001

250 Victoria Square
Adelaide SA 5000

Tel: 1300 653 366
Fax: 1300 883 171

Internet: www.awqc.com.au

Email: producttesting@awqc.com.au

AWQC

FINAL REPORT

Report ID : 302427

CLAUSE 6.4 Growth of Aquatic Micro-organisms

Sample Description

The sample consisted of a single panel with dimensions 50 mm x 145 mm and 2 mm thickness providing a total surface area of approximately 15,000 mm²/L. Extracts were prepared using 970 mL volumes of test water.

Test Method

Growth of Aquatic Micro-organisms (Appendix E)

Inoculum

The volume of the inoculum was 100 mL

Scaling Factor

Not applicable.

Results

Mean Dissolved Oxygen	Control	7.6	mg/L
Mean Dissolved Oxygen Difference	Positive Reference	5.5	mg/L
	Negative Reference	<0.1	mg/L
	Test	0.10	mg/L

Evaluation

The product passed the requirements of clause 6.4 when tested at an exposure of 15,000 mm² per Litre.

Number of Samples

1.

Test Comment

Not applicable.

Aji John
APPROVED SIGNATORY

NATA
WORLD RECOGNISED ACCREDITATION

Corporate Accreditation No.1115
Chemical and Biological Testing
Accredited for compliance with ISO/IEC 17025

ilac-MRA

PO Box 1751
Adelaide SA 5001

250 Victoria Square
Adelaide SA 5000

Tel: 1300 653 366
Fax: 1300 883 171

Internet: www.awqc.com.au

Email: producttesting@awqc.com.au

AWQC

FINAL REPORT

Report ID : 302427

CLAUSE 6.5 Cytotoxic Activity

Sample Description	The sample consisted of a single panel with dimensions 50 mm x 145 mm and 2 mm thickness providing a total surface area of approximately 15,000 mm²/L. Extracts were prepared using 970 mL volumes of 50 mg/L hardness water.
Extraction Temperature	20°C ± 2°C.
Test Method	Cytotoxic Activity (Appendix F)
Scaling Factor	Not applicable.
Results	Non-cytotoxic (sample and controls).
Evaluation	The product passed the requirements of clause 6.5 when tested at an exposure of 15,000 mm² per Litre.
Number of Samples	1.
Test Comment	The test extracts and blank extracts were used to prepare nutrient growth medium and subsequently used to grow a cell line (ATCC Number CCL 81) in the analysis. In addition zinc sulphate (0.4 mmol) was used for the positive control in the analysis.

Mira Maric
APPROVED SIGNATORY

NATA
WORLD RECOGNISED ACCREDITATION

Corporate Accreditation No.1115
Chemical and Biological Testing
Accredited for compliance with ISO/IEC 17025

ilac-MRA

PO Box 1751
Adelaide SA 5001

250 Victoria Square
Adelaide SA 5000

Tel: 1300 653 366
Fax: 1300 883 171

Internet: www.awqc.com.au

Email: producttesting@awqc.com.au

AWQC

FINAL REPORT

Report ID : 302427

CLAUSE 6.7 Metals

Sample Description The sample consisted of a single panel with dimensions 50 mm x 145 mm and 2 mm thickness providing a total surface area of approximately 15,000 mm²/L. Extracts were prepared using 970 mL volumes of 50 mg/L hardness water.

Extraction Temperature 20°C ± 2°C.

Test Method Metals (Appendix H)

Scaling Factor A scaling factor of 0.72 was applied.

Method of Analysis All methods used to determine concentrations of metals are based on those described in the US EPA method 200.8 Determination of Trace elements in Waters and Wastes by Inductively Coupled Plasma - Mass Spectrometry. The methods have been adapted for the instrumentation in use at the Australian Water Quality Centre.
Concentration of the metals described in Table 2 of the AS/NZS 4020:2018 are determined as follows:
Aluminium, Antimony, Arsenic, Barium, Boron, Cadmium, Chromium, Copper, Iron, Lead, Manganese, Mercury, Molybdenum, Nickel, Selenium and Silver by Inductively Coupled Plasma Mass Spectrometry.

Results	Limit of Reporting mg/L	Blank mg/L	Test 1 mg/L	Test 2 mg/L	Max Allowed mg/L
Final Extract					
Aluminium	0.001	0.012	0.009	0.009	0.2
Antimony	0.0005	<0.0005	<0.0005	<0.0005	0.003
Arsenic	0.0003	<0.0003	<0.0003	<0.0003	0.01
Barium	0.0005	<0.0005	<0.0005	<0.0005	0.7
Boron	0.020	0.022	<0.02	<0.02	1.4
Cadmium	0.0001	<0.0001	<0.0001	<0.0001	0.002
Chromium	0.0001	<0.0001	0.0019	0.0019	0.05
Copper	0.0001	<0.0001	0.0001	0.0001	2.0
Iron	0.0005	<0.0005	<0.0005	<0.0005	0.3
Lead	0.0001	<0.0001	0.0100	0.0099	0.01
Manganese	0.0001	<0.0001	<0.0001	<0.0001	0.1
Mercury	0.00003	<0.00003	<0.00003	<0.00003	0.001
Molybdenum	0.0001	<0.0001	<0.0001	<0.0001	0.05
Nickel	0.0001	<0.0001	<0.0001	<0.0001	0.02
Selenium	0.0001	<0.0001	<0.0001	<0.0001	0.01
Silver	0.00003	<0.00003	<0.00003	<0.00003	0.1

Evaluation The product passed the requirements of clause 6.7 when tested at an exposure of 10,800 mm² per Litre with a 0.72 scaling factor applied.

Number of Samples 1.

Test Comment The final (7th) extract exceeded the maximum allowable concentration for lead (Pb) when tested at 15,000mm²/L. A scaling factor of 0.72 was applied to meet the requirements of Clause 6.7 at 10,800mm²/L.

Andrew Paul Ford

Andrew Ford
APPROVED SIGNATORY

NATA
WORLD RECOGNISED ACCREDITATION

Corporate Accreditation No.1115
Chemical and Biological Testing
Accredited for compliance with ISO/IEC 17025

ilac-MRA

PO Box 1751
Adelaide SA 5001

250 Victoria Square
Adelaide SA 5000

Tel: 1300 653 366
Fax: 1300 883 171

Internet: www.awqc.com.au

Email: producttesting@awqc.com.au

AWQC

FINAL REPORT

Report ID : 302427

CLAUSE 6.8 Organic Compounds

Sample Description The sample consisted of a single panel with dimensions 50 mm x 145 mm and 2 mm thickness providing a total surface area of approximately 15,000 mm²/L. Extracts were prepared using 970 mL volumes of 50 mg/L hardness water.

Extraction Temperature 20°C ± 2°C.

Test Method Organic Compounds (Clause 6.8). Max Allowed values are taken from the Australian Drinking Water Guidelines and Drinking-water Standards for New Zealand. Please note, some reported compounds have no guideline value.

Scaling Factor Not applicable.

Results

Organic Compound Nitrosamines	Blank µg/L	Test µg/L	Max Allowed
!External Lab Report No.	ES2043116	ES2043116	
1-Nitrosopiperidine (NPip)	<0.003	<0.003	
1-Nitrosopyrrolidine (NPyr)	<0.01	<0.01	
Nitrosomorpholine (NMor)	<0.003	<0.003	
N-Nitrosodiethylamine (NDEA)	<0.01	<0.01	
N-Nitrosodimethylamine (NDMA)	0.005	<0.003	0.1 µg/L
N-Nitrosodi-n-propylamine (NDPA)	<0.003	<0.003	
N-Nitrosomethylethylamine (NMEA)	<0.003	<0.003	

Organic Compound Phenols	Blank µg/L	Test µg/L	Max Allowed
!External Lab Report No.	ES2043116	ES2043116	
2 4 5-trichlorophenol	<1.0	<1.0	
2 4 6-trichlorophenol	<1.0	<1.0	20 µg/L
2 4-dichlorophenol	<1.0	<1.0	200 µg/L
2 4-dimethylphenol	<1.0	<1.0	
2 6-dichlorophenol	<1.0	<1.0	
2-chlorophenol	<1.0	<1.0	300 µg/L
2-nitrophenol	<1.0	<1.0	
4-chloro-3-methylphenol	<1.0	<1.0	
m+p cresol	<2.0	<2.0	
o-cresol	<1.0	<1.0	
pentachlorophenol	<2.0	<2.0	9 µg/L
phenol	<1.0	<1.0	

PO Box 1751
Adelaide SA 5001

250 Victoria Square
Adelaide SA 5000

Tel: 1300 653 366
Fax: 1300 883 171

Internet: www.awqc.com.au

Email: producttesting@awqc.com.au

AWQC

FINAL REPORT

Report ID : 302427

Organic Compound **Phthalate Esters**	Blank µg/L	Test µg/L	Max Allowed
!External Lab Report No.	ES2043116	ES2043116	
Bis(2-ethylhexyl) phthalate	<10	<10	10 µg/L
Butyl benzyl phthalate	<2	<2	
Di(2-ethylhexyl) adipate	<2	<2	
Diethyl phthalate	<2	<2	
Dimethyl phthalate	<2	<2	
Di-n-butyl phthalate	<2	<2	
Di-n-octyl phthalate	<2	<2	

Organic Compound **Polycyclic Aromatic Hydrocarbons**	Blank µg/L	Test µg/L	Max Allowed
!External Lab Report No.	ES2043116	ES2043116	
Acenaphthene	<0.02	<0.02	
Acenaphthylene	<0.02	<0.02	
Anthracene	<0.02	<0.02	
Benzo(a)anthracene	<0.02	<0.02	
Benzo(a)pyrene	<0.005	<0.005	0.01 µg/L
Benzo(a)pyrene TEQ	<0.005	<0.005	
Benzo(b+j)fluoranthene	<0.02	<0.02	
Benzo(ghi)perylene	<0.02	<0.02	
Benzo(k)fluoranthene	<0.02	<0.02	
Chrysene	<0.02	<0.02	
Dibenzo(a-h)anthracene	<0.02	<0.02	
Fluoranthene	<0.02	<0.02	
Fluorene	<0.02	<0.02	
Indeno(123-cd)pyrene	<0.02	<0.02	
Naphthalene	<0.02	<0.02	
PAH - Total	<0.005	<0.005	
Phenanthrene	<0.02	<0.02	
Pyrene	<0.02	<0.02	

PO Box 1751
Adelaide SA 5001

250 Victoria Square
Adelaide SA 5000

Tel: 1300 653 366
Fax: 1300 883 171

Internet: www.awqc.com.au

Email: producttesting@awqc.com.au

FINAL REPORT

Report ID : 302427

Organic Compound

Volatile Organic Compounds GCMS	Blank µg/L	Test µg/L	Max Allowed
1 1 1 2-Tetrachloroethane	<1	<1	
1 1 1-Trichloroethane	<1	<1	
1 1 2 2-Tetrachloroethane	<1	<1	
1 1 2-Trichloroethane	<1	<1	
1 1-Dichloropropene	<1	<1	
1 2 3-Trichlorobenzene	<1	<1	
1 2 3-Trichloropropane	<1	<1	
1 2 4-Trichlorobenzene	<1	<1	
1 2 4-Trimethylbenzene	<1	<1	
1 2-Dibromo-3-chloropropane	<1	<1	1 µg/L
1 2-Dibromoethane	<1	<1	1 µg/L
1 2-Dichlorobenzene	<1	<1	1500 µg/L
1 2-Dichloroethane	<1	<1	3 µg/L
1 2-Dichloropropane	<1	<1	
1 3 5-Trimethylbenzene	<1	<1	
1 3-Dichlorobenzene	<1	<1	
1 3-Dichloropropane	<1	<1	
1 4-Dichlorobenzene	<1	<1	40 µg/L
1,1-Dichloroethane	<1	<1	
1,1-Dichloroethene	<1	<1	30 µg/L
2,2-Dichloropropane	<1	<1	
2-Chlorotoluene	<1	<1	
4-Chlorotoluene	<1	<1	
4-Isopropyltoluene	<1	<1	
Benzene	<1	<1	1 µg/L
Bromobenzene	<1	<1	
Bromochloromethane	<1	<1	
Bromodichloromethane	<1	<1	60 µg/L
Bromoform	<1	<1	100 µg/L
Bromomethane	<4	<4	
Carbon tetrachloride	<1	<1	3 µg/L
Chlorobenzene	<1	<1	300 µg/L
Chloroethane	<4	<4	
Chloroform	<1	<1	400 µg/L
Chloromethane	<4	<4	
cis-1 3-Dichloropropene	<1	<1	
cis-1,2-Dichloroethene	<1	<1	
Dibromochloromethane	<1	<1	150 µg/L
Dibromomethane	<1	<1	
Dichlorodifluoromethane	<1	<1	
Dichloromethane	<4	<4	4 µg/L
Ethylbenzene	<1	<1	300 µg/L
Hexachlorobutadiene	<0.7	<0.7	0.7 µg/L
Isopropylbenzene	<1	<1	
m+p-Xylenes - Total	<2	<2	

PO Box 1751
Adelaide SA 5001

250 Victoria Square
Adelaide SA 5000

Tel: 1300 653 366
Fax: 1300 883 171

Internet: www.awqc.com.au

Email: producttesting@awqc.com.au

AWQC

FINAL REPORT

Report ID : 302427

Organic Compound **Volatile Organic Compounds GCMS**	Blank µg/L	Test µg/L	Max Allowed
Naphthalene	<1	<1	
n-Butylbenzene	<1	<1	
n-Propylbenzene	<1	<1	
o-Xylene	<1	<1	
sec-Butylbenzene	<1	<1	
Styrene	<1	12	30 µg/L
tert-Butylbenzene	<1	<1	
Tetrachloroethene	<1	<1	50 µg/L
Toluene	<1	<1	800 µg/L
Total 1 2-dichloroethene	<2	<2	60 µg/L
Total 1 3-dichloropropene	<2	<2	20 µg/L
Total Trichlorobenzene	<2	<2	30 µg/L
Total Xylene	<3	<3	600 µg/L
trans-1 3-Dichloropropene	<1	<1	
trans-1,2-Dichloroethene	<1	<1	
Trichloroethene	<1	<1	
Trichlorofluoromethane	<1	<1	
Trihalomethanes - Total	<4	<4	250 µg/L
Vinyl chloride	<0.3	<0.3	0.3 µg/L

Evaluation The product passed the requirements of clause 6.8 when tested at an exposure of 15,000 mm² per Litre.

Number of Samples 1.

Test Comment Not applicable.

Qiong Huang

APPROVED SIGNATORY

NATA
WORLD RECOGNISED ACCREDITATION

Corporate Accreditation No.1115
Chemical and Biological Testing
Accredited for compliance with ISO/IEC 17025

ilac-MRA