

## Compliance Testing Report For Australian Standard AS 60529-2004 Degrees of Protection Provided by Enclosures (IP Code)

Client: Watertech Services International Pty Ltd  
Address: Unit 2/17 Lawrence Dr, Nerang, Queensland 4211, Australia  
Report Number: 1031ENVES3\_529\_A1  
(Replacement report for 1031ENVES3\_529)\*  
Date of Testing: 24 September 2018  
File Number: ENV180420

Equipment Name: Enviroswim Pool Sanitiser  
Equipment Model Number: **ES-3**  
Equipment tradename/brand name: Enviroswim  
Equipment Description: Pool Sanitiser

Result: **COMPLIES\***  
Tested By: Scot Inglis  
Electrical Safety Engineer  
Approved By: Kenneth Fu  
Electrical Safety Manager  
Date of Issue: 12 November 2018



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**\* Refer to Summary Page for Clarification**

## SUMMARY OF COMPLIANCE WITH AUSTRALIAN STANDARD AS 60529-2004

The EUT (Equipment Under Test) was known as an “Enviroswim Pool Sanitiser”, model no. **ES-3** and was supplied for AS 60529-2004 IP23 testing by Watertech Services International Pty Ltd of Unit 2/17 Lawrence Dr, Nerang, Queensland 4211, Australia.

**This report replaces report number 1031ENVES3\_529 to amend the model from ES3 to ES-3.**

The equipment contained hazardous voltage, Safety Extra Low Voltage (SELV) and protective earth circuit and was housed within an earthed metallic enclosure.

The class I wall mounted equipment were designed to be powered by a primary power source of 240Vac, 50Hz, 10A max.

The EUT was tested according to the test requirements of IP23 of AS 60529-2004.

Acceptance conditions for marking (clause 10), specifically relating to product standards outside of AS 60529-2004 were not considered.

The “Enviroswim Pool Sanitiser”, model no. **ES-3 COMPLIES** with the tested clauses of IP23 of AS 60529-2004.

### **Method**

Testing was performed in accordance with the standard.

### **Possible Test Case Verdicts:**

- Test case does not apply to the test object..... N (N.A)
- Test object does meet the requirements ..... P (Pass)
- Test object does not meet the requirements..... F (Fail)
- Testing was not performed..... NT
- Noted ..... ND

AS 60529-2004			
Clause	Requirement – Test	Result - Remark	Verdict
5	DEGREES OF PROTECTION AGAINST ACCESS TO HAZARDOUS PARTS AND AGAINST SOLID FOREIGN OBJECTS INDICATED BY THE FIRST CHARACTERISTIC NUMERAL	Tested only for IP23	P
5.1	Protection Against Access to Hazardous Parts		P
5.2	Protection Against Solid Foreign Objects		P
6	DEGREES OF PROTECTION AGAINST INGRESS OF WATER INDICATED BY THE SECOND CHARACTERISTIC NUMERAL	Tested for IP second characteristic numeral 3	P
7	DEGREES OF PROTECTION AGAINST ACCESS TO HAZARDOUS PARTS INDICATED BY THE ADDITIONAL LETTER	Tested for IP23 characteristics only	P
8	SUPPLEMENTARY LETTERS	Tested only for IP23 only	N
9	EXAMPLES OF DESIGNATION WITH THE IP CODE		P
9.1	IP Code Not Using Optional Letters	IP23	P
9.2	IP Code Using Optional Letters		N
10	MARKING	Refer to applicable standard	ND
11	GENERAL REQUIREMENTS FOR TESTS		P
11.1	Atmospheric Conditions for Water or Dust Tests	Within specified range	P
11.2	Test Samples	EUT was wall mounted as per mounting instructions	P
11.3	Application of Test Requirements and Interpretation of Test Results		P
11.4	Combination of Test Conditions for the First Characteristic Numeral		N
11.5	Empty Enclosures		N

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AS 60529-2004			
Clause	Requirement – Test	Result - Remark	Verdict
12	TESTS FOR PROTECTION AGAINST ACCESS TO HAZARDOUS PARTS INDICATED BY THE FIRST CHARACTERISTIC NUMERAL	Tested for IP first characteristic numeral 2	P
12.1	Access Probes	Jointed test finger with a force of 10N ± 10% Rigid sphere probe of 12.5mm diameter with a force of 30N ± 10%	P
12.2	Test Conditions		P
12.3	Acceptance Conditions	No access to hazardous parts	P
12.3.1	For low-voltage equipment (rated voltages not exceeding 1 000 V a.c. and 1 500 V d.c.)		P
12.3.2	For high-voltage equipment (rated voltages exceeding 1 000 V a.c. and 1 500 V d.c.)		N
12.3.3	For equipment with hazardous mechanical parts		N
13	TESTS FOR PROTECTION AGAINST SOLID FOREIGN OBJECTS INDICATED BY THE FIRST CHARACTERISTIC NUMERAL	Tested for IP first characteristic numeral 2	P
13.1	Test Means	Rigid sphere of 12.5mm diameter with a force of 30N ± 10%	P
13.2	Test Conditions for First Characteristic Numerals 1, 2, 3, 4		P
13.3	Acceptance Conditions for First Characteristic Numerals 1, 2, 3, 4	No access to enclosure	P
13.4	Dust Test for First Characteristic Numerals 5 and 6		N
13.5	Special Conditions for First Characteristic Numeral 5		N
13.5.1	Test conditions for first characteristic numeral 5		N
13.5.2	Acceptance conditions for first characteristic numeral 5		N
13.6	Special Conditions for First Characteristic Numeral 6		N
13.6.1	Test conditions for first characteristic numeral 6		N

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Clause	Requirement – Test	Result - Remark	Verdict
13.6.2	Acceptance conditions for first characteristic numeral 6		N
14	TESTS FOR PROTECTION AGAINST WATER INDICATED BY THE SECOND CHARACTERISTIC NUMERAL	Tested for IP second characteristic numeral 3	P
14.1	Test Means	IPX3: spray nozzle, delivery at 10.0L/min $\pm$ 5%, time: 5 minutes	P
14.2	Test Conditions	EUT was wall mounted	P
14.2.1	Test for second characteristic numeral 1 with the drip box		N
14.2.2	Test for second characteristic numeral 2 with the drip box		N
14.2.3	Test for second characteristic numeral 3 with oscillating tube or spray nozzle	Spray nozzle	P
14.2.4	Test for second characteristic numeral 4 with oscillating tube or spray nozzle		N
14.2.5	Test for second characteristic numeral 5 with the 6.3 mm nozzle		N
14.2.6	Test for second characteristic numeral 6 with the 12.5 mm nozzle		N
14.2.7	Test for second characteristic numeral 7: temporary immersion between 0.15 m and 1 m		N
14.2.8	Test for second characteristic numeral 8: continuous immersion subject to agreement		N
14.3	Acceptance Conditions	<p>No evidence of water ingress on live parts</p> <p>After water test, EUT passed high voltage tests of clause 8.4 AS/NZS 3100:2017+A1</p> <p>Live – PE @ 1000V~</p> <p>Live - SELV wiring @ 3750V~</p> <p>Live – accessible non-conductive parts @ 3750V~</p>	P

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Clause	Requirement – Test	Result - Remark	Verdict
15	TESTS FOR PROTECTION AGAINST ACCESS TO HAZARDOUS PARTS INDICATED BY THE ADDITIONAL LETTER	Tested only for IP23	N
15.1	Access Probes		N
15.2	Test Conditions		N
15.3	Acceptance Conditions		N

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AS 60529-2004			
Clause	Requirement – Test	Result - Remark	Verdict

**\*\*\* END OF REPORT BODY \*\*\***

### **Appendix 1 – Photographic Record of Sample**

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### Appendix 1 – Photographic Record of Sample



Fig 1: Enviroswim Pool Sanitiser –model number **ES-3** in wall mount position



Fig 2: Jointed test finger on timer face



Fig 3: Jointed test finger on lower enclosure pump outlet

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### Appendix 1 – Photographic Record of Sample



Fig 4: Jointed test finger sphere probe left enclosure vent



Fig 5: Jointed test finger sphere probe right enclosure vent



Fig 6: 12.5mm sphere probe left enclosure vent



Fig 7: 12.5mm sphere probe right enclosure vent

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Fig 8: 12.5 Sphere probe on timer face



Fig 9: 12.5mm sphere on upper enclosure



Fig 10: EUT in wall mount position before IP test

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Fig 11: Underside of EUT before test



Fig 12: EUT after test



Fig 13: EUT after test

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Fig 14: Pump socket outlet after test



Fig 15: SELV outputs after test



Fig 16: Internal component after test

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Fig 17: Supply cord entry and rear of socket outlet after test



Fig 18: Transformer connection after test

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Fig 19: Timer connections after test



Fig 20: Switches after test

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Fig 21: SELV control PCB and connection after test



Fig 22: Thermo fan assembly after test

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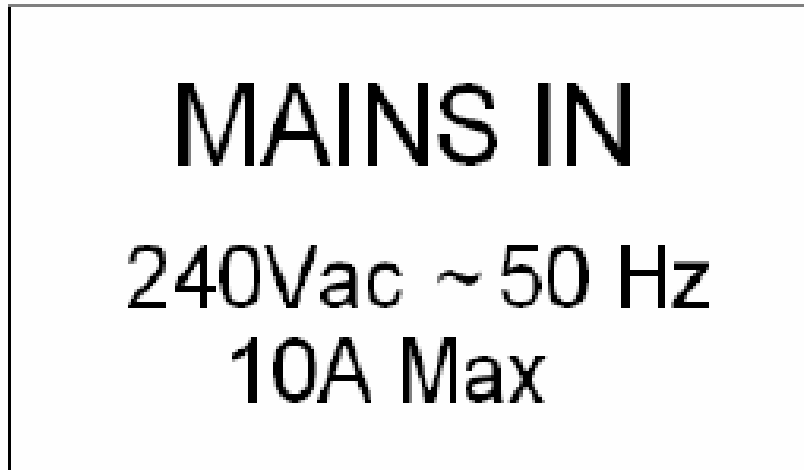


Fig 23: Primary equipment rating label

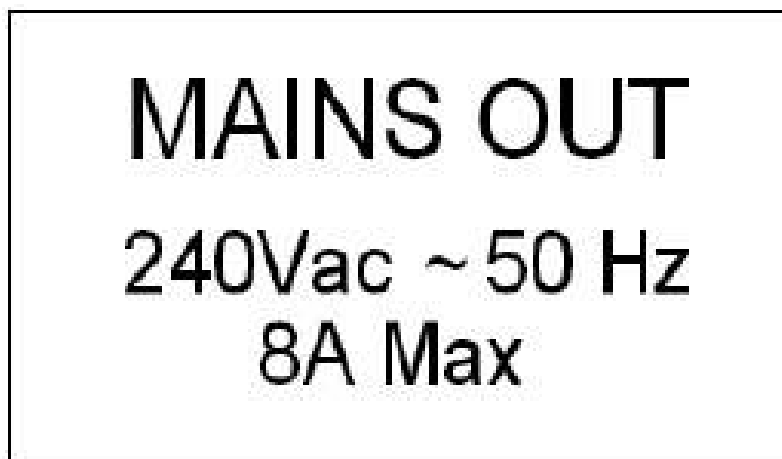


Fig 24: Pump socketed outlet rating