



National Water Services Commission

# **GUIDELINES FOR VOLUNTARY WATER EFFICIENT PRODUCTS LABELLING SCHEME**

**Revision 9**

**Industry Development & Audit Division  
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# GUIDELINES FOR VOLUNTARY WATER EFFICIENT PRODUCTS LABELLING SCHEME

## 1.0 INTRODUCTION

- 1.1 Water Efficient Products Labelling Scheme (hereinafter referred to as WEPLS) is one of the water conservation initiatives taken by Suruhanjaya Perkhidmatan Air Negara (SPAN) in promoting good practices of water demand management in Malaysia.
- 1.2 Products participating in WEPLS will incorporate a water efficiency label that serves to inform the consumers of its efficiency rating. Consumers will be able to take these factors into account when making their purchasing decision.
- 1.3 WEPLS adopts three (3) star rating labelling system. The more stars on the label mean that the product is more efficient and consumes lesser water, thus promoting water conservation.
- 1.4 WEPLS requires the water efficient products and the suppliers to be registered with SPAN. The products are to be labelled with water efficiency rating in accordance with the rating set in the Guidelines.
- 1.5 Participation of WEPLS by the suppliers is on a **voluntary basis** at this juncture to allow a lead time for market to transform towards more water efficient products. WEPLS is not intended to create any barrier to trade.

## 2.0 THE PURPOSE OF WEPLS

- 2.1 The main purpose of WEPLS is to encourage the suppliers in the development and marketing of water efficient products as part of the water conservation measures, as well as to raise the awareness of the public on the availability of water efficient products.

- 2.2 Water efficient labelling on the products will facilitate consumers to clearly identify more water efficient products from the less efficient ones at the point of purchase, therefore, consumers can make well informed purchasing decision.
- 2.3 In addition, implementation of WEPLS will also promote other benefits such as:
- (i) Conserve water by further reducing water consumption through use of water efficient product.
  - (ii) Encourage a healthy water consuming habit among consumers.
  - (iii) Motivate the introduction of cost-effective and water efficient technologies.
  - (iv) Stimulate the adoption of efficient and effective water-use technologies; and
  - (v) Use of water efficient product as part of contributions towards green environment.

### 3.0 INTERPRETATION OF TERMINOLOGY

- 3.1 In this document, unless the context otherwise requires:
- a) **SPAN** means Suruhanjaya Perkhidmatan Air Negara established pursuant to Suruhanjaya Perkhidmatan Air Negara Act 2006
  - b) **Guidelines** refers to the “Guidelines for Voluntary Water Efficient Products Labelling Scheme”.
  - c) **Recognised Standard** means standards or technical specifications of products recognised by SPAN for use in the national water services industry. The standard can be a Malaysia standard or an international standard.
  - d) **Supplier** means a company constituted under the laws of Malaysia and carrying out business in Malaysia. A supplier can be a manufacturer, importer or distributor of a product including their agents or representatives that supply or distribute the product to any user but does not include a retailer.

- e) **Certification body** means a competent certification body recognized by the SPAN, whose activities and expertise include assessment of compliance of product-to-product standard.
- f) **Products** means products covered under WEPLS as listed in section 4.
- g) **Basin Tap** means tap that is designed with intended use to flow water into a basin or a bowl that is used primarily for washing the hands and face.
- h) **Shower Tap** means tap that is designed with intended use to flow water for bathing purposes.
- i) **Sink Tap** means tap that is designed with intended use to flow water into a sink in a kitchen.
- j) **Ablution Tap** means tap that is designed with intended use to flow water for washing part of the body before a Muslim perform his/her prayer.
- k) **Mixer** means tap with a device to mix cold and hot water.
- l) **Washing Machine** means automatic clothes washing machine powered by electricity to wash laundry with the utilization of water and detergent.
- m) **Showerhead** means device through which water is passed to form spray for bathing purposes.
- n) **Water Consumption** means volume of water consumed by products to perform its function. Water consumption for products is computed according to methods prescribed in Annex II
- o) **Water Efficiency Label** means label that has been established for the purpose to identify a water efficient product that has complied with WEPLS requirements.
- p) **Water Efficiency Rating** means grades of efficiency according to water consumption as tabulated in Annex II



## 4.0 PRODUCTS COVERED

4.1 Products that are covered under WEPLS are:

- (a) **Water taps** (either as a single tap, combination tap or mixer) that are produced with intended use as:
- Basin taps.
  - Sink taps.
  - Shower taps
  - Ablution taps.
  - Electronic sensor taps.
  - Automatic shut off taps.
  - Thermostatic mixer
- (b) **Water closet (WC)** that is supplied as:
- one-piece WC pan
  - a closed coupled WC pan
  - WC pan and cistern
  - WC pan and flush valve
  - Hybrid WC Pan
- (c) **Urinals** that are supplied as a complete system.
- (d) **Washing machine** (automatic) that is supplied as (including combination clothes washing machine with dryers):
- Front load washer
  - Top load washer
- (e) **Shower Outlet** which may include a fixed or pivot arm, a flexible hose, tap top assemblies, or other components.

## **5.0 REGISTRATION**

### **5.1 Eligibility**

5.1.1 WEPLS is opened to companies who manufacture, import, distribute or sell sanitary products, water fitting and washing machines in Malaysia.

5.1.2 For local manufactured products, registration is encouraged to be done by the manufacturer.

5.1.3 For imported products, the registration is encouraged to be done by the main importer.

### **5.2 Pre-requisites**

5.2.1 Except washing machines, all products shall:

- have complied with all the materials and performance standards required for its use as specified in the product standard in Annex 1; and
- the supplier and the products have been listed with SPAN under the “SPAN Listing of Suppliers” and has a validity period of not less than one month before the expiry date of the registration.

### **5.3 Testing of Product Water Consumption**

5.3.1 Products to be registered under the WEPLS shall be tested for their water consumptions according to methods and procedures as prescribed in **Annex I**.

### **5.4 Testing Laboratory**

5.4.1 Test of water consumption is to be carried out by an independent testing laboratory recognised by SPAN. Test report must be issued by:

a) Conformity Assessment Bodies (CABs) accredited for ISO/IEC 17025 or ISO/IEC 17020. The following laboratories bodies are recognised by SPAN:

- (i) a local testing laboratory which has been accredited under the Skim Akreditasi Makmal Malaysia (SAMM) for the test method stipulated; or
- (ii) a foreign laboratory which has been accredited by partners under the Department of Standard Malaysia's Mutual Recognition Arrangement (MRA) for the test method stipulated.

## **5.5 Test Report**

5.5.1 Test report shall contain all information as prescribed in **Annex I**.

5.5.2 The validity of the test report should be within five (5) years of the date of the report issued.

5.5.3 Upon submission for registration, the test report should be valid for at least one (1) year.

## **5.6 Quality Management System (QMS)**

5.6.1 Certificate of QMS to be submitted with the application if the product is manufactured under a production system issued by CBs that are accredited by an accreditation body that is part of the international and regional mutual global recognition arrangement Mutual Recognition Arrangement (MRA)/ Multi-Lateral Recognition (MLA) implemented by Asia Pacific Accreditation Cooperation (APAC) and International Accreditation Forum (IAF).

## **5.7 Application for Registration**

5.7.1 Application for registration of water efficient product shall be made via e-Registration system at the SPAN website.

5.7.2 The following information shall be provided and submitted via e-Registration system:

- (i) Company name, address, and company registration number
- (ii) SPAN supplier listing number.
- (iii) Manufacturer's details
- (iv) Showroom/sales location
- (v) Parties who will be responsible for marking and affixing the label
- (vi) Information of the products to be registered under the WEPLS (type of product, brand, model, flowrate for taps, flush volume for WC and urinals, water consumption for washing machines, colour photo of products).
- (vii) Test report that shows that products are tested according to method prescribed in **Annex I** and meets the water consumption requirements.
- (viii) Documentary proof if the production system for the product is operating according to a recognised international quality management system.

## **5.8 Service Charge**

5.8.1 No fees are imposed for the application of registration of WEPLS at this moment.

5.8.2 However, SPAN reserves the right to impose any fees or charges at any time for the registration of WEPLS.

## **5.9 Processing**

5.9.1 On receipt of an application, SPAN will verify whether the product meets the water consumption requirements based on the submitted test report and will rate the products efficiency accordingly. Application for registration will be processed **within 21 working days**.

## **5.10 Water Efficiency Rating**

5.10.1 The water efficiency of a product is rated to three (3) different grades according to the water consumption as tabulated in Table 1 to Table 8 as listed in **Annex II**.

## **5.11 Product Matching**

5.11.1 Both matched products need to be registered with SPAN as suppliers before registering WEPLS.

5.11.2 Only water closet pan products will be registered and labelled WEPLS for registration of the equivalent system between water closet pan and Cistern.

5.11.3 Only Water Closet Pan products will be registered and labelled WEPLS for registration of the matching system between Water Closet Pan and Flush Valve

5.11.4 Only Urinal products will be registered and labelled WEPLS for registration of the equivalent system between Urinal and Flush Valve

5.11.5 The supplier needs to submit a Flow Performance Requirements Test Report (refer to **Annex IV**) to demonstrate the compatibility of the equivalent system.

5.11.6 The Certification Board needs to use the WEPLS test report (refer to **Annex IV**) for products involving matching system.

## **5.12 Validity**

5.12.1 Registration of WEPLS is valid for three (3) year subject to renewal of listing of the supplier and the products under the "SPAN Listing of Suppliers". A fresh application shall be submitted to SPAN not later than 1 month from the expiry date to maintain the products in the WEPLS listing

## **5.13 Listing of Water Efficient Products**

5.13.1 The product and the supplier that have been approved for WEPLS will be listed in a registry maintain by SPAN. The registration record will also be made available at the SPAN website for public information.

## **6.0 WATER EFFICIENCY LABEL**

### **6.1 Labelling**

6.1.1 An approved Water Efficient Product (WEP) shall be labelled with the approved water efficiency label. SPAN will provide the soft copy of standard format for the water efficiency label and the applicant is required to print the label and ensure the labels are affixed on the products or its packaging.

### **6.2 Label Design and Version**

6.2.1 There are two versions of label, i.e., full and simplified version as shown in **Annex III**. The full version label shall be affixed on product packing at a prominent location. The simplified version label is designed to facilitate the supplier to affix the label on the products.

### **6.3 Colour Scheme and Dimension**

6.3.1 The label shall be printed on white colour self-adhesive sheet material and should have dimension as shown in **Annex III**.

### **6.4 Paper Quality**

6.4.1 The paper used for the label should be durable and possess good wear and tear characteristic. It should stick tightly on the products or its packing.

## **6.5 Information on the Label**

6.5.1 Information to appear on the label shall be in accordance with the label format as indicated in Annex III and shall state the information as listed on the confirmation letter issued by SPAN.

6.5.2 Information on the label consists of:

(a) Full version:

- (i) The star rating.
- (ii) WEPLS Registration number
- (iii) Brand
- (iv) Model
- (v) Water consumption rate

(b) The simplified version shall contain the WEPLS registration number

## **6.6 Guidance for Label Use**

6.6.1 The label shall be fixed to each product model displayed for sale or supplied. The label shall be fixed such that it is prominent for consumers to view and compare with ease.

6.6.2 The marking and information on the label shall not be removed, defaced, or obscured in any manner that may confuse or mislead the consumer.

6.6.3 Water efficient product must, when supplied or offered for supply, have the following displayed in a way that is easily readable, clearly visible, and attributable to the product:

Product	Guidance for Label Use	Remark
1) Water taps. 2) Water closet 3) Urinals 4) Shower Outlet	<b>Unpackaged</b>	A tag in the simplified version shall be either: <ul style="list-style-type: none"> <li>a) <b>be on the product itself</b>, or</li> <li>b) <b>be on both sides of a swing tag affixed to the product</b>, or</li> <li>c) <b>be fixed adjacent to the product</b> such that the position of the label and product indicates a clear and obvious connection.</li> </ul>
	<b>Packaged</b>	The <b>label</b> shall be in: <ul style="list-style-type: none"> <li>a) <b>Full version</b>, and</li> <li>b) <b>be affixed on the packaging</b> such that it is clearly visible on the front portion of the package when it is hung from a rack or placed on a shelf for supply purposes.</li> </ul>
	<b>Website or Advertisement</b>	The following requirements shall be complied: <ul style="list-style-type: none"> <li>a) The <b>label for each registered model shall be separately displayed if there is more than one model</b> being advertised or promoted.</li> <li>b) The <b>label shall appear next to products</b> so that it is easily identified with the model featured.</li> <li>c) <b>All information</b> on the label <b>shall be clearly visible</b> and <b>legible</b> the following relevant information shall be extracted and printed clearly and legibly alongside the label:               <ul style="list-style-type: none"> <li>i. <b>Brand</b>,</li> <li>ii. <b>Model</b>,</li> <li>iii. <b>Star rating</b> as well as wordings (i.e., “highly efficient” or “most efficient”),</li> <li>iv. <b>Water Consumption Rate</b>; and</li> <li>v. <b>Registration Number</b>.</li> </ul> </li> <li>d) <b>Statements connoting</b> that the product is “<b>SPAN tested</b>” or “<b>SPAN certified</b>” or “<b>SPAN approved</b>” are <b>PROHIBITED</b>.</li> </ul>



Product	Guidance for Label Use	Remark
<b>5) Washing Machine</b>	<b>Unpackaged</b>	Unpackaged washing machines <b>must carry WELPS label on the product itself or on both sides of a swing tag affixed to the product.</b>
	<b>Packaged</b>	The <b>label</b> shall be in: a) <b>Full version</b> , and b) <b>be affixed on the packaging</b> such that it is clearly visible on the front portion of the package when it is hung from a rack or placed on a shelf for supply purposes.
	<b>Website or Advertisement</b>	The following requirements shall be complied:  The <b>label for each registered model shall be separately displayed if there is more than one model</b> being advertised or promoted.
		The <b>label shall appear next to the products</b> so that it is easily identified with the model featured.
		e) <b>All information</b> on the label <b>shall be clearly visible and legible</b> the following relevant information shall be extracted and printed clearly and legibly alongside the label: vi. <b>Brand</b> , vii. <b>Model</b> , viii. <b>Star rating</b> as well as wordings (i.e., “highly efficient” or “most efficient”), ix. <b>Water Consumption Rate</b> ; and x. <b>Registration Number</b> .  f) <b>Statements connoting</b> that the product is “ <b>SPAN tested</b> ” or “ <b>SPAN certified</b> ” or “ <b>SPAN approved</b> ” are <b>PROHIBITED</b> .

## **7.0 OBLIGATIONS OF THE WEPLS SUPPLIER**

### **7.1 General Obligations**

7.1.1 Once approved by SPAN, the supplier is responsible to comply with the following general obligations to ensure that:

- (i) products are labelled according to water efficiency label as described in section 6; and
- (ii) only registered brands or models are labelled.

### **7.2 Notification of Change in Particulars**

7.2.1 The supplier shall notify SPAN of any changes to any of the particulars (e.g., change in company name, etc.) provided to SPAN during the application of WEPLS. The notification shall be made not less than 14 working days after the changes.

### **7.3 Notification of Modification to Registered Product**

7.3.1 Where any registered product is modified in any way, the supplier shall resubmit the application through e-registration system and if the modification alters the water consumption of the registered model, new test report also needs to be submitted.

7.3.2 SPAN may revise the water efficiency rating of the registered model based on the submitted information and test reports.

### **7.4 Notification of Change of Distributor**

7.4.1 When the distributorship of an existing registered product is taken over by the newly appointed supplier, the new supplier who takes over the distributorship shall notify SPAN with an undertaking letter undertaking all declaration made by the existing supplier for the registered models.

## **8.0 ENFORCEMENT**

### **8.1 Purpose**

8.1.1 To uphold the credibility of WEPLS and to maintain continuous confidence of the consumer, monitoring and inspection on the use of labels on products registered under WEPLS will be conducted by SPAN.

### **8.2 Legal Provision**

8.4.1 WEPLS is a voluntary scheme. However, suppliers who abuse the scheme by giving false information on the label may constitute an offence under the Malaysian Trade Description Act 2011 (Act 730), Consumer Protection Act 1999 (Act 566) and the Water Services Industry Act 2006 (Act 655).

## **9.0 DISCLAIMER**

9.1 WEPLS is aimed at promoting and raising awareness on the availability of water efficient products. SPAN disclaims all responsibility and liability of any kind whatsoever for any loss, injury, liability, claim or damage of any kind resulting from and arising of, or any way related to the misuse or counterfeiting of the label under the scheme.

## **10.0 ENQUIRIES**

10.1 All enquiries on WEPLS shall be addressed to SPAN at the following address:

The Senior Director  
Development and Audit Industry Division  
National Water Services Commission  
Ground Floor, Prima Avenue 8  
Block 3510, Jalan Teknokrat 6,  
63000 Cyberjaya, Selangor.

# ANNEXES

Annex I	Standard of Product
Annex II	Determination of Water Consumption for Products
Annex III	Water Efficiency Rating
Annex IV	Water Efficiency Label
Annex V	Water Efficient Products Labelling Scheme (WEPLS) Test Report

**ANNEX I**  
**Standard of Product**

No	Product	Standard	Standard Requirement
1.	Water taps (either as a single tap, combination tap or mixer) that are produced with intended use as:  <ul style="list-style-type: none"> <li>• Basin taps.</li> <li>• Sink taps.</li> <li>• Shower taps.</li> <li>• Ablution taps.</li> <li>• Electronic sensor taps.</li> <li>• Automatic shut off taps.</li> <li>• Thermostatic mixer</li> </ul>	<b>SPAN TS 3004:2021</b>	Water Taps-Single Taps and Combination Taps – Specification
		<b>Section 11.4.1 of BS EN 816:2017</b>	Automatic shut off taps
		<b>Section 13.2 of BS EN 1287:2017</b>	Thermostatic mixer
		<b>Section 5.3 of BS EN 15091:2013</b>	Electronic sensors tap
		<b>BS EN 1287:2017</b>	Sanitary tapware, Low Pressure Thermostatic Mixing Valves, General Technical Specification
2.	Water Closet (WC)	<b>Clause 4.8 of MS 1522:2021</b>	Vitreous China Water Closet Pans-Specification
3.	Urinals	<b>MS1799:2020</b>	i. Annex A for Slab and Stall Urinals ii. Annex B for Wall-Hung Urinals
4.	Shower Outlet	<b>SPAN TS 3005:2021</b>	Shower Outlet for Sanitary Tapware for Water Supply System-Specification
5.	Washing Machine	<b>SPAN TS 3006:2021</b>	Washing Machines-Water Efficiency Performance and Related Testing Methods

**ANNEX I**  
**Determination of Water Consumption for Products**

**A. Water Taps and Mixer**

**A1 Water Consumption**

A1.1 Water consumption for water taps and mixers is taken to be the nominal flow rate of taps or mixers compute at the mean of the average flow rates obtain at the following dynamic flow pressures of 100 kPa, 150 kPa, 250 kPa, 350 kPa and 500 kPa

**A.2 Testing Requirements and Methods**

A2.1 Test shall be conducted in accordance with the procedures described in the following sections as required in the respective standards:

- (i) **SPAN TS 3004:2021** for Water Taps-Single Taps and Combination Taps – Specification
- (ii) **Section 10 of BS EN 200: 2008** for mechanical basin/ sink/ shower mixers with a single/ separate control device for adjusting flow rate and temperature.
- (iii) **Section 11.4.1 of BS EN 816:2017** for automatic shut off taps.
- (iv) **Section 13.2 of BS EN 1287:2017** for thermostatic mixer
- (v) **Section 5.3 of BS EN 15091:2013** for electronic sensors tap.
- (vi) **BS EN 1287:2017** for Sanitary tapware, Low Pressure Thermostatic Mixing Valves, General Technical Specification

**A.3 Flow Performance Requirements**

A3.1 The following test requirements shall be followed in measuring and computing flow rates and nominal flow rates:

- (i) The flow rates shall be measured in accordance with the standards stipulated above at each of the dynamic flow pressures of **50 kPa, 100 kPa, 150 kPa, 200 kPa, 250 kPa, 300kPa, 350 kPa, 400 kPa, 450 kPa, 500kPa and 550 kPa.**

- (ii) The nominal flow rate shall be the mean of the average flow rates obtained at the following dynamic flow pressures of **100 kPa, 150 kPa, 250 kPa, 350 kPa and 500 kPa**.
- (iii) The highest average flow rate determined in accordance with the standards stipulated above at each of the dynamic flow pressures of **100 kPa, 150 kPa, 250 kPa, 350 kPa and 500 kPa** shall not exceed the upper limit of the flow range for the applicable rating for the determined nominal flow rate by more than 0.5 litres/min.
- (iv) The lowest average flow rate determined in accordance with the standards stipulated above at each of the dynamic flow pressures of **100 kPa, 150 kPa, 250 kPa, 350 kPa and 500 kPa** shall not exceed the lower limit of the flow range for the applicable rating for the determined nominal flow rate by more than 0.5 litres/min.
- (v) The differences between the highest and lowest average flow rate determined in accordance with the standards stipulated above at each dynamic flow pressures of **100 kPa, 150 kPa, 250 kPa, 350 kPa and 500 kPa** shall not exceed 2.0 litres/min.
- (vi) The recording of the average flow rates at **50 kPa, 200 kPa, 300 kPa, 400 kPa, 450 kPa and 550 kPa are for data collection purposes only**.
- (vii) The water consumption of a tap shall be taken to be the nominal flow rate determined in (b).
- (viii) The tap shall also comply with the requirements specified in (c), (d) and (e) to be qualified for WEPLS

#### **A.4 Test Report**

A4.1 The following shall be reported in the test report:

- (i) Supplier, brand name, model name and model number of the product and description of other components tested with the sample.
- (ii) Photos showing tested product.
- (iii) The average flow rate through the test sample, at the dynamic flow pressure at **50 kPa, 100 kPa, 150 kPa, 200 kPa, 250 kPa, 300kPa, 350 kPa, 400 kPa, 450 kPa, 500kPa and 550 kPa**.
- (iv) The nominal flow rate at **100 kPa, 150 kPa, 250 kPa, 350 kPa and 500 kPa**
- (v) The highest average flow rate taken at **100 kPa, 150 kPa, 250 kPa, 350 kPa and 500 k**

- (vi) The lowest average flow rate taken at **100 kPa, 150 kPa, 250 kPa, 350 kPa and 500 kPa.**
  
- (vii) The difference between the highest and lowest average flow rate **100 kPa, 150 kPa, 250 kPa, 350 kPa and 500 kPa.**



## **B. Water Closet (WC)**

### **B1 Water Consumption**

B1.1 Water consumption of water closet is taken to be the nominal flush volume that has successfully meet the flushing performance requirements in section B3

### **B2 Testing Requirement and Method**

B2.1 Flushing test shall be conducted for the flush volume in accordance with the procedures described in:

- (i) **Clause 4.8 of MS 1522:2015 for Vitreous China Water Closet Pans-Specification**

### **B3 Flushing Performance Requirements**

B3.1 The WC shall pass the flushing test as required for **clause 4.8 of MS 1522:2015**

### **B4 Test Report**

B4.1 The following shall be reported in the test report:

- (i) Supplier, brand name, model name and model number of the WC and flushing system used.
- (ii) Photos showing tested product.
- (iii) Flush Volume
- (iv) If flush valve is used, state the flush valve manufacturer, model, pressure group and type of flush valve.

## **C. Urinal Equipment**

### **C1 Water Consumption**

C1.1 Water consumption of urinals is taken to be the actual volume of water discharge per flush that has successfully meet the flushing performance requirements in section C3.

### **C2 Testing Requirements & Method**

C2.1 Test shall be conducted based on the flush volume declared by the supplier using the procedures described in MS 1799:2020 as follows:

(i) Annex A for slab and stall urinals

(ii) Annex B for wall-hung urinals.

### **C3 Flushing Test Performance**

C3.1 The urinal shall pass the flushing test in clause 4.4.1 and 4.4.2 of MS 1799:2008 for slab urinals and wall hung urinals, respectively.

### **C4 Test Report**

C4.1 The following shall be reported in the test report:

(i) Supplier, brand name, model name and type of urinal

(ii) The flushing mechanism

(iii) Actual volume of water discharge per flush

(iv) The area of sawdust remaining within the test area

(v) Photos showing tested product.

## **D. Washing Machine**

### **D1 Water Consumption**

D1.1 Water consumption of the washing machine is taken to be actual volume of water used for a complete automatic cold or hot cycle for washing, rinsing and spinning of the test load.

D1.2 The washing machine shall be tested using standard program (auto, normal or default program). Other option/features/functions such as prewash, eco, energy saver and etc shall be disabled

### **D2 Testing Requirements & Method**

D2.1 Test of water consumption for washing machines shall be conducted in accordance with the procedures described in:

- (i) **SPAN TS 3006:2021** for Washing Machines- Water Efficiency Performance and Related Testing Methods

### **D3 Evaluation of Water Consumption**

D3.1 The water consumption of washing machine shall be measured in accordance to Clause 9.5 of the above standards

### **D4 Test Report**

D4.1 The following shall be reported in the test report:

- (i) Supplier, brand name, model name and model number and rated wash capacity of the washing machine
- (ii) Photos showing tested product.
- (iii) Indication of front load or top load
- (iv) Detail information of selected program with any associated settings
- (v) Wash load tested in kg.

(vi) Volume of water consumption in litres

(vii) Water efficiency in litre/kg load

## **E. Shower Outlet**

### **E1 Water Consumption**

E1.1 Water consumption for showerhead is taken to be the nominal flow rate of showerhead compute at the mean of the average flow rates obtain at the following dynamic flow pressures of 100kPa, 150kPa, 250kPa, 350kpa and 500kPa

### **E2 Testing Requirements & Method**

E2.1 Test shall be conducted in accordance with the procedures described in:

- (i) **SPAN TS 3005:2021** for Shower Outlet for Sanitary Tapware for Water Supply System- Specification
- (ii) **Section 11.2 of BS EN 1112:2008**

### **E3 Flow Performance Requirements**

E2.1 The following test requirements shall be followed in measuring and computing flow rates and nominal flow rates:

- (i) The flow rates shall be measured in accordance with the standards stipulated above at each of the dynamic flow pressures of **50 kPa, 100 kPa, 150 kPa, 200 kPa, 250 kPa, 300kPa, 350 kPa, 400 kPa, 450 kPa, 500kPa and 550 kPa.**
- (ii) The nominal flow rate shall be the mean of the average flow rates obtained at the following dynamic flow pressures of 100 kPa, 150 kPa, 250 kPa, 350 kPa and 500 kPa.
- (iii) The highest average flow rate determined in accordance with the standards stipulated above at each of the dynamic flow pressures of **100 kPa, 150 kPa, 250 kPa, 350 kPa and 500 kPa** shall not exceed the upper limit of the flow range for the applicable rating for the determined nominal flow rate by more than 0.5 litres/min
- (iv) The lowest average flow rate determined in accordance with the standards stipulated above at each of the dynamic flow pressures of 100kPa, 150kPa, 250kPa, 350kPa, 150kPa, 250kPa, 350kPa and 500kPa shall not exceed the lower limit of the flow range for the applicable rating for the determined nominal flow rate by more than 0.5litres/min
- (v) The differences between the highest and lowest average flow rate determined in accordance with the standards stipulated above at each dynamic flow pressures of **100 kPa, 150 kPa, 250 kPa, 350 kPa and 500 kPa shall not exceed 2.0 litres/min.**

- (vi) The recording of the average flow rates at **50 kPa, 200 kPa, 300 kPa, 400 kPa, 450 kPa and 550 kPa** are for data collection purposes only.
- (vii) The water consumption of a showerhead shall be taken to be the nominal flow rate determined in (b).
- (viii) The showerhead shall also comply with the requirements specified in (c), (d) and (e) to be qualified for WEPLS

#### **E4 Test Report**

E4.1 The following shall be reported in the test report:

- (i) Supplier, brand name, model name and model number of the product and description of other components tested with the sample
- (ii) Photos showing tested product.
- (iii) The average flow rate through the test sample, at the dynamic flow pressure at **50 kPa, 100 kPa, 150 kPa, 200 kPa, 250 kPa, 300kPa, 350 kPa, 400 kPa, 450 kPa, 500kPa and 550 kPa**
- (iv) The nominal flow rate at **100 kPa, 150 kPa, 250 kPa, 350 kPa and 500 kPa**.
- (v) The highest average flow rate taken at **100 kPa, 150 kPa, 250 kPa, 350 kPa and 500 kPa**.
- (vi) The lowest average flow rate taken at **100 kPa, 150 kPa, 250 kPa, 350 kPa and 500 kPa**.
- (vii) The difference between the highest and lowest average flow rate **100 kPa, 150 kPa, 250 kPa, 350 kPa and 500 kPa**.

**ANNEX II**  
**Water Efficiency Rating**

Water efficiency rating for products is determined in accordance to Table 1 to Table 8

**Table 1: Conversion of water consumption to water efficiency rating for basin taps and mixers.**

Water Consumption <i>nominal flow rates (f)</i> (l/min)	Water Efficiency Grade	Rating	Symbol on Label
$6.0 < f \leq 8.0$	Efficient	1★	★
$4.0 < f \leq 6.0$	Highly Efficient	2★	★★
$1.5 < f \leq 4.0$	Most Efficient	3★	★★★

Note:

1. If tap equipment has an effective automatic shut-off device, its water efficiency rating is increased to the next higher rating. Tap equipment with an automatic shut-off capability are those that:

a) For **hand basins**:

- (i) Require user input to turn the flow of water on but automatically turn the flow off after a maximum time of 12 seconds (e.g., by use of a spring-loaded mechanism, a timer, a volume measuring device or electronically); or
- (ii) Require user input to turn the flow of water on (e.g., a sensor), but turn the water off automatically within 2 seconds after the end of the user activity.

**Table 2: Conversion of water consumption to water efficiency rating for sink taps and mixers.**

Water Consumption nominal flow rates ( $f$ ) (l/min)	Water Efficiency Grade	Rating	Symbol on Label
$6.0 < f \leq 8.0$	Efficient	1★	★
$4.0 < f \leq 6.0$	Highly Efficient	2★	★★
$2.5 < f \leq 4.0$	Most Efficient	3★	★★★

**Table 3: Conversion of water consumption to water efficiency rating for shower taps and mixers.**

Water Consumption nominal flow rates ( $f$ ) (l/min)	Water Efficiency Grade	Rating	Symbol on Label
$8.0 < f \leq 10.0$	Efficient	1★	★
$6.0 < f \leq 8.0$	Highly Efficient	2★	★★
$4.5 < f \leq 6.0$	Most Efficient	3★	★★★

**Table 4: Conversion of water consumption to water efficiency rating for ablution taps and mixers.**

Water Consumption nominal flow rates ( $f$ ) (l/min)	Water Efficiency Grade	Rating	Symbol on Label
$6.0 < f \leq 8.0$	Efficient	1★	★
$4.0 < f \leq 6.0$	Highly Efficient	2★	★★
$1.5 < f \leq 4.0$	Most Efficient	3★	★★★



**Table 5: Conversion of water consumption to water efficiency rating for water closet**

Water Consumption <i>Flush volume per flush</i> ( <i>fv</i> ) (litre/flush)	Water Efficiency Grade	Rating	Symbol on Label
Full Flush $fv \leq 6.0$ Reduced Flush $fv \leq 3.0$ .	Efficient	1★	★
Full Flush $fv \leq 5.0$ Reduced Flush $fv \leq 3.0$ .	Highly Efficient	2★	★★
Full Flush $fv \leq 4.0$ Reduced Flush $fv \leq 3.0$ .	Most Efficient	3★	★★★

Note:

- i. If a WC pan, WC cistern or flush valve is supplied separately, its registration and rating shall be based on the performance of a WC pan in combination with the flushing cistern or flush valve (or other flushing control mechanism) nominated by the applicant for the testing and registration.

**Table 6: Conversion of water consumption to water efficiency rating for urinal equipment**

Water Consumption <i>Flush volume per flush</i> ( <i>fv</i> ) (litre/flush)	Water Efficiency Grade	Rating	Symbol on Label
$1.5 < fv \leq 2.5$	Efficient	1★	★
$1.0 < fv \leq 1.5$	Highly Efficient	2★	★★
$fv \leq 1.0$	Most Efficient	3★	★★★

Note:

If a urinal or a urinal flush valve is supplied separately, its registration and rating shall be based on the performance of a combination of a urinal and flush valve (or other flushing control mechanism) nominated by the applicant for registration.

**Table 7: Conversion of water consumption to water efficiency rating for washing machine.**

Water Consumption Volume per wash load $v$ (litre/kg)	Water Efficiency Grade	Rating	Symbol on Label
$12 < v \leq 15$	Efficient	1★	★
$9 < v \leq 12$	Highly Efficient	2★	★★
$v \leq 9$	Most Efficient	3★	★★★

Note:

Automatic washing machines are defined as machines where the load is fully treated by the machine without the need for user intervention at any point during the programme prior to its completion.

**Table 8: Conversion of water consumption to water efficiency rating for showerhead**

Water Consumption nominal flow rate ( $f$ ) (l/min)	Water Efficiency Grade	Rating	Symbol on Label
$8.0 < f \leq 10.0$	Efficient	1★	★
$6.0 < f \leq 8.0$	Highly Efficient	2★	★★
$4.5 < f \leq 6.0$	Most Efficient	3★	★★★

# ANNEX III

## Water Efficiency Label



**Full Version**

**Size 15.5 cm x 9.5 cm**

## Water Efficiency Label



**Simplified Version**

**10.0 cm X 6.0 cm**



**Simplified Version**

**5.0 cm X 2.5 cm**

## ANNEX IV

### Water Efficient Products Labelling Scheme (WEPLS) Test Report

**Report No.** :  
**Report Issued Date** :  
**Application No.** :  
**Name & Address of Client** :  
**Issued Date** :  
**Tested By** :  
**Total Pages** :  
**Products** : Example: Water Closet (WC) Pans - (MS 1522: 2015)

*WC Pan		**Cistern		
WC Group	Model	Model	Maximum Nominal Flush (L)	
			Full	Reduced

*WC Pan		**Flush Valve		
WC Group	Model	Model	Maximum Nominal Flush (L)	
			Full	Reduced

**\*Note:** Certified by :  
 Certificate No. :  
 Expiry Date :

**\*\*Note:** Certified by :  
 Certificate No. :  
 Expiry Date :

Thank you,  
 For,  
**XXX Sdn. Bhd.**

**(NAME)**  
**POSITION**

**Test Result**

Sample No. :  
 WC Group :  
 WC Pan Model :  
 Closed Coupled Supplier & Brand :  
 Matching Cistern Supplier & Brand :  
 Cistern Model :

Requirement – MS 1522:2015	Result of type test or observation						Compliance to Specification
Clause 4.8 Flushing test Clause 4.8.1 Full flush test	Flushing test was carried out by using cistern model _____ certified to MS 795-1: 2019. Volume of discharge (4,5,6 +0 , - 0.5L) : __ liter (Avg. of 3) Rate of discharge (Min 1.8 L/sec) : __ L/sec Volume of discharge (Max 3.0L) : __ liter (Avg. of 3) Rate of discharge (Min 1.4 L/sec) : __ L/sec						-
Clause 4.8.1.1 Newspaper test	Flush	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	5 <sup>th</sup>	
	Discharge						
<b>Result:</b> Five tests out of five discharged all six pieces of newspaper out of the pan outlet.							
Clause 4.8.1.2 Simulating Solid	Flush	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	5 <sup>th</sup>	
	Discharge						
<b>Result:</b> Five tests out of five discharged all four pieces of solid out of the pan outlet.							
Clause 4.8.1.3 Sawdust test	Area of sawdust remaining inside the pan: __ mm <sup>2</sup>						
Clause 4.8.1.4 Ball test	Flush	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	5 <sup>th</sup>	
	Discharge						
<b>Result:</b> Five tests out of five discharged the ball out of the pan outlet.							
Clause 4.8.2.1 Toilet paper test	Flush	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	5 <sup>th</sup>	
	Discharge						
<b>Result:</b> Five tests out of five discharged the ball out of the pan outlet.							
Clause 4.8.2.2 Liquid containment pH value test	Test	Reading 1 (R1)	Reading 2 (R2)	Reading 3 (R3)	Result (R3-R1)		
	1 <sup>st</sup>						
	2 <sup>nd</sup>						
	3 <sup>rd</sup>						
	Average						

**Attachment**

<b>Photos of Tested Product</b>	
Sample:	Sample:

**-End of Report-**

**Water Efficient Products Labelling Scheme (WEPLS) Test Report**

Report No. :  
 Report Issued Date :  
 Application No. :  
 Name & Address of Client :  
 Issued Date :  
 Tested By :  
 Total Pages :  
 Products : Urinals - (MS 1799: 2020) & Flush Valve (MS 2545: 2022)

Urinal Material: Stainless Steel

Trap type: With integral trap

<b>*Urinals</b>		<b>**Flush Valve</b>	
<b>Urinal Type</b>	<b>Model</b>	<b>Model</b>	<b>Volume of discharge (L)</b>
<b>Wall-hung Urinal</b>			

Trap type: Without integral trap

<b>*Urinals</b>			<b>**Flush Valve</b>	
<b>Urinal Type</b>	<b>Model</b>	<b>Matching Trap</b>	<b>Model</b>	<b>Volume of discharge (L)</b>
<b>Wall-hung Urinal</b>				

\*Note: Certified by :  
 Certificate No. :  
 Expiry Date :

\*\*Note: Certified by :  
 Certificate No. :  
 Expiry Date :

Thank you,  
 For,  
**XXX Sdn. Bhd.**

**(NAME)**  
**POSITION**



Sample No. :  
 Urinal Type (L) :  
 Urinal Model :  
 Urinal Brand & supplier :  
 Flush Valve Model :  
 Flush Valve Brand & supplier :

<b>Requirement            – MS 1799: 2020</b>	<b>Result of type test or observation</b>	<b>Compliance            to            Specification</b>
Clause 6 Performance requirements	Flushing test was carried out by using flush valve model _____ certified to MS 2545: 2020.  Volume of discharge (Maximum 2.5, 1.5, 1.0) : _____ liter (Avg. of 3)	-
<p>Clause 6.1 Flushing test for slab and trough urinals</p> <p>When tested in accordance with Annex A, with nominal flush volume as per Table 1 sawdust remaining in tested area shall not be more than 2500 mm<sup>2</sup> after a single flush operation.</p> <p>The surface of tested area shall include from the centre point of the water inflow, at an angle of 25° on the surface of the slab urinal and the distance of maximum 300 mm side to side, excluding the side wall as shown in Figure A1.</p>		
<p>Clause 6.2 Flushing test for wall-hung and stall urinals</p> <p>When tested in accordance with Annex B, with nominal flush volume as per Table 1 sawdust remaining in tested area shall not be more than 2500 mm<sup>2</sup> after a single flush operation.</p> <p>The surface of tested area shall include from the centre point of the water inflow (either from the spreader or the uppermost flushing outlet), at an angle of 25° on the surface of the urinal, and excluding the side wall as shown in Figure B1.</p>		

**Attachment**

<b>Photos of Tested Product</b>	
Sample:	Sample:

**-End of Report-**

