

Your Ref :

Our Ref : WSN 92413/90/202301/COPPERALLOY

Date : 1 Mar 2023

To water fitting suppliers, test laboratories, Singapore Sanitary Ware Importers & Exporters' Association (SSWIEA), Singapore Plumbing Society (SPS), Licensed Plumbers, Professional Engineers and relevant government agencies and associations.

Dear Sir/Madam

(A) PHASING-OUT OF SALE AND SUPPLY OF COPPER ALLOY GRADES CW602N, CW709R AND CC491K WATER FITTINGS FOR POTABLE WATER FOR USE

(B) NEW COPPER ALLOY WATER FITTINGS ACCEPTABLE FOR POTABLE WATER USE AND THE TESTING REQUIREMENTS

Currently, under the PUB Stipulation of Standards & Requirements of Water Fittings (PUB S&R), copper alloy water fittings, except exposed terminal fittings, for use in water service installations shall be of the following grades:

- a) DZR brass grades CW511L, CW602N, CW625N, CW626N, CW709R, CW724R, CW725R; and
- b) Bronze & gunmetal (e.g. grade CC491K).

2. As part of tightening the requirements on the use of copper alloy water fittings, PUB had consulted the industry in June/July 2022 on phasing-out the 3 copper alloy grades of water fittings namely CW602N, CW709R and CC491K from sale and supply in Singapore, to align with other countries' practices on copper alloys suitable for potable water use. We have reviewed and would like to inform you on the following implementation plans and testing requirements:

- a) **With effect from 1 Mar 2027 (i.e. 4 years from the date of this circular)**, all existing copper alloy water fittings of grades **CW602N, CW709R** and **CC491K** will no longer be allowed for supply in Singapore. This duration is to allow existing copper alloy water fittings of such grades to be cleared from the market.
- b) **With effect from 1 Mar 2023 (based on date of test reports)**, all new copper alloy water fittings except for exposed terminal fittings such as taps/mixers, shall comply with the following:
 - i. The copper alloys that are acceptable for use in contact with potable water shall be of any grade which are listed in the "**Common Approach on Metallic Materials Part B: Positive List of Compositions**". The listing can be downloaded from the Umweltbundesamt's website at <https://www.umweltbundesamt.de/en/topics/water/drinking-water/distributing-drinking-water/approval-harmonization-4ms-initiative#publication-of-common->

approaches. For your information, the existing copper alloy grades such as CW511L, CW625N, CW626N, CW724R and CW725R are currently covered in this listing.

- ii. The copper alloy shall be tested for compliance with the following test standards/methods:
- 1) Chemical composition analysis;
 - 2) AS/NZS 4020:2018 Appendix H on Extraction of metals; and
 - 3) Dezincification resistant test (DZR) under ISO 6509-1:2014 and ISO 6509-2:2017, if applicable. Suppliers/manufacturers are advised to consult the accredited test laboratory whether the DZR test is applicable for their copper alloy grade.
- c) New copper alloy water fittings of grades CW602N, CW709R and CC491K which are tested after 1 Mar 2023 (based on date of test reports) will be allowed for supply until end February 2027.

Please refer to the Table below for your easy reference.

Allowed for supply between 1 March 2023 to end February 2027	Allowed for supply from 1 March 2027 onwards
<ul style="list-style-type: none"> • Copper alloy grades : CW511L, CW602N, CW625N, CW626N, CW709R, CW724R, CW725R, CC491K, bronze and gunmetal <p style="text-align: center;">OR</p> <ul style="list-style-type: none"> • Copper alloy grades as listed in the 4MSI Positive List of Compositions 	<p>Copper alloy grades as listed in the 4MSI Positive List of Compositions (which also covers CW511L, CW625N, CW626N, CW724R and CW725R)</p>

3. For avoidance of doubt, a water fitting shall be deemed to comply with the stipulated standards if it is tested by a testing laboratory accredited by the Singapore Accreditation Council (SAC) or its Mutual Recognition Arrangement (MRA) partners. Test reports issued by a testing laboratory accredited by the SAC or its MRA partners must bear the SAC-SINGLAS mark or the mark of the International Laboratory Accreditation Cooperation Mutual Recognition Arrangement (ILAC-MRA) respectively.

4. A copy of this circular can also be downloaded from PUB's website at www.pub.gov.sg. Please disseminate this circular to your relevant staff, members, distributors, retailers and other industry partners for their information and compliance. If you have any queries concerning this circular or need further clarification or assistance, please do not hesitate to email to pub_waterfittings@pub.gov.sg

5. Please contact me or email to pub_waterfittings@pub.gov.sg if you have any clarifications. Please indicate PUB's Circular Reference No. and the date in your email enquiry.

Yours faithfully



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for DIRECTOR
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