

PLEASE ADDRESS ANY CORRESPONDENCE TO WATER SUPPLY (NETWORK) DEPARTMENT

Your Ref :

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Date : 1 July 2019 E-mail : roland_chan@pub.gov.sg

To all relevant water fittings suppliers, test laboratories, certification bodies for WELS, Singapore Sanitary Ware Importers & Exporters' Association (SSWIEA), Singapore Plumbing Society (SPS), Licensed Plumbers and relevant Government Agencies, Statutory Board, Professional Engineers, M&E Consultants, Associations and Organisations.

Dear Sir/Madam

UPDATED STIPULATION OF STANDARDS AND REQUIREMENTS FOR WATER FITTINGS - COPPER ALLOY DEZINCIFICATION RESISTANT (DZR) BRASS

Currently, all copper alloy water fittings except for exposed terminal fittings shall be of gunmetal, bronze or DZR brass materials only. For gunmetal or bronze fittings, they shall comply with BS EN 1982 : 2008. Those which are of Dezincification resistant type (DZR) shall comply with the tests on 'Composition' and 'Resistance to dezincification' of BS EN 12163 : 1998 or BS EN 12165 : 1998 or BS EN 12420 : 1999. Such fittings shall have an additional marking of 'DZR' or 'CR'. CW602N is the material composition designation for copper alloy with dezincification resistance in accordance with BS EN 12163 : 1998 or BS EN 12165 : 1998 or BS EN 12420 : 1999.

2 **With effect from 1 Oct 2019 (date of test report)**, only copper alloys which are of Dezincification Resistant (DZR) types that have been tested on "Composition" and "Resistance to dezincification" in accordance with the test methods specified in the stipulated standards and comply with requirements of the standards as shown in **Table** below shall be allowed for display, advertisement, sale, supply and installation in potable water supply systems in Singapore. Only DZR brass grades as specified in the clauses under "Resistance to dezincification" of the respective standards are acceptable. Such fittings shall have an additional marking of "DZR" or "CR".

Table

Stipulated Standards	*Acceptable DZR brass grades	Tests	Test method
BS EN 12163:2016	CW511L, CW724R.	1) Clause 6.1 Chemical composition	1) Relevant applicable standards
BS EN 12165:2016	CW511L, CW602N, CW625N, CW626N, CW709R, CW724R, CW725R.	2) Clause 6.3 Resistance to dezincification test	2) *EN ISO 6509-1:2014
BS EN 12420:2014	CW511L, CW602N, CW625N, CW626N, CW709R, CW724R, CW725R.	1) Clause 6.1 Chemical composition 2) Clause 6.3 Resistance to dezincification test	1) Relevant applicable standards 2) *EN ISO 6509-1:2014

*Specified in the respective standards.

3 Existing DZR brass water fittings which have been tested to comply with BS EN 12163:1998/2011/2016, BS EN 12165:1998/2011/2016 and BS EN 12420:1999/2014 **prior to 1 Oct 2019 (date of test report)**, can continue to be allowed for display, advertisement, sale, supply and installation in potable water supply systems in Singapore. For more information, please refer to PUB's website at www.pub.gov.sg.

4 Should there be any modifications/changes that may materially impact the quality of the fittings, PUB strongly recommend that the suppliers/manufacturers exercise due diligence to have the fitting/material re-tested to the latest prevailing standards stipulated by PUB. We have included a non-exhaustive list of the possible modifications/changes below:-

- a. change in constituent materials or raw ingredients
- b. change in manufacturing method or process or conditions
- c. change in manufacturing site, factory or plant
- d. change in source of materials or raw ingredients.

5 We would like to remind that a water fitting is deemed to comply with PUB's stipulated standards if it is tested as complying with such standards by a testing laboratory accredited by the Singapore Accreditation Council (SAC) or its Mutual Recognition Arrangement (MRA) partners. For more information, please visit SAC's website at www.sac-accreditation.gov.sg. Test reports issued by a testing laboratory accredited by the SAC or its MRA partners must bear the SAC-SINGLAS mark and ILAC mark, or MRA partners' International Laboratory Accreditation Cooperation (ILAC-MRA) mark respectively. Please note that PUB will not accept any test report issued by a testing laboratory (notwithstanding that the testing laboratory is accredited by the SAC or its MRA partners) if the test report does not bear the above-mentioned logos.

6 All water fittings must be supported with valid, complete and full test reports. Suppliers, retailers and installers shall ensure that the test reports of all water fittings which they offer-for-sale, advertise, display, sell or supply are properly kept and must be produced for verification upon request by PUB. PUB conducts surveillance checks and will not hesitate to take action against any non-compliance.

7 Please disseminate the information in this circular with your relevant staff, members, distributors, retailers and other industry partners for their information and compliance. A copy of this circular is downloadable from PUB's website at www.pub.gov.sg. If you have any queries concerning this circular or need further clarification or assistance, please do not hesitate to contact any of the officers listed below.

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Yours faithfully



ROLAND CHAN
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for DIRECTOR
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