



水務署
Water Supplies Department

總部 Headquarters

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Distribution: All Licensed Plumbers and Authorized Persons

Dear Sirs,

Circular Letter No. 4/2020
Mandatory Lead Check for Soldering Materials in Pipe-fittings
with Integral Solder Ring upon delivery to Site

Currently, non-destructive lead checks for solder joints of copper pipes and fittings will be carried out by the Water Authority during inspection of completed inside service as detailed in Appendix 12 of the Guide to Application for Water Supply (October 2019). However, it is difficult to carry out lead checks on solder joints of copper pipe-fittings with integral solder rings after completion of the plumbing works since proper melting of solder of individual joint to expose the solder materials for lead check will depend on workmanship and it may not be possible to test some of the completed solder joints. To enhance the control of lead content in the soldering materials of pipe-fittings with integral solder rings to be used in plumbing projects, all pipe-fittings integrated with solder materials shall undergo random lead checks upon delivery to site prior to installation in projects. The WSD has consulted the Technical Committee on Plumbing on the above lead check requirement.

LEAD CHECK ON INTEGRATED SOLDERING MATERIALS IN PIPE-FITTINGS

2. Upon delivery of pipe-fittings with integral solder materials to site, samples shall be taken randomly by the Plumbing Contractor/Licensed Plumber¹ from each batch of such pipe-fittings under the same GA Reference Number² for conducting lead check on soldering materials prior to using that subject batch in plumbing installations. The number of samples to be taken for lead check will depend on the overall batch size. Pipe-fittings of different sizes and types under the same GA Reference Number delivered to site on the same date can be regarded as one batch for the purpose of sampling for lead check, i.e. minimum 1% of the total number of fittings (for all types and sizes in the batch) with a max of 10 samples. Pipe-fittings of different GA Reference Numbers are regarded as different batches even if they are delivered to site on the same date. All the samples in a batch shall pass the lead check before the batch shall be allowed to be used in the project.

3. Testing requirement of soldering materials stipulated in para.2 above is to check the lead-free requirement of the test sample with reference to BS EN ISO 9453:2014. This can be done by either the lead tester kit, the XRF analyzer, or the chemical composition analysis³ as appropriate.

4. Current non-destructive lead checks for solder joints of copper pipe-fittings to be carried out by the Water Authority during inspection of completed inside service will **NOT** apply to those joints of pipe-fittings with integral solder rings that have passed the lead checks prior to installation.

¹ For smaller scale of works not involving any plumbing contractor, the responsible Licensed Plumber may carry out the required lead check of integral solder pipe-fittings upon delivery to site.

² Random lead check for soldering materials in pipe-fittings with integral solder ring also applies to those to be used in prefabrication works, such as the Modular Integrated Construction (MiC). Hence, the same steps of random sampling and lead check shall also be taken on the pipe-fittings upon delivery to site before their use in the prefabrication work.

³ Chemical composition analysis shall be carried out by a local laboratory accredited by the Hong Kong Laboratory Accreditation Scheme ("HOKLAS") under the Category – "Construction Materials" and Sub-category – "Metallic materials".

RESPONSIBILITIES OF RELEVANT STAKEHOLDERS

5. The responsibilities of relevant stakeholders are given below:-

Plumbing Contractor/Licensed Plumber

- (i) To arrange and carry out random lead check for each batch of pipe-fittings with integral soldering materials as detailed in para.2 above upon delivery to site.
- (ii) To reject the whole batch of delivered materials back to the Material Supplier if any of the samples fails the lead check.
- (iii) To properly keep the batch delivery inventory record and the corresponding lead check test results with record photos of every batch of pipe-fittings with integral solder materials for subsequent inspections by the Water Authority when requested.

Licensed Plumber

- (i) To submit test records of lead checks for each batch of pipe-fittings with integral soldering materials (including such pipe-fittings used in prefabrication works) to Water Authority together with Form WWO 46 Part IV.
- (ii) To obtain relevant test records of lead checks from plumbing contractor where necessary for submission together with WWO 46 Part IV.

EFFECTIVE DATE

6. This above random lead check requirement shall apply to pipe-fittings with integral solder ring delivered to site on or after 1 December 2020.

ENQUIRY

7. Should you have any enquiry, please contact our Mechanical Engineer/Material Control at telephone no. 2294 2656.

Yours faithfully,

(Original Signed)

(CHAN Chung Kun)

for Water Authority

(with Chinese translation)

c.c. Housing Department (Attn: SM/QM)
 Buildings Department
 Architectural Services Department
 Fire Services Department
 The Hong Kong Housing Society
 The Hong Kong Institute of Architects
 The Hong Kong Institution of Engineers
 The Hong Kong Institute of Surveyors
 The Chartered Institute of Plumbing and Heating Engineering - Hong Kong Council
 Hong Kong Plumbing and Sanitary Ware Trade Association Ltd
 Hong Kong Licensed Plumbing Professionals Association Ltd
 Hong Kong Plumbing General Union
 Hong Kong Water Works Professionals Association Ltd
 The Hong Kong Institution of Plumbing and Drainage Ltd
 Plumbing Technology Student Association
 The Association of Registered Fire Service Installation Contractors of Hong Kong Ltd
 Real Estate Development Association of Hong Kong
 Hong Kong Institute of Vocational Education
 Construction Industry Council
 The Hong Kong Construction Association Ltd
 Hong Kong General Building Contractors Association Ltd
 The Hong Kong Federation of Electrical & Mechanical Contractors Ltd
 Contractor's Authorised Signatory Association Ltd
 Registered Minor Works Contractor Signatory Association Ltd
 Hong Kong Registered Contractors Association Company Ltd
 Building Services Operation and Maintenance Executives Society
 The Hong Kong Air Conditioning and Refrigeration Association Ltd
 Hong Kong Licensed Plumbers Union Limited
 Li Ka Shing Institute of Professional and Continuing Education, The Open University of Hong Kong
 The Association of Electrical and Mechanical Engineering (Hong Kong) Ltd
 Pipeman Engineering (International) Limited