

Voluntary GA* Scheme

Background

At present, the Water Supplies Department (WSD) has a General Acceptance (GA) system in place to pre-approve plumbing products used in plumbing projects. The current GA* Scheme is a voluntary scheme built on the existing GA System. The scheme promotes adoption of low metal leaching rate metallic plumbing products in fresh water inside service application. Suppliers, manufacturers and importers of GA plumbing products are encouraged to join the Scheme to introduce low metal leaching rate metallic plumbing products to the local market.

Scope

GA plumbing products (excluding products for non-potable fresh water system, flushing water system and fire service system) that fulfill the requirements of low metal leaching rate on the metallic surfaces in direct contact with fresh water will be classified as low metal leaching rate metallic plumbing products under the GA* Scheme. Currently, GA products accepted for GA* application include pipes and pipe fittings (stainless steel, copper or copper alloy), valves, strainers, expansion/settlement/flexible joints, taps and mixers.

Assessment

1. A prerequisite requirement for GA* application is that the plumbing product shall possess a valid GA status.
2. Low metal leaching rate metallic plumbing products under the GA* Scheme shall possess supporting document/test report to prove compliance with an Australian/New Zealand Standard AS/NZS 4020:2005 Appendix H or I at a testing temperature (20±2)°C. The maximum allowable concentration of heavy metals of the extracts shall comply with the World Health Organization's guideline values and/or provisional guideline values as shown in the table below.

Metal	Maximum Allowable Concentration, µg/L
Lead (Pb)	10
Cadmium (Cd)	3
Chromium (Cr)	50
Nickel (Ni)	70
Copper (Cu)	2,000
Antimony (Sb)	20

3. **GA*** Scheme accepts test reports issued by accredited laboratories under the Hong Kong Laboratory Accreditation Scheme (HOKLAS) in the same category/sub-categories as for GA application or test reports recognised under the mutual recognition arrangement (MRA) with HOKLAS for the relevant test (note the requirement of Scaling Factor in clause 6).
4. For a particular model of plumbing product designed with different connection size/diameter, compliant metal leaching test conducted on the smallest size/diameter fitting is sufficed for the whole range of size/diameter of that model of plumbing product as stated in the GA letter. For example, compliant test of a diameter 25mm copper bend will validate bends of the same model at diameter 25mm or above for the **GA*** status. However, for copper bend of the same model with diameter below 25mm would not be covered.
5. As stated in AS/NZS 4020:2005, any product, or part of a product, installed within 250 mL draw-off of a drinking water delivery point will be classified as “end-of-line fitting” and shall comply with the extraction-of-metals procedure for testing in Appendix I of the Standard. Procedure for testing “in-line” fittings is given in Appendix H. In brief, taps and mixers are “end-of-line fitting” whereas “in-line” fittings would include pipes, pipe fittings, valves etc. The approved laboratories would advise the applicants on the tests required for different plumbing products.
6. In accordance with Appendix H of AS/NZS 4020:2005 for “in-line” products, the result of heavy metal concentrations from test shall be multiplied by the corresponding Scaling Factors, before checking against the table on the maximum allowable concentration in Clause 2 for compliance. However, there is no Scaling Factor for “end-of-line fitting” in Appendix I of the Standard. The WSD has adopted the following Scaling Factors for “in-line” fittings used in the Hong Kong situation:

In-line Metallic Plumbing Product	Scaling Factor
Pipe	Nil
Pipe fitting	0.05
Valves (Gate, Globe & Ball)	0.01
Butterfly valve	0.05
Non-return/Check valve, Pressure reducing valve	0.01 for DN=>100 0.05 for DN<100
Strainer	0.1
Expansion/Settlement/Flexible Joint	0.01

As the Scaling Factors adopted by the WSD for “in-line” products may not be the same as the Scaling Factors used overseas, for test reports issued by laboratories under the mutual recognition arrangement (MRA) with HOKLAS, adjustment on the final metal concentration by using the Scaling Factor above may be necessary before acceptance of the products by the WSD.

7. For **GA*** application purpose, valid test reports shall be issued no more than three years from the date of **GA*** application.

Publication of GA* Result

After acceptance of application by the WSD, the **GA*** information of the **GA** product will be updated to the Directory Search of the WSD website for **GA** products.

<http://www.wsd.gov.hk/en/plumbing-engineering/pipes-and-fittings-to-be-used-in-inside-service-or/index.html>

An example to search **GA*** products in the **GA** Directory Search is shown below:-

Step 1

Search for Water Supply Pipes and Fittings with Valid General Acceptance

Simple Search | Advanced Search | Creation of Annex to WWO46 (For applicants' use only) | Information - | Mobile Application

Simple Search

General Acceptance No.:

Category: *

Type / Material:

Brand:

* Mandatory Input

GA* Product Only

• Colour for normal items and items with surveillance status "pass", "under compliance test" and "GA reinstated" items: default system colour
• Colour for "GA suspended" items: pale yellow
• Colour for "GA removed" items: light pink
• Colour for items with GA expired normally: grey

Search Reset

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Step 2

Search for Water Supply Pipes and Fittings with Valid General Acceptance

Simple Search | Advanced Search | Creation of Annex to WWO46 (For applicants' use only) | Information - | Mobile Application

Simple Search

General Acceptance No.:

Category: *

Type / Material:

Brand:

* Mandatory Input

GA* Product Only

• Colour for normal items and items with surveillance status "pass", "under compliance test" and "GA reinstated" items: default system colour
• Colour for "GA suspended" items: pale yellow
• Colour for "GA removed" items: light pink
• Colour for items with GA expired normally: grey

Search Reset

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Step 3

Search for Water Supply Pipes and Fittings with Valid General Acceptance

Simple Search | Advanced Search | Creation of Annex to VVW046 (For applicants' use only) | Information | Mobile Application

Simple Search

General Acceptance No.:

Category:

Type / Material:

Brand:

* Mandatory input GA* Product Only

Colour for normal items and items with surveillance status "pass", "under compliance test" and "GA reinstated" items: default system colour
Colour for "GA suspended" items: pale yellow
Colour for "GA removed" items: light pink
Colour for items with GA expired normally: grey

SEARCH RESULT

Brand	Manufacturer	Origin	Class	Type of Fittings	Series	Size	Model	GA Number	Expiry Date	Approval Date	GA Info	Substandard	GA*	GA* Remarks	Surveillance Status	Surveillance Status Effective Date	Surveillance Remarks	Product Photo	Letter
Dummy	Dummy	Denmark	Valve	Thermostatic blending valve		3/4 inch	dummy-m	X19000101	31-Jul-22	4-Oct-17	★	★	★	Download	Pass	9-Nov-17	This is remarks in English		
Dummy	Dummy	Denmark	Valve	Thermostatic blending valve		3/4 inch	dummy-m	X19000103	31-Jul-22	4-Oct-17	★	★	★		Suspended	9-Nov-17	This is remarks in English		
Dummy	Dummy	Denmark	Valve	Thermostatic blending valve		3/4 inch	dummy-m	X19000106	31-Jul-22	4-Oct-17	★	★	★		GA Expired	9-Nov-17	This is remarks in English		

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Enquiry

For enquiry on the GA* Scheme and the updated list of accredited laboratories acceptable for testing of GA* products, please contact the Material Control Unit at tel.: 3583 4086.

Material Control Unit
Water Supplies Department
17 November 2017

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