

TEST REPORT

TITLE : Testing of Water Tap

SAMPLE ID : 20M009

DESCRIPTION OF SAMPLE : 1/2" Single lever sink mixer

Name of Client: MCU Co. LTD.

BRAND : MCU

BODY MARKINGS : **mcu**

MANUFACTURER : MCU Manufacturing Ltd

COUNTRY OF ORIGIN : China

MODEL : M35-2

METHOD OF TEST : BS EN 1286: 1999, BS EN 1982:2008, BS EN 12163:2011,
AS/NZS 4020:2005, in-house method EM1

PERIOD OF TESTS : 27-12-2019 to 22-01-2020

Sample

**Incorrect details in description
(such as size of the product, etc.)
錯誤資料描述 (如產品尺寸等)**

**Incorrect reference standard
and/or its edition quoted
不正確參考標準 及/或 其版本**



(CHAN Tai Man)
Senior Test Engineer

Summary

Test	Remark
1. Dimensions	C
2.1 Leaktightness of the Mixing Valve Upstream of the Obturator and of the Obturator	C
2.2 Leaktightness of the Obturator: Cross Flow between Hot water and Cold water	C
2.3. Leaktightness of the Mixing Valve Downstream of the Obturator	C
3.1. Determination of Flow Rate	C
4.1 Chemical Composition of Metal Component - body	C
4.2 Chemical Composition of Metal Component - spout	C
5. Leaching test	C
6. Extraction of metals from valve cartridge	C

RESULTS:

1. DIMENSIONS (BS EN 1286: 1999 Cl. 8)

Ambient temperature: 20 °C

Relative humidity:

67%

	Sample	Requirement	Remark
Nominal size (in)	3/8"	/	C
Body thickness (mm)	2.15	/	C
Bore of seat (mm)	6.72	/	C

Remark: Electroplating materials were / were not observed on the internal water passage surfaces of the sample under a non-destructive and unaided visual inspection.

Missing crucial information
遺漏要求上的重要資料

Relevant Standard with Clause no. omitted
未有提供相關測試標準及其段落

2. LEAKTIGHTNESS CHARACTERISTICS (Cl. 9)

2.1 Leaktightness of the mixing valve upstream of the obturator and the obturator (Cl. 9.3)

	Unit	Sample	Requirement	Remark
Test Pressure (bar)	(bar)	16	16 ± 0.5	C
Duration (s)	(s)	61	60 ± 5	C
Observation	/	No	No Leakage or seepage	C

2.2 Leaktightness of the obturator: cross flow between hot water and cold water(Cl. 9.4)

		Unit	Sample	Requirement	Remark
Hot to Cold	Static pressure	Bar	4	4 ± 0.2	C
	Duration	Sec.	63	60 ± 5	C
	Observation	/	No	No Leakage or seepage	C
Cold to Hot	Static pressure	Bar	4	4 ± 0.2	C
	Duration	Sec.	60	60 ± 5	C
	Observation	/	No	No Leakage or seepage	C

2.3. Leaktightness of the mixing valve downstream of the obturator (Cl. 9.5)

		Unit	Sample	Requirement	Remark
High Pressure	Static pressure	Bar	4	4 ± 0.2	C
	Duration	Sec.	60	60 ± 5	C
	Observation	/	No	No Leakage or seepage	C
Low Pressure	Static pressure	Bar	0.2	0.2 ± 0.02	C
	Duration	Sec.	60	60 ± 5	C
	Observation	/	No	No Leakage or seepage	C

Relevant Clause not according to Technical Requirements of Plumbing Works in Buildings
與水務署水喉工程技術要求的相關測試段落不同

3. HYDRAULIC OPERATING CHARACTERISTICS

3.1. Determination of Flow Rate (Cl.10)

		Unit	Measured	Required	Remark
1	Temperature (Full Cold)	°C	14	10-15°C	C
	Dynamic pressure	bar	0.1	0.1 ± 0.005	C
	Flow rate (main outlet mode)	l/s	0.056	/	/
2	Temperature (34 degree)	°C	34	/	/
	Dynamic pressure	bar	0.1	0.1 ± 0.005	C
	Flow rate (main outlet mode)	l/s	0.064	/	/
3	Temperature (38 degree)	°C	38	/	/
	Dynamic pressure	bar	0.1	0.1 ± 0.005	C
	Flow rate (main outlet mode)	l/s	0.063	/	/
4	Temperature (42 degree)	°C	42	/	/
	Dynamic pressure	bar	0.1	0.1 ± 0.005	C
	Flow rate (main outlet mode)	l/s	0.064	/	/
5	Temperature (Full Hot)	°C	64	60-65°C	C
	Dynamic pressure	bar	0.1	0.1 ± 0.005	C
	Flow rate (main outlet mode)	l/s	0.5	/	/

4. CHEMICAL COMPOSITION

4.1 Chemical composition of metal component - body

Analyte	Units	Sample	CC754S Requirement	Remark
Aluminium (Al)	%	0.5	Max. 0.8	C
Copper (Cu)	%	63.5	58.0 to 63.0	NC
Nickel (Ni)	%	0.03	Max. 1.0	C
Lead (Pb)	%	1.5	0.5 to 2.5	C
Tin (Sn)	%	0.1	Max. 1.0	C
Zinc (Zn)	%	38.2	Remainder	C
Iron (Fe)	%	0.1	Max. 0.7	C
Manganese (Mn)	%	0.002	Max. 0.5	C
Phosphorous (P)	%	<0.0025	Max. 0.02	C
Silicon (Si)	%	0.02	Max. 0.05	C

**Failed test report
submitted
提交不及格
測試報告**

Material fulfills specification of Copper and copper alloys BS EN 1982:2008 Table 7 CuZn39Pb1Al-C (CC754S).

The specification from GA report is CC754S.

4.2 Chemical composition of metal component - spout

Analyte	Units	Sample	CW507L Requirement	Remark
Copper (Cu)	%	64.7	63.5 to 65.5	C
Aluminium (Al)	%	<0.0025	Max. 0.02	C
Iron (Fe)	%	0.002	Max. 0.05	C
Nickel (Ni)	%	0.001	Max. 0.3	C
Lead (Pb)	%	<0.0025	Max. 0.05	C
Tin (Sn)	%	0.004	Max. 0.1	C
Zinc (Zn)	%	36.2	Remainder	C

Material fulfills specification of Copper and copper alloys BS EN 12163:2016 CW507L

The specification from GA report is BS EN 12163:2016 CW507L

**Table of compositions without complete list of
Analytes in accordance with Standard. Any missing
analytes shall be incomplete, including "Others"**
成份表並未按相關標準完整列出所有成份要求。
完整分析物亦包括「其他成份」

Electroplating materials were observed on the internal water passage surfaces of the sample under a non-destructive and unaided visual inspection.



5. LEACHING TEST (AS/NZS 4020:2005 Appendix I)

Analyte	Units	Blank	Sample	WHO Guideline	Remark
Antimony (Sb)	µg/L	<2	<2	Max. 20	C
Cadmium (Cd)	µg/L	<1	<1	Max. 3	C
Chromium (Cr)	µg/L	<5	<5	Max. 50	C
Copper (Cu)	µg/L	<20	<20	Max. 2000	C
Nickel (Ni)	µg/L	<5	<5	Max. 70	C
Lead (Pb)	µg/L	<8	<8	Max. 10	C

Remarks : (1) Extraction of metals by AS/NZS 4020:2005 Appendix I.

(2) Materials fulfill the WHO guidelines for Drinking water quality, 4th ed. 2011.

6. EXTRACTION OF METALS FROM VALVE CARTRIDGE

Analyte	Units	Blank	Sample	WHO Guideline	Remark
Arsenic (As)	µg/L	<2	<2	Max. 10	C
Cadmium (Cd)	µg/L	<1	<1	Max. 3	C
Chromium (Cr)	µg/L	<5	<5	Max. 50	C
Nickel (Ni)	µg/L	<5	<5	Max. 70	C
Lead (Pb)	µg/L	<8	<8	Max. 10	C
Selenium (Se)	µg/L	<2	<2	Max. 40	C

Remarks : (1) Extraction of metals by in-house method (Method EM1).

(2) Materials fulfill the WHO guidelines for Drinking water quality, 4th ed. 2011.

**Testing components (such as body, spout, etc.)
not properly indicated**

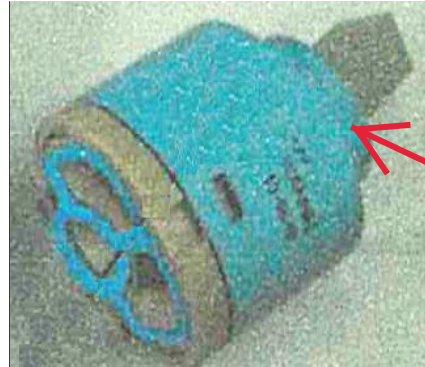
測試部份(包括本體部份、噴口等)未明確標示

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Figure 1: Photo of Sample



Figure 2: Photo of Valve Cartridge



**Photo of the
components/parts
always not clearly
shown / blurred
部件模糊/
未清楚顯示**

**Superfluous products (not forming part of this GA
product, such as flow controller / flexible hose)
improperly incorporated with ambiguity
額外配件(非申請GA產品部份 如節流器/軟管)
不恰當配上會造成混淆**

General Notes:

C: Conformance

NA: Not Applicable

NC: Non-conformance

NS: Not Specified

R: Remainder

- End of Report -