



中国认可  
国际互认  
检测  
TESTING  
CNAS L0599

## TEST REPORT

No. : SHIN1904021090ML

Date : Apr 16, 2019

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CUSTOMER NAME: METAL & TOOLS TRADE LIMITED  
ADDRESS: FLAT B, 3/F, KO SHUN HOUSE, 329-331 NATHAN ROAD,  
KOWLOON, HONGKONG

Sample Name : SEAMLESS COPPER TUBE  
Product Specification : 9.52 x 0.81mm  
Product or Lot No. : R410 TO K-FLEX 03-01-2019  
Manufacturer : METAL & TOOLS TRADE LIMITED  
Buyer : K-FLEX INSULATION & A/C PARTS LIMITED  
Material and Mark : ASTM B280, C12200

Above information and sample(s) was/were submitted and confirmed by the client. SGS, however, assumes no responsibility to verify the accuracy, adequacy and completeness of the sample information provided by client.

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Test Required : Chemical Composition Analysis, Tensile Test, Dimension Measurement  
Ref. Standard : ASTM B280-08  
Date of Receipt : Apr 04, 2019  
Testing Start Date : Apr 04, 2019  
Testing End Date : Apr 16, 2019  
Test result(s) : For further details, please refer to the following page(s)  
(Unless otherwise stated the results shown in this test report refer only to the sample(s) tested)

Signed for  
SGS-CSTC Standards Technical  
Service (Shanghai) Co., Ltd.

Kelly Shi  
Authorized signatory



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### 1. Chemical Composition Analysis:

Test Method: Cu: GB/T 5121.1-2008

Others: GB/T 5121.27-2008(ICP-OES)

Element	Cu	Ag	P	Con.
Req.,%	≥99.90	-	0.015~0.040	-
Result ,%	99.96	<0.001	0.020	Pass

Note: The result comply with the requirement of ASTM B280-08 type C12200.

### 2. Tensile Test:

Test Method: ASTM E8/E8M-16a

Test item	Specimen type	Tensile strength (MPa)	Yield strength (0.2% offset) (MPa)	Elongation after fracture G=2 in. (%)	Con.
Req.	-	≥205	-	≥40	-
Result	Full-size tubular specimen	245	82	50.0	Pass

Note: The results comply with the requirement of ASTM B280-08 type C12200.



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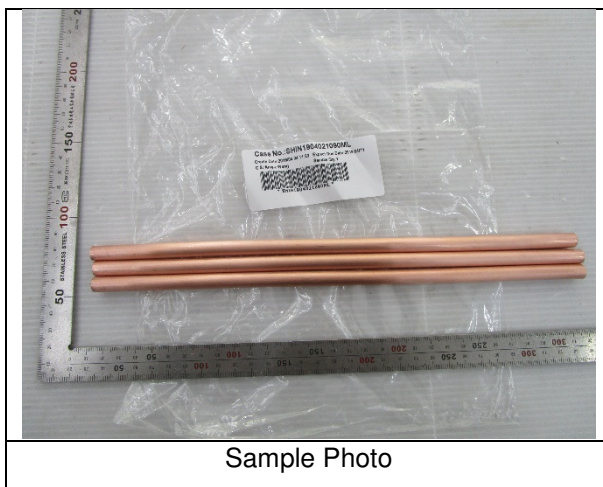
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### 3. Dimension Measurement:

Unit(mm)

Test Item			Theoretical Value			Results				Test Equipment
No.	Position	Dimension	Nominal	Tolerance (+)	Tolerance (-)	Measure	Deviation	Out of	Con.	
1		Diameter	9.52	0.051	0.051	9.526	0.006	0	○	Micrometer
2		Wall thickness	0.81	0.08	0.08	0.84	0.030	0	○	Callipers
3		Roundness	0	0.076	0	0.073	0.073	0	○	CMM
4		Weight (Kg/m)	0.199	-	-	0.191	-0.008	-	-	Electronic scale/Callipers

Note: "○" indicates Pass, "x" indicates Fail.



Sample Photo

\*\*\*\*\* End of report\*\*\*\*\*

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