

TEST REPORT

No. : QDIN2007004553PS

Date : Aug 13, 2020

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QDIN2007004553PS

CUSTOMER NAME: HENAN HONREY CABLE CO.,LTD
ADDRESS: NO.195, FUNIU ROAD, ZHONGYUAN DISTRICT, ZHENGZHOU CITY,
HENAN PROVINCE.

Sample Name : AAAC-Aluminum Alloy Conductor
Product Specification : 35mm²
Manufacturer : HENAN HONREY CABLE CO.,LTD
Material and Mark : Aluminium Alloy

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.

SGS Ref. No. : GZIN2007039361MR; GZIN2007039999MR
Date of Receipt : Jul 23, 2020
Testing Start Date : Jul 23, 2020
Testing End Date : Aug 13, 2020
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
Services (Qingdao) Co., Ltd.

Vicky Dong
Authorized signatory



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Summary of Results:

No.	Test Item	Test Method	Result		Conclusion
1	Conductor Structure Dimension	IEC 61089:1991	See result		Pass
2	Lay Ratio	IEC 61089:1991	14.2		Pass
3	Linear Mass	IEC 61089:1991	95.1kg/km		Pass
4	Direction of Lay	IEC 61089:1991	Right Direction		Pass
5	Surface Quality	IEC 61089:1991	See result		Pass
6	DC Resistance at 20 °C	IEC 61089:1991(1997-05) Section 5.8 & IEC 61232:1993-06 Section 6.3.5	0.8957 Ω/Km		Pass
7	Tensile Test	With reference to ASTM B398/B398M-15 & ASTM B399/B399M-04(2015) and client's requirement	Average tensile Strength	327MPa	Pass
			Average elongation at Break	7.4%	

- Note: 1. Pass : Meet the requirements;
 Fail : Does not meet the requirements;
 / : Not Apply to the judgment.
2. Test items 6-7 were carried out by SGS-CSTC Standards Technical Services Co., Ltd. Guangzhou Branch (CNAS L0167, CMA2017191612Z).



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Original Sample Photo:



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1. Test Item: Conductor Structure Dimension

Sample Description: See photo

Test Method: IEC 61089:1991

Test Condition:

Digital Caliper

Lab Environmental Condition: (23 ± 2) °C, (50 ± 5) % RH

Test Result:

Test Item	Test Result	Requirement of IEC 61089:1991	Conclusion
Number of wires	7	7	Pass
Diameter of Wire	2.55mm	2.52±0.03mm	Pass
Diameter of Conductor	7.56mm	7.56±0.1mm	Pass

2. Test Item: Lay Ratio

Sample Description: See photo

Test Method: IEC 61089:1991

Test Condition:

Digital Caliper

Lab Environmental Condition: (23 ± 2) °C, (50 ± 5) % RH

Test Result:

Test Item	Test Result	Requirement of IEC 61089:1991	Conclusion
Lay Ratio	14.2	10-16	Pass

3. Test Item: Linear Mass

Sample Description: See photo

Test Method: IEC 61089:1991

Test Condition:

Digital Caliper

Lab Environmental Condition: (23 ± 2) °C, (50 ± 5) % RH



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Test Result:

Test Item	Test Result	Requirement of IEC 61089:1991	Conclusion
Linear Mass	95.1kg/km	96.0±1.9kg/km	Pass

4. Test Item: Direction of Lay

Sample Description: See photo

Test Method: IEC 61089:1991

Lab Environmental Condition: (23 ± 2) °C, (50 ± 5) % RH

Test Result:

Test Item	Test Result	Requirement of IEC 61089:1991	Conclusion
Direction of Lay	Right Direction	Right Direction	Pass

5. Test Item: Surface Quality

Sample Description: See photo

Test Method: IEC 61089:1991

Lab Environmental Condition: (23 ± 2) °C, (50 ± 5) % RH

Test Result:

Test Item	Test Result	Requirement of IEC 61089:1991	Conclusion
Surface Quality	Aluminum alloy single wire was round, smooth and clean without damage and oil stain. Stranded wire: tightly twisted, round, smooth surface, no oil stain, no scratch, no back strand, no loose strand, no snake bending and other defects.	Aluminum alloy single wire should be round, smooth and clean without damage and excessive oil stain. Stranded wire: tightly twisted, round, smooth surface, no serious oil stain, no scratch, no back strand, no loose strand, no snake bending and other defects.	Pass



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6. Test Item: DC Resistance at 20 °C

Sample Description: Wire

Test Method: IEC 61089:1991(1997-05) Section 5.8 & IEC 61232:1993-06 Section 6.3.5

Test Condition:

Test Environment Condition: 23.3°C, 49.8%RH

Gauge Length: 786.08 mm

Test Result:

Test Item	Result	Client's requirement	Conclusion
DC Resistance at 20 °C	0.8957 Ω/Km	≤ 0.9595 Ω/Km	Pass

Equipment Information:

Equipment	Model	Equipment No.	Calibration date	Next Calibration date
Resistivity measuring instrument	34420A	GZMR-RL-E075	2019-12-26	2020-12-25
Vernier Caliper	0~1000/0.02mm	GZMR-RL-E088	2020-02-20	2021-02-19



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7. Test Item: Tensile Test

Sample Description: Aluminum alloy

Test Method: With reference to ASTM B398/B398M-15 & ASTM B399/B399M-04(2015) and client's requirement

Test Condition:

Specimen cross-sectional area: 34.3mm²

Testing speed: 2.5mm/min

Grip separation: 250mm

Lab Environmental Condition: (23 ± 2) °C, (50 ± 5) % RH

Test Result:

Test Item	Test Result	With reference to ASTM B398/B398M-15 & ASTM B399/B399M-04(2015) and client's requirement	Conclusion
Tensile Strength	327MPa	≥317Mpa	Pass
Elongation at Break	7.4%	≥3.0%	Pass

Note: Test specimens were cut from the sample.

Equipment Information:

Equipment	Model	Equipment No.	Calibration date	Next Calibration date
Universal Testing Machine	CMT4304	GZMR-PL-E062	2019-09-04	2020-09-03

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



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