

	SARA SAE ENGINEERING SPECIFICATION	
	Section: SES 26 – 802	
	ISSUE "A"	REV "0"
	EFF. DATE: 18.05.2016	Page 1 of 3

MATERIAL SPECIFICATION FOR ALUMINUM NICKEL, BRONZE, ASTM B150
UNS 63000, SOLUTION TREATED, QUENCHED AND TEMPERED

Rev	Reason of Change	Date	Made By	Reviewed By	Approved By	Status
0		18-05-2016	MN	AS	KKD	Released

	SARA SAE ENGINEERING SPECIFICATION	
	Section: SES 26 – 802	
	ISSUE "A"	REV "0"
	EFF. DATE: 18.05.2016	Page 2 of 3

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SCOPE

1.0 This Specification covers aluminum nickel bronze in the solutioned, quenched and tempered condition for use in bearings in pressure containing equipment for oilfield products.

2.0 APPLICABLE SPECIFICATIONS

- 2.1 ASTM B150 (C63000)
- 2.2 ASTM B249
- 2.3 UNS C63000

3.0 CHEMISTRY REQUIREMENTS

C63000

Aluminum	9.0/11.0
Iron	2.0/4.0
Manganese	1.5 max.
Nickel & Co	4.0/5.5
Copper	Remainder

4.0 MECHANICAL PROPERTIES

4.1 The mechanical properties shall meet the following minimum requirements after material has been annealed, quenched and tempered:

C63000

Tensile Strength, ksi min	100
Yield Strength, ksi min	50
Elongation, 2" gauge length, % min	10
Brinell hardness, BHN	207-235

5.0 MARKING REQUIREMENTS

5.1 All parts shall be marked in accordance with the requirements of the drawing.

	SARA SAE ENGINEERING SPECIFICATION	
	Section: SES 26 – 802	
	ISSUE "A"	REV "0"
	EFF. DATE: 18.05.2016	Page 3 of 3

6.0 **HEAT TREATMENT**

6.1 The material shall be supplied in the solution treated, quenched & tempered condition, or the drawn and stress relieved condition.

7.0 **CERTIFICATION**

7.1 A test certificate shall be provided to Sara with each shipment. A copy shall be sent to Sara's Purchasing Department. The certificate shall include:

7.1.1 Mill heat number and chemical analysis.

7.1.2 Statement of actual mechanical properties.

7.1.3 The Purchase Order number.

7.1.4 How the material was heat treated.

7.1.5 In the event of partial shipments, each shipment shall be accompanied by a certificate of test.