



ENGINEERING MATERIAL SPECIFICATION

BRASS ROD, LOW FUMING, BARE

WSB-M4A178-A1

BRASS ROD, LOW FUMING, COATED

WSB-M4A178-A2

1. SCOPE

The material defined by these specifications is a copper zinc brazing rod.

2. APPLICATION

These specifications were released originally for material used as a general purpose bronze welding and/or brazing on automotive components.

3. REQUIREMENTS

3.0 STANDARD REQUIREMENTS FOR PRODUCTION MATERIALS

Material suppliers and part producers must conform to the Company's Standard Requirements For Production Materials (WSS-M99P1111-A).

3.2 SIZE

These low fuming brass rods shall be a nominal diameter, as specified on the purchase order.

3.3 CHEMICAL COMPOSITION (weight percent)

Test Method: Inductively coupled plasma emission spectroscopy.

Copper	56.0 - 60.0
Lead	0.05 max
Iron	0.25 - 1.20
Tin	0.80 - 1.10
Aluminum	0.01 max
Manganese	0.01 - 0.50
Silicon	0.04 - 0.15
Other	0.50 max
Zinc	Remainder

3.4 PERFORMANCE

3.4.1 Parts brazed with these rods shall show smooth and uniform deposits free from porosity and cracks.

3.4.2 Parts brazed with these rods shall meet all Engineering drawing requirements, when the rod is used under the conditions specified by the Manufacturing Engineering Department.

Date	Action	Revisions
2003 09 24	Revised	Para 3.0 inserted; para 3.1, 3.5 and 4 deleted
1990 06 28	NB00K10040016003	Release



Documents

R.D. Moore, J. Moriarty



5. GENERAL INFORMATION

The information given below is provided for clarification and assistance in meeting the requirements of this specification.

- 5.1 Prior to engineering approval, satisfactory results on a minimum trial quantity of 25 kilograms of rods on the actual application will be required. The body Resident Engineer will inform Body Materials Engineering of the successful plant trial.
- 5.2 The material described in this specification is similar to AWS-A5.a27-85 RB Cu ZN-C.