

NORTH STAR BLUESCOPE STEEL LLC Material Specification

Process Area: Melt Shop LMF	Number: AL 22.08
Material: Calcium Backup Wire (Ca)	Effective Date: 7/15/03
Authorized By: John Ruf	Review Date: 7/15/04

1.0 Application:

Ladle addition for alloying purposes.

2.0 Chemical Analysis and Material Properties:

Element	Absolute min.	Preferred min.	Preferred max.	Absolute max.
Ca	99%			
Al				0.50%
Mg				0.50%

3.0 Packaging:

- 3.1 Horizontal payoff container - must be shipped on flat bed truck - each shipment to be identified with lot number
3.2 The North Star BlueScope Steel Raw Material Number must appear on all shipping and billing paperwork.

4.0 Sizing:

9mm diameter cored wire with single wall steel casing - 0.033lb of Calcium per foot of wire

5.0 Certification and Control:

- 5.1 Each lot received to include statements of conformity and certification. These documents must be handed in at the scales and include:
- 1) Certification for Calcium.
 - 2) Quantity
 - 3) Name of material
 - 4) Lot number
- 5.1 All chemical constituents not expressed but are contained in the subject material may not exceed 0.5% (except for Al) collectively. Any material lot exceeding 0.5% must have prior approval by purchasing before shipment is made and analysis included on certification.
- 5.2 Material is subject to inspection at North Star BlueScope Steel to test adherence to specification.
- 5.3 All material supplied to this specification must be equivalent in all respects to the material on which approval was originally granted.

6.0 Relevant Industry Standards (e.g. ASTM): N/A

7.0 Hazardous Material:

If this material is hazardous or requires special handling or storage, this information must be clearly labeled on containers and shipping documents. MSDS Sheets must also be sent to purchasing manager for new materials.

8.0 Attachments/Reference Documents: N/A

Rev #	Date	Description of Change(s)	Reason for Change:
1	5/21/98	Changed footer and added revision level	To comply with QP
2	10/2/98	Added elements to certify	Comply with new procedure
3	12/22/99	Under 3.0, added that NSBHP Raw Material Number must be on all shipping and billing paperwork	For clarification purposes
4	1/11/00	Updated sizing to double steel cased	For improved recovery
5	1/17/01	Reviewed and re-authorized	Annual Review
6	11/28/01	Updated sizing to 13mm and single steel casing	To match new supplier stock
7	12/10/02	Reviewed and re-authorized	Annual review
8	7/15/03	Changed size to 9mm, and fill to .033 lbs. Ca per ft.	Match current wire used

Prepared by: Jim Nevins	Page 1 of 1
-------------------------	-------------

"This document is controlled electronically in Q:\Qadocs and in hard copy form with the Melt Shop Standards Administrator. All other copies are uncontrolled."