

NORTH STAR BLUESCOPE STEEL LLC**Material Specification**

Process Area: LMF	Number: AL 37.05
Material: Graphite for Ladle Injection (C)	Effective Date: 1/13/05
Authorized By: John Ruf	Review Date: 1/13/06

1.0 Application:

Ladle addition for alloying purposes.

2.0 Chemical Analysis and Material Properties:

Element	Absolute min.	Preferred min.	Preferred max.	Absolute max.
Carbon	99.0%			
Ash				.5%
Moisture				.2%
Nitrogen				.2% or 2000ppm
Sulfur				.2%

3.0 Packaging:

- 3.1 2500 lb Supersacks.
- 3.2 The North Star BlueScope Steel Raw Material Number must appear on all shipping and billing paperwork.

4.0 Sizing:

- 4.1 10 mesh by 80 mesh with less than 2% above or below

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 Carbon, Nitrogen, Sulfur
 - 2) Quantity
 - 3) Name of material
 - 4) Lot number
- 5.2 All chemical constituents not expressed but are contained in the subject material may not exceed .5% collectively. Any material lot exceeding 0.2% must have prior approval by purchasing before shipment is made and analysis included on certification.
- 5.3 Material is subject to inspection at North Star BlueScope Steel to test adherence to specification.
- 5.4 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:

- 7.1 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	7/17/01	Reviewed and re-authorized	Annual review
2	1/4/02	Included the N spec in ppm as well as %	To reduce confusion at the scales
3	1/8/03	Reviewed and re-authorized	Annual review
4	1/14/04	Reviewed and re-authorized	Annual review
5	1/13/05	Reviewed and re-authorized	Annual review