

***NORTH STAR BLUESCOPE STEEL LLC* Material Specification**

Process Area: EAF	Number: AL 15.12
Material: Calcium Carbide (CaC ₂)	Effective Date: 01/16/18
Authorized By: Jim Fox	Review Date: 01/16/19

1.0 Application:

Ladle addition for slag treatment in steel making.

2.0 Chemical Analysis and Material Properties:

Element	Absolute min.	Preferred min.	Preferred max.	Absolute max.
Calcium Carbide (CaC ₂)	75.0%			83.0%
Calcium Oxide (CaO)	13.0%			20.0%
Silica	1.0%			2.8%
Alumina	0.8%			1.9%
IronOxide	0.1%			0.8%
Phos.Oxide	0.010%			0.02%
Sulfur	0.35%			0.6%
Unreacted Coke				1.5%
Magnesia				0.1%

3.0 Packaging:

10lb. cans - each shipment to be identified with lot number - must be shipped on flatbed truck **THIS MATERIAL MUST BE TARPED AND KEPT DRY DURING SHIPPING.** The North Star BlueScope Steel Raw Material Number must appear on all shipping and billing paperwork.

4.0 Sizing:

0.25" X 0.083" also called ¼" X 12mesh

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:

- Certification for Calcium Carbide (CaC₂)
- Quantity
- Sizing
- Name of material
- Lot number

5.2 All chemical constituents not expressed but are contained in the subject material may not exceed 0.5% collectively. Any material lot exceeding 0.5% must have prior approval by purchasing before shipment is made and analysis included on certification. Material is subject to inspection at North Star BlueScope Steel to test adherence to specification. Material submitted must undergo laboratory testing and operating trials prior to approval. 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:

Prepared by: Kevin Jessing	Page 1 of 2
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Appendix #1 MSDS Sheets

Rev	Date	Description of change	Reason for change:
	12/07/11	Reviewed and reauthorized.	Annual review.
	12/14/12	Reviewed and reauthorized.	Annual review.
	12/17/13	Reviewed and reauthorized.	Annual review.
	11/20/14	Reviewed and reauthorized.	Annual review.
	10/22/15	Reviewed and reauthorized	Annual review
	01/04/17	Reviewed and reauthorized	Annual review
	01/16/18	Reviewed and reauthorized	Annual review