

1 General Characteristics

LDSF[®] is a completely pre-melted material manufactured to meet the specific requirements of steel makers and metallurgists.

Ladle metallurgy and ladle furnaces are a critical quality control step between the primary melting furnace and the continuous caster.

A key feature for successful ladle metallurgy is slag control. LDSF[®] is specifically designed to have the required chemical composition and physical properties that make it easy to store and handle.

LDSF[®] is not a by-product, but is a manufactured calcium aluminate of controlled composition. It is produced in high-capacity furnaces by the complete fusion of bauxite and limestone, which yields a homogeneous product of constant composition.

LDSF[®] is hard, stable, and nearly dust-free.

LDSF[®] melts readily at "steel-making" temperatures. The slag has good sulphur retention and performs effectively as a desulphurising slag.

LDSF[®] calcium aluminate contains no fluorine compounds, thus avoiding refractory attack and atmospheric pollution.

LDSF[®] is an excellent cover slag for the prevention of gaseous pick-up from the atmosphere and is an effective fluid sink that absorbs inclusions from steel.

LDSF[®] does not contain any additives.

LDSF[®] does not contain crystalline silica.

2 Specifications

LDSF[®] distributed in North America adheres to the following specifications:

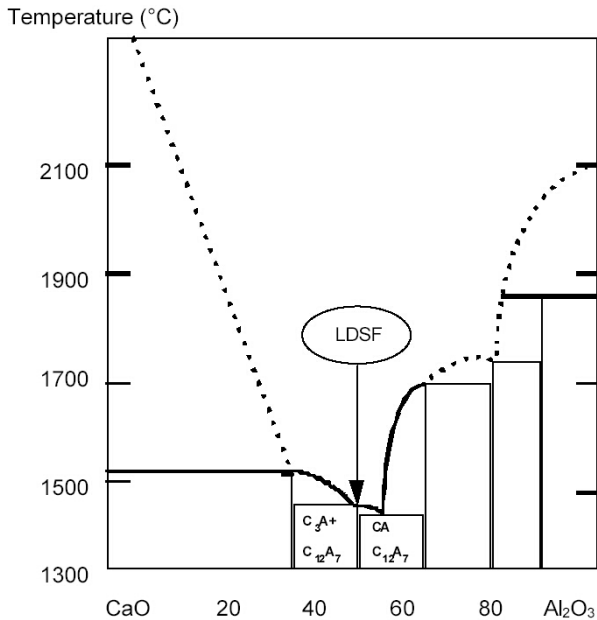
Chemical constituents (% by XRF chemistry)			
Al ₂ O ₃	CaO	SiO ₂	Fe ₂ O ₃
41 - 45	49 - 54	≥ 3.8	≤ 1.8

Chemical constituents (% by XRF Chemistry)	
TiO ₂	MgO
< 2.8	< 2.0

For detailed test procedures, please contact a Kerneos Technical or Quality Manager.

3 Additional Physical properties

- Specific gravity: approx. 2.85
- Melting point: < 2417° F (1325° C)



Mineralogy

- Principal mineralogical phase:
calcium aluminate $C_{12}A_7$

- Secondary phases:
 C_2S

C = CaO A = Al₂O₃ S = SiO₂ F = Fe₂O₃

4 Packaging

LDSF[®] is available in bulk run of kiln.

KERNEOS LIMITED WARRANTY

Kerneos warrants that this product, at the time of shipment, conforms to the Specifications set forth in section 2 of this Product Data Sheet. All other information provided in this Product Data Sheet is for guidance only. ALL OTHER WARRANTIES, INCLUDING WITHOUT LIMITATION THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE EXCLUDED. Kerneos' sole obligation and the sole and exclusive remedy under this limited warranty shall be the replacement of any nonconforming product, or, at Kerneos' option, the refund of the purchase price. No warranty is given for any technical advice or recommendations provided by Kerneos. Buyer waives all claims under this limited warranty unless it has given written notice of nonconformity within 30 days of delivery.

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