PRODUCT BULLETIN

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ALLIED MINERAL PRODUCTS, INC.

LCF 798A

General Information

LCF 798A is an andalusite-based, low moisture castable designed for ferrous and non-ferrous refractory applications. This product is well suited for use in molten metal contact applications; such as tundish linings, ladle linings, launder systems and non-ferrous channel furnace uppercases. LCF 798A is also ideal for refractory shapes, covers, combustion systems, heat treatment furnaces and other heat containment applications. The excellent thermal shock resistance of the andalusite aggregate makes this an excellent material to pre-cast burner blocks. This product offers the following benefits and features:

> Excellent volume stability
> Organic fiber addition to minimize dryout time
> Outstanding thermal shock resistance

Technical Data

Chemical Analysis	
Al_2O_3	61.5%
SiO_2	35.0%
CaO	2.1%
Fe_2O_3	0.7%

Material Required	2.78 g/cm^3(174 lbs/ft^3)
Grain Size	…8 mm (5/16 mesh) and finer
Maximum Use Temperature	1705°C (3100°F)
Installation Method	Casting/Vibration

Packaged in 25 kg (55-lb) multi-wall paper bags. Also available in bulk packaging. Storage beyond 6 months is not recommended. Store in a dry location to avoid moisture pickup.

Hydraulic Set

Water Range: 5.3 – 5.5%
Working Time: 45 minutes
Initial Set: 2 - 3
Final Set: 4 - 6
Remove forms 18 hours after casting

Allied Mineral Products, Inc. supplies a complete line of monolithic refractories for the metals industry. For more information or a complete evaluation of your refractory requirements, please contact your local Allied representative.

Warning: Contains aluminum oxide, aluminosilicate, calcium aluminate cement, and silica. The International Agency for Research on Cancer (IARC) has classified crystalline silica inhaled in the form of quartz or cristobalite carcinogenic to humans. Refer to Material Safety Data Sheet for additional information and disposal instructions. Avoid breathing dust. Wear NIOSH approved respirator during installation, removal, and disposal of product to prevent inhalation of dust. Avoid contact with skin and eyes. Cement powder or freshly mixed castable may cause eye and skin irritation. Steam spalling, which can lead to personal injury, may result from improper drying and firing procedures. In case of eye contact, flush immediately and repeatedly with water and consult a physician. Hydrogen gas may be generated when product is exposed to water. Ignition of hydrogen gas in an enclosed area can lead to personal injury. Proper ventilation should be supplied to avoid gas buildup. For safest use and optimum performance, proper practices must be followed.

(LCF798)
Revised 6/17/14

Laboratory Test Bar Data
LCF 798A

Bulk Density	**g/cm^3**	**kg/m^3**	**pcf**
After heating to:			
110°C (230°F)	2.77	2771	173
980°C (1800°F)	2.68	2683	167
1315°C (2400°F)	2.66	2663	166
1480°C (2700°F)	2.67	2667	166

Linear Expansion	**%**
After heating to:	
110°C (230°F)	
980°C (1800°F)	0.11
1315°C (2400°F)	0.44
1480°C (2700°F)	0.71

Modulus of Rupture	**MPa**	**kg/cm^2**	**psi**
After heating to:			
110°C (230°F)	16.5	168.3	2395
980°C (1800°F)	7.6	77.3	1100
1315°C (2400°F)	7.0	71.5	1015
1480°C (2700°F)	15.9	162.1	2305

Creep at 1400°C (2552°F) (20-50 Hours) 0.0148%

Cold Crushing Strength	**MPa**	**kg/cm^2**	**psi**
After heating to:			
1315°C (2400°F)	34.4	351.3	5000

Apparent Porosity	**%**
After heating to:	
1315°C (2400°F)	14.0

Thermal Conductivity	**W·m^{-1}·K^{-1}**	**Btu in./ft.^{2}/hr·°F**
After heating to:		
200°C (390°F)	2.03	14.1
400°C (750°F)	1.80	12.5
600°C (1110°F)	1.75	12.1
800°C (1470°F)	1.90	13.2
1000°C (1830°F)	2.00	13.9
1200°C (2190°F)	2.00	13.9
1400°C (2550°F)	1.80	12.5
1600°C (2910°F)	1.70	11.8

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