

PRODUCT BULLETIN

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**ALLIED
MINERAL**
PRODUCTS, INC.

MINRO-MAG RAM M22 LD

General Information

MINRO-MAG RAM M22 LD is a high-purity magnesia-based dry vibratable refractory. The primary application for M22 LD is lining air melt and vacuum melt coreless induction furnaces for the production of steel and high temperature alloys. M22 LD is also suitable for use as a crucible backup material. MINRO-MAG RAM M22 LD is a magnesium oxide refractory which contains no additives or sintering agents. This results in a refractory that has the highest temperature capability among all those manufactured for induction furnace applications. M22 LD has outstanding high temperature resistance to chemical attack under most conditions, except those where an acid slag exists. M22 LD offers the following features and benefits:

- > Completely dry
- > Low dust formulation
- > Loose backup minimizes metal fin penetration
- > Compatible with basic slag constituents

Technical Data

Chemical Analysis (Major Components)	
MgO	96.9%
CaO	1.1%
SiO ₂	0.9%
Fe ₂ O ₃	0.7%

Material Required	2.80 g/cm ³ (180 lb./ft. ³)
Grain Size	5 mm (4 mesh) and finer
Maximum Practical Use Temperature	1815°C (3300°F)
Minimum Use Temperature	1480°C (2700°F)
Installation Method	Dry Ram or Vibrate
Procedures	CL-1, CL-4, CL-14, CL-18

Packaged in 25 kg (55-lb.) multi-wall paper bags. Palletized 64 bags (1600 kg or 3520 lb.) per 42" x 42" pallet, protected with stretch wrap. Storage beyond 12 months is not recommended. Store in a dry location to avoid moisture pickup.

Sintering Data

Minimum Temperature:	1595°C (2900°F)
Sinter Rate (Maximum):	222°C (400°F)/Hour
Form Type:	Consumable

Allied Mineral Products, Inc. supplies an entire 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 magnesium oxide 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. Avoid breathing dust. Wear NIOSH approved respirator during installation, removal, and disposal of product to prevent inhalation of dust. Refer to Material Safety Data Sheet for additional information and disposal instructions. In case of eye contact, flush immediately and repeatedly with water and consult a physician. For safest use and optimum performance, proper practices must be followed.

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