Need ladle solutions to optimize refractory performance?

We’ve got you covered.

alliedmineral.com
KEEP HEAT WHERE YOU NEED IT with A LAYERED APPROACH
For superior refractory performance and savings, Allied Mineral Products offers the most advanced monolithic refractories to line iron, steel, copper and aluminum ladles. Get unique products for a complete refractory system that ensures your ladles get the job done — addressing optimal lining function, durability and maintenance.

Allied’s products are designed to retain heat. That translates into less work for your furnace and ladle refractory savings.

Learn how our customers are succeeding with ladle solutions for backup insulation, working linings, maintenance and coatings.
Working Lining
Monolithic Cast Ladles

IRON ALLOYS
- CW 712 CASTABLE
- CW 965 CASTABLE
- DRI-VIBE® 916A
- MINRO-AL® PLASTIC A76
- METAL KAST 85 & 85 C

STEEL ALLOYS
- METAL KAST 85 & 85 C
- METAL KAST 90
- DRI-VIBE® 916A
- DRI-VIBE® 88
- MINRO-AL® RAM A60-W

COPPER ALLOYS
- TUFF-FLO 608
- CW METAL KAST 85
- CW METAL KAST 60
- LCF 798A

ALUMINUM ALLOYS
- DURACON 32
- TUFF-FLO 608
- VIB RAM 70
- DRI-VIBE® 88

STEEL ALLOYS
- METAL KAST 85 & 85 C
- METAL KAST 90
- DRI-VIBE® 916A
- DRI-VIBE® 88
- MINRO-AL® RAM A60-W

COPPER ALLOYS
- TUFF-FLO 608
- CW METAL KAST 85
- CW METAL KAST 60
- LCF 798A

ZINC ALLOYS
- MATRICAST 82 SiC
- QUICK CAST® 61ACX
- MATRILITE HS AC
- MATRIPUMP 63ACX
- QUICK CAST® 62

ALUMINUM ALLOYS
- DURACON 32
- TUFF-FLO 608
- VIB RAM 70
- DRI-VIBE® 88

ZINC ALLOYS
- MATRICAST 82 SiC
- QUICK CAST® 61ACX
- MATRILITE HS AC
- MATRIPUMP 63ACX
- QUICK CAST® 62
**Working Lining**

**Precast Shape Ladles**

**IRON ALLOYS**
- CW 712 CASTABLE
- CW 965 CASTABLE
- METAL KAST 85 & 85 C
- DURACON 32
- TUFF-FLO 608

**STEEL ALLOYS**
- METAL KAST 85 & 85 C
- METAL KAST 90

**COPPER ALLOYS**
- TUFF-FLO 608
- CW METAL KAST 85
- CW METAL KAST 60

**ALUMINUM ALLOYS**
- MATRICAST 82 SiC
- QUICK CAST® 61ACX
- MATRIPUMP 63ACX
- QUICK CAST® 62

**ZINC ALLOYS**
- QUICK CAST® 62
WORKING LINING

Extend refractory and ladle life using our DRI-VIBE® 88 and QUICK CAST® 62 solutions

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CASE STUDY

POURING LADLE WITH QUICK CAST® 62 AND BREAST PLATE

EQUIPMENT
• Pouring ladle, 1765 lb (800 kg) capacity

PRODUCT
• QUICK CAST® 62 and Precast Breast Plate

APPLICATION
• Pouring ladle

INSTALLATION
• Used pan mixture and needle vibrator, with mica combination as backup
• 715 lb (325 kg) of QUICK CAST® 62 was installed
• 100 lb (50 kg) of MINRO-AL® PLASTIC A76 was used for a repair
• 88 lb (40 kg) of LADLE WELL was used as a coating
• Precast pre-fired plate was used as a dam to use the lip pouring ladle as a teapot ladle

RESULTS
• The ladle performed 1,000 tappings before the customer took it offline
• The pre-fired breast plate looked brand new
• Due to Allied’s recommendation to clean the slag after 50 to 60 tappings and coat with LADLE WELL, the customer does not have to repair dams

CASE STUDY

DRI-VIBE® 88 LADLE INSTALLATION

EQUIPMENT
• Sliding tundish ladle, 1765 lb (800 kg) capacity

PRODUCT
• DRI-VIBE® 88 was chosen due to easy sintering and equipment availability to install the castable

APPLICATION
• Product was installed in grey iron treatment ladle
• It took 990 lb (450 kg) to finish the ladle lining

INSTALLATION
• Completed according to Allied procedures

RESULTS
The ladle is still in service after 10 months of use
Conserve energy with Allied’s high-performance backup insulation product, MINRO-SIL® RAM 1001 NO BA

IRON, STEEL, ALUMINUM, COPPER & ZINC ALLOYS

• Skamol VIP-12 HS Board
• Skamol VIP-12 HS Clickboard
• Kaowool Paper
• Microporous Board

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CASE STUDY

PRECAST LADLE LINER

EQUIPMENT
• 700 lb (315 kg) ladle

PRODUCT
• Allied precast shape

APPLICATION
• Pouring ladle with dam wall
• Customer was initially achieving about 1 month of ladle life/campaign

INSTALLATION
• Lined the shell with 1/4” ceramic fiber paper
• Rammed floor with MINRO-SIL® RAM 1001 NO BA
• Set precast ladle and rammed sidewalls with MINRO-SIL® RAM 1001 NO BA

RESULTS
• Customer now achieves a shape life of 3 months with improved maintenance and pouring practices
• Using Allied’s precast ladles vs. competitive material liners, which were replaced daily, will save the customer an estimated $60,000 annually in lining, material and man hour costs
MAINTENANCE

Use Allied’s PLASTER 55AC to increase ladle performance

<table>
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<th>IRON ALLOYS</th>
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<td>QUICK-FIRE® PATCH B</td>
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<td>MINRO-AL® PLASTIC A76</td>
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</tbody>
</table>

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CASE STUDY

TOP CAP AND SPOUT PATCHING MATERIAL

EQUIPMENT
• 5 ton ladle

PRODUCT
• PLASTER 55AC

APPLICATION
• Patching top cap and spout

INSTALLATION
• Mix in 5-gallon bucket using a paint mixer; added water to desired consistency

RESULTS
• Customer saw successful patching lasting an entire week of production
• The customer now uses PLASTER 55AC to successfully repair 5-ton ladles
COATINGS

Improve casting quality and surface finish with Allied’s LCF 384A and T-COAT® 692M coatings
CASE STUDY

INSTALLATION OF LCF 384A AND T-COAT® 692M IN T-SPOUT LADLE

EQUIPMENT
• 2425 lb (1100 kg) T-spout ladle

PRODUCT
• LCF 384A and T-COAT® 692M

APPLICATION
• LCF 384A was installed for the working lining
• T-COAT® 692M for the coating

INSTALLATION
• Lining thickness for the sidewall was 3 inches and 3.5 inches for the bottom
• Used a removable form, mixer and forking tools for installation
• After dry-out, 8 to 10 mm of T-COAT® 692M was applied
• The temperature of the spout was raised and liquid metal was later poured for tapping

RESULTS
• Customer has used T-COAT® 692M with LCF 384A for 5 months and is very happy with the results
• T-COAT® 692M helped improve refractory lining performance by 50%
12 manufacturing facilities
Over 130 international sales representatives
3 research and technology facilities
Sales activity in more than 100 countries
5 precast shapes facilities
WE ARE A GLOBAL REFRACTORY SOLUTIONS PROVIDER

Allied Mineral Products is a global leader in developing, designing and manufacturing monolithic refractories and precast refractory shapes. With more than 1,400 products, we provide leading-edge refractory technology and valued-added alternatives.

We’re dedicated to being there for you. Partner with us to get the smartest refractory solutions, with quality and consistency, for every furnace and industry application. From research and engineering to manufacturing and service, it’s all in our element.
we are a
GLOBAL REFRACTORY
SOLUTIONS PROVIDER

ALLIED MINERAL
PRODUCTS

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