



# Refractory Mortars for Foundry Applications

Resco Products offers several different types of refractory mortars for Foundry applications. Our refractory mortars are available in Wet or Dry form and several chemical formulations for all types of refractory brick needs.

Wet mortars are shipped in ready to use form in dipping and troweling consistencies. Dry mortars are supplied in powder form and must be mixed with clean water. Regardless of type, Resco refractory mortars are smooth and creamy, will stay in suspension longer and exhibit good water retention.

**Ladlelock 3000**  
**Type: Wet Mortar**  
**Bond: Air-Set**  
**Temp. Limit: 3000°F**  
**Al<sub>2</sub>O<sub>3</sub> Content: 48%**  
**Mat'l Req'd\*: 400 to 500 lbs.**  
**Uses: Superduty Firebrick**  
**High Alumina Brick**  
**Consistency: Dipping, Trowel**  
**Shelf Life: 3 Months**

## Popular Wet Mortars



**Ladlelock 70**  
**Type: Wet Mortar**  
**Bond: Air-Set**  
**Temp. Limit: 3100°F**  
**Al<sub>2</sub>O<sub>3</sub> Content: 72%**  
**Mat'l Req'd\*: 400 to 500 lbs.**  
**Uses: High Alumina Brick**  
**Consistency: Dipping, Trowel**  
**Shelf Life: 3 Months**

**Ladlelock 90 PB**  
**Type: Wet Mortar**  
**Bond: Phosphate**  
**Temp. Limit: 3300°F**  
**Al<sub>2</sub>O<sub>3</sub> Content: 90%**  
**Mat'l Req'd\*: 425 to 550 lbs.**  
**Uses: High Alumina Brick**  
**Consistency: Dipping, Trowel**  
**Shelf Life: 3 Months**

## Designations

	Definition
<b>TR</b>	Troweling
<b>DIP</b>	Dipping
<b>W</b>	Winter Grade
<b>D#</b>	Dart Consistency

**Trowleze**  
**Type: Wet Mortar**  
**Bond: Air-Set**  
**Temp. Limit: 3000°F**  
**Al<sub>2</sub>O<sub>3</sub> Content: 44%**  
**Mat'l Req'd\*: 350 to 400 lbs.**  
**Uses: Insulating Firebrick**  
**Superduty Brick**  
**Consistency: Troweling**  
**Shelf Life: 3 Months**

**Lo-Set**  
**Type: Dry Mortar**  
**Bond: Air-Set**  
**Temp. Limit: 3000°F**  
**Al<sub>2</sub>O<sub>3</sub> Content: 41%**  
**Mat'l Req'd\*: 290 to 325 lbs.**  
**Water Req'd: 25 to 29%**  
**Uses: High Duty Firebrick**  
**Superduty Firebrick**  
**50 to 60% Alumina Brick**  
**Brush Coating on Brick**  
**Shelf Life: 6 Months**

## Popular Dry Mortars



**Alutab**  
**Type: Dry Mortar**  
**Bond: Air-Set**  
**Temp. Limit: 3400°F**  
**Al<sub>2</sub>O<sub>3</sub> Content: 87%**  
**Mat'l Req'd\*: 450 to 500 lbs.**  
**Water Req'd:**  
**20 to 23% Trowel**  
**32 to 35% Dipping**  
**Uses: 70 to 90% Alumina Brick**  
**Shelf Life: 6 Months**

\*To lay 1000 9" straights at 1/16" thickness



# Refractory Mortars for Foundry Applications

## Bond Types

**Air-Set** – Develops a strong bond at atmospheric temperatures. The bond strength increases when heated to higher temperatures.

**Heat-Set** – Develops a strong, ceramic bond after firing at high temperatures. Heat-Set mortars offer flexibility to lining movement during initial heating to operating temperature.

**Phosphate** – Similar to Heat-Set, these mortars develop a chemical bond above 500°F between the phosphate and the fines in the matrix providing mortar joint strength.

## Consistency

Wet mortar consistencies are measured using **Darts**. **Darts** are long, thin, metallic cylinders with a rounded tip. The **Dart** is dropped tip first into a sample of the wet mortar from a fixed height. The **depth** that the cylinder travels into the mortar indicates the **Dart** value.

Mortars with a higher **Dart** number are softer and thinner in consistency. A thicker mortar is not as easily penetrated by the **Dart** so results in a lower value. A Dipping consistency mortar would have a **Dart >4** while a regular trowel mortar has a **Dart of 3**.

As-Made Consistency:	As-Made Consistency Designations					
	2 Dart	2.5 Dart	3 Dart	3.5 Dart	4 Dart	Dipping
Consistency Description:	Very Thick Trowel	Thick Trowel	Regular Trowel	Soft Trowel	Very Soft Trowel	Thin, Watery
Brand Name	(Brand Code)	(Brand Code)	(Brand Code)	(Brand Code)	(Brand Code)	(Brand Code)
Ladlelock 3000-TR-D2**	3223					
Ladlelock 3000-TR-D2.5**		3060				
Ladlelock 3000-TR-D3			3049			
Ladlelock 3000-DIP						3051
Ladlelock 70-TR-D2.5		9856				
Ladlelock 70-TR-D3			3638			
Ladlelock 70-TR-D3.5**				3079		
Ladlelock 70-DIP						3066
Ladlelock 90 PB-TR-D2**	3091					
Ladlelock 90 PB-TR-D2.5**		3292				
Ladlelock 90 PB-TR-D3			3092			
Trowleze-TR					1146	
Trowleze-TR-D3			4448			

\*\* Also available in Winterized Versions