

Fascote® System

Formulations

Due to the unique nature of the product, the formulation implemented will vary from foundry to foundry. The following formulation is for casters just starting out.

% Refractory	Target Slurry Density (g/ml)	Target Viscosity	Formula for 10 Gallons (lbs)		Formula for 10 Liters (kgs)	
			FASCOTE binder	FASCOTE refractory	FASCOTE binder	FASCOTE refractory
60%	1.60-1.66	10-12 sec/ #4 Zahn	55.0	82.5	6.59	9.89

Application Recommendations

1. Remix the FASCOTE binder prior to use to ensure a homogeneous blend of material.
2. For best results, weigh all ingredients when making up a new slurry or making additions to an existing slurry.
3. When building the slurry, add the refractory last. If more than one refractory is used, add the lowest density refractory first: fused silicas (2.2 g/cc), alumino silicates (2.7 g/cc), zircon (4.5 g/cc). Add refractory slowly for best results.
4. New and makeup slurries must be prepared with a propeller mixer, not in a rotating tank. This ensures proper dispersion of the refractory particles. The propeller mixer must be of adequate HP and RPM. Excessive mixing action can introduce air into the slurry and cause erratic viscosity and/or bubbles in the slurry coat.
5. As with any slurry, the viscosity of the slurry must be stable before use. A stable viscosity is one that does not change by more than 1 second when checked at 1 hour intervals. Viscosity can be increased by adding more refractory and decreased by adding more binder.
6. It is required to replace water lost to evaporation. When water is needed (based on test results for viscosity and/or binder solids), use distilled or deionized water as opposed to tap water, which can contain contaminants that can negatively affect slurry life.
7. Antifoam, wetting and bactericide agents are already formulated into FASCOTE binder and other additions may not be compatible. Contact R&R's technical team before making these additions to the slurry.

Slurry Control Procedures

Slurry Control Worksheets are available for download at www.ransom-randolph.com under resources. Slurry Control Worksheets allow you to input data directly and help you calculate values.



RANSOM & RANDOLPH

Maumee, OH 43537 USA

Toll Free: 800.800.7496

Phone: 419.865.9497

Fax: 419.865.9997

www.ransom-randolph.com

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Slurry Testing Frequency

R&R recommends running the following tests accordingly.

Slurry Test	Recommended Testing Frequency
Slurry Viscosity	Two Times Per Shift
Slurry Density	Weekly
Refractory Solids	Weekly
Binder Solids	Two Times Per Week
Binder pH	Weekly

Target Binder Solids Range

The target binder solids range for FASCOTE binder is 24.0%-26.0% by weight.

Specific Gravity	Binder Solids	Specific Gravity	Binder Solids	Specific Gravity	Binder Solids
1.129	21.9	1.144	24.0	1.159	26.1
1.130	22.1	1.145	24.2	1.160	26.2
1.131	22.2	1.146	24.3	1.161	26.4
1.132	22.4	1.147	24.4	1.162	26.5
1.133	22.5	1.148	24.6	1.163	26.7
1.134	22.6	1.149	24.7	1.164	26.8
1.135	22.8	1.150	24.9	1.165	26.9
1.136	22.9	1.151	25.0	1.166	27.1
1.137	23.1	1.152	25.1	1.167	27.2
1.138	23.2	1.153	25.3	1.168	27.3
1.139	23.3	1.154	25.4	1.169	27.5
1.140	23.5	1.155	25.5	1.170	27.6
1.141	23.6	1.156	25.7	1.171	27.8
1.142	23.7	1.157	25.8	1.172	27.9
1.143	23.9	1.158	26.0	1.173	28.0



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Safety

OSHA-approved respiratory protection should always be worn to avoid inhalation of respirable silica dust, which can result in an irreversible lung disease, silicosis. Such exposure includes slurry makeup, casting, knockout and cleanup. Refer to SDS for specific details.

Storage & Handling

Keep from freezing. FASCOTE binder must be maintained above 35°F (2°C) to prevent the material from precipitating irreversibly and making the product unsuitable for use. Binder stored in transparent or translucent containers should be sheltered from direct sunlight. Shelf life is 1 year from date (MMDDYY) in batch lot number on label. Rotate stock to maximize shelf life.

Technical Tips

For additional information and recommendations, refer to the Shell Building, Slurry Control, Autoclaving and FlashFire Dewax Method Technical Tips available for download at www.ransom-randolph.com under resources.

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