

My Home Foundry: K-Bond info for the hobby foundry worker.

Notes from issue 01: **The Hot Metal Ezine.**

THIS MONTHS FEATURE ARTICLE

By Tom Cobett.

Tom has been teaching metal casting at Kent State University for the past 13 years.

K BOND. BASIC MIX.

100 lb. Fine Silica Sand (100 to 150 AFS GFN)
6 - 7 lb. K-BOND BINDER (Organo clay)
3 lb. K-BOND OIL (Amorphous Polybutene)
1/4 lb. K-BOND CATALYST (Propylene Carbonate)

Put the dry sand into a muller. Add the K-BOND OIL and mix for 1 minute. Then add the K-BOND BINDER and mix for 2 minutes.

Really fine mesh sand will require a little more BINDER. Finally, add the K-BOND CATALYST and mix for another 2 minutes. New K-BOND sand is fairly stiff. After pouring metal into it two or three times, it will begin to get very silky in texture.

Always mull the K-BOND sand for a few minutes before you use it for molding. The mulling not only breaks up lumps, but it also creates enough friction to warm the sand. Warm K-BOND will work much better than cold K-BOND. Do not use K-BOND if the sand is below 40°F.

If the mixed sand appears to be too dry, add a small amount of K-BOND OIL (maybe ½ cup per 100 lb. of sand) while it is mulling. If the sand appears to be too weak, add a small amount of K-BOND CATALYST (maybe a ¼ cup per 100 lb.) during mulling. If it is still too weak, add 1 lb. of K-BOND BINDER per 100 lb. of sand to the muller.

In general, K-BOND requires less venting than green sand. However, jab vents in the cope and parting line vents are normally required for any metal section thickness of less than ¼ inch. Pouring temperatures are usually 50 to 100°F. less than those used with green sand.

=====

Sources for Raw Materials In USA.

=====

Fine Silica Sand Fairmount Minerals (440) 285-3132
www.fairmount-minerals.com

K-BOND BINDER REFCOTEC (330) 683-2200

K-BOND OIL REFCOTEC (330) 683-2200
INDOPOL L-50 BP Amoco Products
available from Chemcentral

Chevron Oronite OLOA 16500
You can also use any smokeless
2-stroke oil from Wal-Mart, etc.

K-BOND CATALYST REFCOTEC (330) 683-2200
Propylene Carbonate
You can also use a mixture of 95%
Methanol and 5% Water

=====

Thanks to Tom Cobett for this great article. Tom can be reached by Ph, Fax,
or email as detailed below.

T. Cobett and Associates

10042 Oak Branch Trail
Strongsville, OH 44149
TEL: (216) 577-7738
FAX: (440) 572-7511
E-Mail: Giesser@aol.com

For down to earth hobby foundry ebooks, please visit our web site:
<http://www.myhomefoundry.com>

Ebook list:

The 3 volume hobby foundry ebook.
The Design of Gates & Risers ebook
The Petro Bond users guide ebook.
How to build Crucible lifting tongs ebook
How to build accurate mould boxes ebook.

The Petro Bond guide, crucible lifting tongs & building mould boxes ebooks
are FREE when the **foundry ebook package** is purchased.

All ebooks are available as downloads or on CD ROM.

Our Fax number is: + 61 3 57 22 4654.
PH: + 61 3 57 222 446.