EXAMPLE 69

The product of Example 1 can be used as a binder for foundry sand. The binder as an acetone solution (e.g., 77 wt. %) containing 1 part/100 of TBDSA catalyst is kneaded with sand and the solvent is vaporized by heating. The amount of binder to sand is preferably 1–5.5 parts to 100 parts of sand. The coated sand is then filled into a core mold and heated at 200°–300° C. for 30 sec. to two minutes. A core having good strength and showing little tendency to give off gases having a strong smell (e.g., formaldehyde) will be obtained.

Instead of sand, glass powder and glass fiber can be substituted, in which case, thermally insulating shapes having good structural integrity will be obtained.

The above-mentioned patents and publications are incorporated herein by reference. Many variations of this invention will suggest themselves to those skilled in this art in light of the above, detailed description. Instead of using n-propylcarbamylmethylated- and methylcarbamylmethylated melamines as curing agents in the formulations of Tables 1–8, the corresponding alkyl (and mixed alkyl) carbamylmethylated melamine and melamine oligomers of Examples 3–16 can be used. Instead of tetrabutyldiacetoxy stannoxane and, dibutyltin dilaurate as cure catalysts, lead octoate, and stannous octoate can be used. Instead of hydroxyfunctional polyesters and polyacrylates, epoxy resins, such as the polyglycidylethers of bisphenol A and the reaction products thereof with amines and ammonia can be used. All such obvious modifications are within the full intended scope of the appended claims.

We claim:

1. A curable composition comprising:

(a) an active hydrogen-containing material;

(b) a triazine compound selected from

(i) a triaminotriazine compound of the formula $C_3N_6(CH_2OR)_{6-x}(CH_2NHCOOR^1)_x$;

(ii) a benzoguanamine compound of the formula $C_3N_5(C_6H_5)(CH_2OR)_{4-y}(CH_2NHCOOR^1)_y$;

(iii) an oligomer of (i) or of (ii); or

(iv) a mixture of at least two of any of (i), (ii) and (iii), wherein the R groups are, independently, hydrogen or alkyl from 1 to 12 carbon atoms, the R^1 groups are, independently, alkyl of from 1 to 20 carbon atoms, x is in the range of from about 2 to about 6, and y is in the range of from about 2 to about 4; and

(c) a cure catalyst.

2. A curable composition as defined in claim 1 wherein the active hydrogen-containing material is a polymeric material containing at least one class of reactive groups selected from carboxyl groups, alcoholic hydroxy groups, amide groups, amine groups or a mixture of any of such groups or a group convertible to any of such groups.

3. A curable composition as defined in claim 2 wherein the active hydrogen-containing material comprises a hydroxy functional acrylic resin or a low molecular weight polyester polyol.

4. A curable composition as defined in claim 1 wherein the triazine compound is a triaminotriazine compound (i) wherein x is in the preferred range of from about 2.8 to about 6.

5. A curable composition as defined in claim 4 wherein, in the triazine compound (i), R is C_1–C_8 lower alkyl and R^1 is methyl, ethyl, n-propyl, butyl, i-propyl, n-octyl, 2-ethylhexyl, n-octadecyl, or a mixture of any of the foregoing.

6. A curable composition as defined in claim 1 wherein the cure catalyst is a metal salt or complex comprising tin.

7. A curable composition as defined in claim 6 wherein the cure catalyst comprises tetrabutyldiacetoxy stannoxane, dibutyltin dilaurate or dimethyltin dilaurate.

8. A substrate protectively coated with a cured composition as defined in claim 1.

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