

Title (en)

MOULDING MATERIAL FOR PRODUCING CORES AND METHOD FOR CURING SAME

Title (de)

FORMSTOFF ZUR HERSTELLUNG VON KERNEN UND VERFAHREN ZU DESSEN HÄRTUNG

Title (fr)

MATIÈRE À MOULER POUR FABRIQUER DES NOYAUX ET PROCÉDÉ POUR DURCIR LA MATIÈRE À MOULER

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Abstract (en)

[origin: WO2022008001A1] The invention relates to a moulding material for producing cores using the cold box method, comprising the following components: a two-component, phenol- and phenol-derivative-free, polyurethane-based binder, containing a resin component, having one or more branched aliphatic or aromatic polyester polyols, formed by branched aliphatic or aromatic diol or triol starters with one or more side chains, as well as substituted or unsubstituted aliphatic and/or aromatic di- and/or tri-carboxylic acids or anhydrides thereof and/or one or more polycarbonate alcohols with equivalent weights of 250 to 4000 g/mol and hydroxyl functionalities of 2 to 4 as compounds that are hydrogen-active relative to isocyanates, wherein the branched polyester polyols and/or polycarbonate alcohols of the resin component of the binder have a proportion in the region of 35 to 100 wt.% of the resin component; and a curing component, having one or more polyisocyanates; as well as one or more refractory, loose-fill filling materials. The invention also relates to a method for curing a moulding material of this type. The moulding material can be cured in the cold box method via a gas application with tertiary amines in short cycles. The option of replacing usual phenolic urethane resin binders achieves considerable emission advantages in casting-related binder burn-off.

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