

Title (en)
RESOL-BASED CO 2-HARDENABLE BINDING AGENT SYSTEM

Title (de)
CO 2-HÄRTBARES BINDEMITTELSYSTEM AUF RESOLBASIS

Title (fr)
SYSTEME DE LIANT DURCISSABLE AU CO 2 A BASE DE RESOL

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Application
EP 02754350 A 20020711

Priority
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• DE 10136365 A 20010726

Abstract (en)
[origin: DE10136365A1] A carbon dioxide curable binder system including: (a) a resol resin and (b) at least one oxy anion, where the binder system contains at least one nitrogen-containing compound selected from: urea, urea/formaldehyde resin, melamine, and melamine formaldehyde resin, especially a urea and a urea/formaldehyde resin is new. Independent claims are included for: A process for preparation of the CO₂ curable binder system by the steps; (A) preparation of the resol resin, and (B) mixing of the resol resin with at least one oxy anion selected from: urea, urea/formaldehyde resin, melamine and melamine/formaldehyde resin; (3) preparation of the resol resin, i.e. by the steps (1) condensation of phenol and aldehyde in the presence of a nitrogen-containing compound, i.e. urea, urea/formaldehyde resins, melamine/formaldehyde resins, and (2) mixing of the resol resin with at least one oxyanion; and (C) a molding composition including an aggregate, an oxy anion, a nitrogen compound selected from: urea, urea/formaldehyde resin, melamine and melamine/formaldehyde resin and an active binding amount of a CO₂ curable resol resin; and (D) use of the binder system for the preparation of mold parts by the steps: (1) mixing of the aggregates with an active binding amount of the binder system, (2) transfer of the mold mixture into a mold, (3) curing of the mold mixture in the mold in order to obtain a self-supporting mold, and (4) removal of the formed mold mixture and further curing to give a hard solid and cured mold part.

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