

Title (en)
ORTHOPEDIC CASTS

Title (de)
ORTHOPÄDISCHE STÜTZVERBÄNDE

Title (fr)
MOULAGES ORTHOPEDIQUES

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Application
EP 95902522 A 19941108

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Abstract (en)
[origin: CA2173967A1] Heat-recoverable orthopedic casts include a support which is maintained in an elastically deformed condition by a casting polymer, e.g. a polycaprolactone (PCL) or a side chain crystallizable polymer having a relatively low melting point. The cast is placed around the limb and is then heated. The casting polymer softens and the cast recovers around the limb. A liner is preferably placed between the cast and the limb, especially when the casting polymer is PCL or has a comparable or higher melting point. For high strength casts, the support is preferably an open-mesh knitted fabric which, when fully relaxed, contains at most 300 holes per inch² (at most 45 holes per cm²). Such a fabric, when it is extensible to a maximum of 15 to 40 %, is also useful as casting tape which comprises a curable polymer casting composition, e.g. a water-curable polyurethane prepolymer. As illustrated in Figures 1 and 2, a stockinette liner (2) is preferably placed between the cast (1) and the limb as a thermal barrier. A reinforcing component may be used to strengthen the recovered cast. Suitable reinforcing components include (A) polyurethane precursors which are applied to the cast before or after recovery, and are polymerized during or after recovery, and (B) thermoplastic materials which are applied hot to the recovered cast. Casts made in this way can be divided to make splints which can be easily removed and replaced.

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