

Title (en)  
 STABLE MOLDED BODIES OR PLATES MADE OF LIGHTWEIGHT MATERIAL FOR THERMAL INSULATION AND FOR USE AS FIRE PROTECTION, METHOD FOR THE PRODUCTION THEREOF, USE THEREOF, AND BUILDING EQUIPPED THEREWITH

Title (de)  
 STABILE FORMKÖRPER ODER PLATTEN AUS LEICHTBAUMATERIAL ZUR WÄRMEDÄMMUNG UND ZUR VERWENDUNG ALS BRANDSCHUTZ, DAS VERFAHREN ZU IHRER HERSTELLUNG, IHRE VERWENDUNG UND EIN DAMIT AUGERÜSTETES BAUWERK

Title (fr)  
 CORPS MOULÉS OU PLAQUES STABLES CONSTITUÉS D'UN MATÉRIAU LÉGER SERVANT D'ISOLATION THERMIQUE ET DESTINÉS À ÊTRE UTILISÉS COMME PROTECTION CONTRE L'INCENDIE, PROCÉDÉ DE FABRICATION ET UTILISATION DESDITS CORPS MOULÉ OU DES PLAQUES, ET OUVRAGE ÉQUIPÉ DESDITS CORPS OU PLAQUES

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Abstract (en)  
 [origin: WO2015056138A1] The invention relates to stable molded bodies and plates which are used as a lightweight material for equipping building envelopes with thermal insulation or as a local fire-protection measure. The stable molded bodies and plates are produced on the basis of expanded perlite, from a homogeneous mixture, which then hardens. Specifically, such a plate is composed of a prepared homogeneous mixture, having a composition of at least 40% by volume of glazed balls made from expanded silica sands, which balls are closed-cell at the surface thereof and are filled with air. The balls have a density of only 50 to 400 grams/liter, such that normally no measures for hydrophobing are necessary because of the closed-cell, unfractured perlite. The remaining volume consists of a mineral or organic binding agent, which was prepared and to which a foaming agent was added during the preparation thereof, such that the plate as a whole has a density between 120 kg/m<sup>3</sup> and 1200 kg/m<sup>3</sup>, depending on the specific composition of all components, because of the air in the expanded perlite and the air from the foaming agent. Embodied as insulating plates, the plates are used to create wall structures on the inside or outside of buildings, in that the insulating plates (8) are applied to a cleaned interior or exterior wall of a building that has been leveled with a plaster and that afterwards has been provided with adhesive mortar. If necessary, the plates can be mechanically fastened to the building wall and afterwards a base coat (9) having a glass-based reinforcing woven-fabric mesh (10) can be applied, and finally a final coat can be applied, which is optionally provided with a coat of paint.

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