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## Production of cell concrete blocks using cocoa fatty acids and foundry wastes

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The northern region of the State of Rio Grande do Sul is an important metal / mechanic industrial pole, with an extensive and varied equipment portfolio, especially the manufacture of agricultural implements. In foundries parts used in the manufacture of agricultural machinery a lot of sand are used, generating waste in accordance with standard NBR 10004/2004, which deals with the classification of solid waste as their potential risks to the environment and health waste sand is classified as class II A. This class includes non-hazardous and non-inert waste. Their environmentally sound disposal in controlled or sanitary landfills represents an important expense in the cost sheet and requires careful management for the generating industries that are directly responsible for incidents and accidents and co- responsible for possible future environmental liabilities, even with landfill toilets paid. Specifically, this work evaluated the possibility of using the casting sands in the manufacture of cellular foam blocks (BCCE), their inertization and consequent use

as building blocks in civil construction. The production methodology will be based on models studied and already published in papers and scientific articles, laboratory tests and also in industrial format. In previous bench studies, after characterization of the casting sand as its grain size curve, DRX, DFX, the analysis of the foam composition, the particle size of the residue, the water content and the mixing time. The BCCE component materials are sandcast residue, collected in the KUHN DO BRASI industry, foam prepared with coconut fatty acids, drinking water quality and cement as a binding agent. In the bench tests, 36 test specimens, cylindrical in size, 50 mm in diameter per 100 mm in height, with different volumes of incorporated air, were divided into three groups. The samples were left for 28 days at room temperature, in the curing process, and after analysis for the compressive strength, density and distribution of the air bubbles.

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