

## ECO-INNOVATIVE TECHNOLOGY FOR THE USE OF RECYCLED GLASS WASTE IN CONSTRUCTION WORKS

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**Rezumat.** Scopul principal al acestei lucrări este de a sublinia posibilitatea utilizării materialului granular obținut din sticla reciclată în lucrările de construcții. Prin utilizarea materialului granular reciclat din sticlă, va rezulta un impact ecologic pozitiv, deoarece va reduce suprafețele ocupate de materiale neutilizate și va proteja resursele rare. Pentru a defini conceptul de „material de sticlă reciclat” și pentru a confirma caracteristicile fizico-mecanice pentru utilizare în lucrări de construcții, au fost efectuate cercetări și determinări de laborator. Acest domeniu de cercetare este actual datorită dezvoltării diverselor tehnologii de recuperare și reciclare a materialelor și necesității de a proteja mediul.

**Abstract.** The main aim of this paper is to emphasize the possibility of utilizing the granular material obtained by recycled glass in construction works. By using the glass recycled granular material, a positive ecological impact will be shown as it will reduce the surfaces occupied by these unused materials as well as it will protect scarce resources. To define the concept of “recycled glass material” and to confirm the physical-mechanical characteristics for use in construction works, research and laboratory determinations were performed. This research domain is current due to the development of various materials recovery and recycling technologies and the need to protect the environment.

**Keywords:** glass waste, recycled material, recovery technology, environmental protection

### 1. Introduction

According to the requirements of the European Directive DC2008 / 98 / CE, which regulates the waste regime, their producers must recycle and capitalize on them, by using the best available techniques, with minimal effects on environmental factors and human health [16]. In the framework directive DC2008 / 98 / CE on waste, recycling occupies the main place in the hierarchy of processes, being located before storage and incineration. Glass being an inert material, in landfills it becomes indestructible in a natural way; therefore, it is extremely harmful to the environment (Fig. 1).

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