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Assessment of the Mechanical Properties of Marble and Granite Dust - High Impact Polystyrene Composites

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Experimental work has been carried out to study the effect of adding marble and Granite dust (MGD) on the mechanical properties of high impact polystyrene (HIPS). The selected wt. % of MGD was 10, 20, 30, 40, 50 and 60. MGD was chemically treated by adding 2 wt. % stearic acid in an attempt to prevent agglomeration of the dust particles. Mechanical tests were carried out according to the ASTM standards to assess the bending strength and impact strength for both treated and untreated MGD-HIPS composites and also, Vickers hardness test was conducted. SEM analysis was also performed to interpret the results achieved throughout different tests.