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Physical Properties of Various Materials Relevant to Granular Flow KURT ROSENTRATER, USDA-Agricultural Research Service — Because of the ubiquitous nature of granular materials, ranging from natural avalanches to industrial storage and processing operations, interest in quantifying and predicting the dynamics of granular flow continues to increase. The objective of this study was to investigate various physical properties of common biological bulk solids (i.e., grains) which are relevant to granular flow. Particle size, shape, loose bulk density, compacted bulk density, angle of repose, and angle of marginal stability will be presented and discussed. Flow properties depend, in large measure, upon the size and shape of the particles themselves; thus information generated from this study may be useful to future experimental and simulation studies of bulk flow.

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