

Abstract Submitted
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Mechanical Behavior of TNAZ/Hytemp Explosives During High Acceleration Y. LANZEROTTI, U.S. Army ARDEC, Picatinny Arsenal, NJ 07806-5000, J. SHARMA, Naval Surface Warfare Center, Carderock Division, West Bethesda, MD 20817-5700 — The mechanical behavior of TNAZ/Hytemp (1,3,3-trinitroazetidine/polyacrylate) explosives subjected to high acceleration has been studied in an ultracentrifuge. Pressed plastic-bonded TNAZ/Hytemp was studied as a function of the percentage of Hytemp at -10°C and 25°C . The percentage of Hytemp in the samples varied from 1% to 2%. Failure occurs when the shear or tensile strength of the explosive is exceeded. The fracture acceleration of pressed plastic-bonded TNAZ/Hytemp decreases with the increasing percentage of Hytemp in the explosive at -10°C and 25°C . The fracture acceleration of pressed plastic-bonded 98TNAZ/Hytemp at 25°C is about 1/3 that at -10°C .

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