

Title: NEW 105MM ARTILLERY CARTRIDGE; XM350 with M1130E1

Abstract Text: The Program Executive Office for Ammunition has started testing a new artillery round that will provide Soldier's with superior performance as well as lighten the military logistics burden.

The 105mm M1130E1 High Explosive Pre-Formed Fragments, Base Bleed, or HE PFF BB round with the XM350 propelling charge, is a state-of-the-art cartridge that replaces four existing high- explosive projectiles and two propelling charges with a single round. In addition, the new projectile has shown a two-to-four-times improved capability over the M1 HE round against select targets because the warhead has better fragmentation distribution. Currently, four different 105mm cartridges (the M1, M760, M927 and M1130), each containing one of two propelling charges (M67 and M200), are needed to engage the various targets at distances from 1.4 kilometers out to 16 kilometers. The M1130E1 combines the M1130 projectile with the XM350 propelling charge so that one projectile and propelling charge can cover all these ranges, plus additional range. When corrected to International Civil Aviation Organization, or ICAO, standard conditions, the new M1130E1 cartridge demonstrates an average range of 17.8 km at top zone. The XM350 propelling charge takes advantage of a state-of-the-art, high-performance, "HYBRID" propellant, which allows it to cover the minimum to maximum range requirements of both the M67 and the M200 propelling charges with a single, zoned, propelling charge. ARDEC and St. Marks Powder have developed this granular propellant for the XM350 propelling charge that offers many benefits to the Army. The benefits plus projectile characteristics and actual test results will be presented.