

Melt-Cast IM Explosive Evaluation in 120mm Mortar Ammunition

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MECAR SA, a subsidiary of The Allied Defense Group, Inc., has developed a process for loading melt-cast explosives based upon 2,4-dinitroanisole (DNAN) into 120mm Mortar Ammunition. Working with BAE Systems at Holston Army Ammunition Plant, Mecar purchased a melt-cast explosive consisting of DNAN, nitrotriazalone (NTO) and triaminotrinitrobenzene (TATB). Mecar loaded this explosive into 120mm Mortar Ammunition and subjected the rounds to several IM tests, including:

- Fast Heating (Fuel Fire Test IAW Stanag 4240) - Bullet Impact IAW Stanag 4241 - Shaped Charge Jet Impact – (75mm calibre shaped charge) - Sympathetic Reaction IAW Stanag 4396

This paper describes the explosive properties, ammunition loading process, IM testing regime and results.