

FIELD ARTILLERY AMMUNITION 155 mm HE LU211-M WITH SIGNIFICANT
IM/MURAT PERFORMANCE

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Since the beginning of 90's, melt-castable NTO based explosive formulations have been studied and manufactured by Giat Industries as suitable explosives for Insensitive Munitions. The LU211-M was the first ammunition to receive by the French MOD the "One Star" MURAT label specified in the French doctrine . Since then, Giat Industries has improved its low vulnerability proving the "Two Stars " MURAT label.

The potential of melt-cast explosives to provide an IM solution for main charge of artillery and bombs ammunition is highly significant. Several points can be emphasized. Firstly, processing properties are suitable for large scale production especially with current industrial mixing and filling facilities. Secondly, EIDS XF 13 333 has a low vulnerability with high terminal efficiency close to Comp B, thermal and ageing resistance and also absence of exudation. Thirdly, LU211-M is compliant with new US transport regulation HD 1.2.3. The last point is the LU211-M aptitude for demilitarization, disposal and recycling According to the STANAG 4518, LU211-M neutralization at the End of the Mission or at the End of the Operational Life is easier due to the no detonation of the surrounding ammunition and does not cause collateral damage. The using of conical shape charge or flexible linear shape cutting charge allows easily to leave out all military potential with a low cost and without environment pollution. According to the STANAG 4518, LU211-M demilitarization at the End of the Life is very easy and does not require specific technologies due to the design of the shell and the physical and thermal properties of the XF 13333 by re-melting.

Live trials performed the last two years by BWB and DGA in the frame of the qualification contract for a new IM HE round fully compliant with 52 calibre guns confirm against accidental stimuli specified in the STANAG 4439 the significant low sensitivity and vulnerability of the LU211-M without protection screen. An order for the French Army is coming to force in the next months.