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SMArt155 sensor-fused artillery ammunition assures high-accuracy engagement of land and coastal targets

Standing for Sensor-fused Munition for Artillery, Calibre 155mm, the SMArt155 is a robust, highly effective “fire and forget” artillery shell. Each round carries a payload consisting of two autonomous, intelligent, high-performance submunitions. These are capable of neutralizing stationary and moving armoured vehicles of all types as well as coastal targets, in any environment and in all weathers. SMArt155 makes it possible to halt an armoured assault with minimum ammunition expenditure and high accuracy, even at long ranges of engagement. The risk of collateral damage is reduced to a minimum.

The projectile features a thin-walled carrier shell, providing maximum volume for the two submunitions. Combining a multi-mode sensor system with an explosively formed projectile, or EFP, the submunitions are extremely effective. Excellent target detection and false target rejection capabilities, a large footprint, a high hit probability and outstanding warhead performance combine to assure maximum lethality and havoc on the ground, effectively neutralizing enemy armour formations.

Fire missions can be completed with just a few projectiles in very short order. This enables shoot-and-scoot tactics, significantly reducing the effectiveness of enemy counter-battery fire, a critical factor for force protection.

Redundant self-destruction is a key feature of SMArt155, whose designers took special care to avoid the risk of unexploded ordnance. If no target is detected within a submunition’s footprint, two independent and redundant mechanisms – consisting of robust, simple components – ensure that the round reliably self-destructs, enabling friendly troops to move into the zone with a high degree of confidence. Target or no target, the warhead is designed to fire as soon as the parachute-suspended submunition descends to within less than 20 metres of the ground. If this function fails and the submunition lands intact, the warhead automatically detonates as soon as the battery voltage falls below a certain level. This mode also covers possible malfunctions of the sensors or electronics.

The Cluster Munition Coalition (CMC) clearly states that SMArt155 is a Non Cluster Munition while fully complying with the stringent criteria of the Convention on Cluster Munitions.
GIWS, a joint venture of Diehl and Rheinmetall, first developed the projectile late in the Cold War, enabling the German Bundeswehr to counter the threat from Warsaw Pact tank formations, resulting in a highly cost-effective form of deterrence.

Today, the armies of Germany, Switzerland, Greece and Australia all field the SMArt155. Steadily upgraded, the round has functioned perfectly in several live fire procurement trials as well as ammunition surveillance firings, confirming SMArt155’s extraordinary reliability.

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