

DM431
Point-Detonating Self-Destruct
Infantry Grenade Fuze



for 40mm high explosive (HE) and dual purpose high velocity ammunition

DM431

The DM431 fuze is a mechanical impact fuze with a pyrotechnic self-destruct device.

The safety of the rotor is guaranteed by two physically independent safety elements. These are an acceleration-dependent safety element and a rotation-dependent safety element. The rotation safety element is additionally secured by another pre-acceleration-dependent safety element.

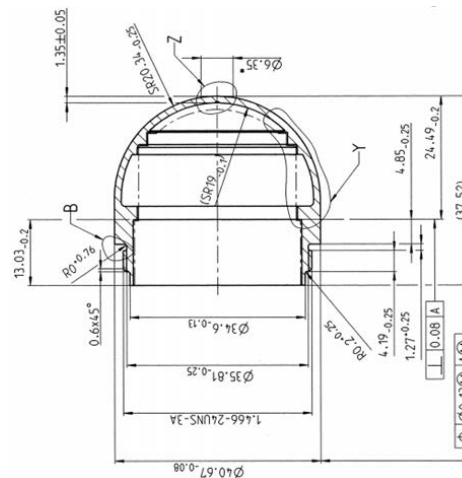
In order to reach the specified muzzle safety distance, the arming of the rotor is delayed by a mechanical escapement mechanism. Both independent safety elements provide the fuze with the required storage, transport, handling and muzzle safety.

When the projectile hits a target, the stab type detonator in the rotor is ignited and initiates the booster, and this detonates the main charge. The delay detonator which is activated upon firing, initiates the self-destruct function via the rotor with the stab type detonator if the fuze does not function in the impact mode after expiry of the self-destruct time (> 14 s).

The DM431 is useable on the high explosive fragmentation cartridge DM111 (similar to the M383 / M384 fuzes).

By using a corresponding booster (spit-back booster) this fuze can also be used on the high explosive dual purpose cartridge DM32 (similar to the M430A1 fuze).

The fuze is triggered when fired at a 1 mm thick aluminum plate (AlCuMg1 F40) from a distance of 100 m at 0° NATO. The fuze is also triggered striking at an angle range of 0° to 70° NATO on a 3 mm steel plate (St37) from a distance of 100 m.



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Technical Data DM431

Muzzle safety	≥ 18 m
Self-destruct time	> 14 s
Required setback for arming	≥ 22,500 g
Required rotation for arming	≥ 6,000 rpm
Angular sensitivity	70° NATO
Operational temperature range	-46°C to +63°C
Storage temperature range	-54°C to +71°C
Weight	62 g
Shelf life	10 years
Compliance with STANAG 4187 / MIL-STD-331C / and MIL-STD-810C	