**Purpose:** This cartridge is used in a direct fire, anti-armor role and is specifically designed for long range tank engagement.

**Description:** The C76A1(FP105) cartridge is made up of two major elements, the projectile assembly and the cartridge.

The projectile assembly consists of both a ballistic subprojectile and parasitic hardware. The subprojectile is comprised of a ballistic monobloc tungsten alloy penetrator, and aerodynamic windshield and a fin. The subprojectile is propelled downrange at hyper-velocity by the parasitic sabot assembly, which transfers momentum from the propellant gases to the subprojectile in-bore through a series of mating buttress grooves. The sabot assembly consists of a three-segment aluminum sabot, a bore riding steel bourrelet, a two-piece plastic slip band/obturator, and a molded elastomeric seal to prevent gas leakage. The sabot incorporates aerodynamic scoops at both the forward and aft ends to produce a smooth, symmetric discard from the subprojectile to muzzle exit. This is accomplished by employing the centrifugal forces of the barrel and the pressures of muzzle blast to insure an unimpeded, and accurate launch. The bourrelet and obturator maintain sabot integrity and provide obturation during in-bore travel. Upon launch, these components break away in a controlled and reproducible manner when a specific load is exerted by the action of the propellant and aerodynamic forces.

The C76A1(FP105) cartridge utilizes a multi-perforated M30 triple base propellant, or equivalent, and an electric M120 primer. The cartridge case is the standard steel M148A1B1. The standard titanium dioxide coated rayon cloth wear liner is used to decrease tube wear.

**Operation:** Because of its advanced tungsten alloy penetrator, high length to diameter ratio, and low drag, the FP105 projectile exhibits exceptional accuracy with minimal dispersion and very high-performance penetration against heavy armor targets.
105MM KINETIC ENERGY (TUNGSTEN) TANK AMMUNITION

TYPE CLASSIFICATION:
Cartridge, 105mm, APFSDS-T, C76A1(FP105)

CHARACTERISTICS:
Type Classified by ____________General Defense Corporation
/Canadian Government C76A1
Cartridge type ___________________105 mm APFSDS-T
Cartridge length ________________36.5 inches (927mm)
Projectile weight ________________12.7 lbs (5.8 kg)
Projectile length ________________18.7 inches (475mm)
Subprojectile weight ____________8.0 lbs (3.6 kg)  Subprojectile diameter ____________1.025 inches (26 mm)
Propellant charge weight ________220.0 ozs (6.2 kg)
Propellant type ________________M30 triple base
Penetrator material ______________Tungsten alloy
Sabot material _________________Aluminum
Fin material ________________Aluminum
Windshield material ____________Aluminum
Tip material ________________Steel
Bourelet material ______________Stainless Steel
Obturator material ____________Nylon
Seal Band material ____________Polypropylene
Cannon used with ____________M68, L7

TEMPERATURE LIMITS:
Firing:
Lower limit ___________________ -25˚F (-32˚C)
Upper limit ___________________+125˚F (52˚C)

Storage:
Lower limit ___________________ -65˚F (-53.8˚C)
Upper limit ___________________+165˚F (71.1˚C)
Chamber pressure ____________59,600 psi at +70˚F

PACKING:
1 round per fiber container; 2 containers per wooden box:
Weight (lb) ___________________132.0
Cube (ft) ____________________3.4

Packing Box:
Weight ________________________124.0 lb
Dimensions ____________________47 7/16 X 13 5/16 X 7 1/16 in.
Cube ________________________2.5 cu ft

GENERAL DYNAMICS
Ordnance and Tactical Systems
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