Gel Ammo

An ammunition that allows the weapons designed for it to adjust the size and shape of its projectiles. Each projectile is plasma-encased.

Developed in the years leading up to YE41 by Noval Heavy Industries as part of their efforts to create a line of products suitable for military and security details. Noval's dedication to perfectly matching a customer's needs led them to develop an ammunition that can suit those needs - at all times. Gel Ammo allows Noval's costly weapons to suit a wide range of needs - where other manufacturers might sell various rifles, machine guns, and so forth, Noval plans to instead offer a single weapons in each size category and allow the weapon to fill the various roles therein.

Informally referred to as “glammo”, for its nature and manufacturer, it was made available for purchase in YE 46.

About Gel Ammo

Gel Ammo is Noval's response to the customer desire for weapons that are both high-capacity and highly-configurable. Depending on the user's needs, a single Gel Ammo cartridge can fire thousands of rounds or only a few dozen. Designed for use with specialized coil guns, each physical round is coated in plasma before being ejected from the weapon's barrel. In this way, the weapon delivers both a physical and an energy attack simultaneously.

Nomenclature Information

- Designer: Noval Heavy Industries (NDSS)
- Manufacturer: Noval Heavy Industries
- Name: Gel Ammo
- Type: Plasma Encased Variable Shape Ammunition
- Role: Weapon Ammunition; Variable Use
- Length: Varies
- Weight: Varies

Function and Design

Gel Ammo is a non-newtonian, ferrous liquid in its inert state. The liquid contains a number of proprietary chemical compounds. The first facilitates a strong magnetic response, reducing the necessary power for shaping the gel and firing it. The second is a hardener that activates under extreme heat and magnetic fields. This hardener supports the gel's ability to take on various shapes and ensures that the ammunition will not breakdown when exposed to the intense heat of the plasma outer shell. The third is a highly-reactive chemical that quickly catalyzes into a plasma state when appropriately activated. The final element is the ferrous material itself. A 'soft' magnet, the iron-silicon alloy is cheap to produce and

maintains its magnetic field for only as long as necessary.

Each of these components can be transported in a well-mixed powder form to reduce weight and increase capacity of transport containers.

When it is time for the Gel Ammo cartridge-equipped weapon to fire, a number of things happen in rapid succession. The first is that the cartridge expels a small amount of the gel into a pre-firing chamber. It is immediately exposed to a shaped magnetic field in this chamber, which both holds the ammunition in place and gives it the desired shape. A small electrical charge is applied and ignites the plasma reagent which solidifies the shape of the round. The charge also causes the ferrous alloy to become magnetic and bottles the plasma to a small area around its surface.

As soon as the gel has been formed into viable ammunition, it is immediately accelerated by a series of magnetically-activated coils along the weapon's primary firing chamber.

The entire process, from ammunition formation to exit from the weapon's barrel, occurs in a split-second. The lack of moving parts and reduced energy consumption supports a wide variety of firing modes, from 'full auto' to single, high-powered shots.

Appearance

Gel Ammo is typically shiny silver in appearance and contains countless small flecks of metal within it. Customers can custom-purchase other colors, such as copper, gold, or brass for an additional fee, but it has no impact on the ammunition's performance.

In its non-inert state, Gel Ammo can take on a wide array of appearances. Typical shape configurations are flechette, needle, micro-bullet, and hollow-point micro-bullet. Other configurations may be appropriate depending on the needs of the specific ammunition.

Stats and Discharge Information

Gel Ammo's versatile nature means that its power is more dependent upon the weapon it is fired from than the ammunition itself.

- Muzzle Flash: Light from the plasma round only, typically blue-white.
- Retort: A modulating energy sound (such as https://www.youtube.com/watch?v=DUiqMM8P3P0)
- Projectile/Beam Appearance: A white-blue plasma sphere with a small solid core (Other colors available)
- Recoil: Minimal recoil during standard operations
- Muzzle Velocity: 1000 m/s
- Damage Rating: Varies by Weapon; DR 1 to DR 9 applications primarily
- Size: Varies by Weapon
- Caliber: Varies by Weapon
- Damage Description: Physical and Plasma

- Effective Range: Varies by Weapon

Other

Powder Cartridges

An alternative to the standard Gel Cartridge, users can easily switch in a Powder Cartridge instead. These cartridges have a much higher capacity than standard gel cartridges, but come with notable drawbacks.

The first, and most significant, drawback is that the cartridge requires a water source in order to convert the powder into a gel form. This is solved by a small water reservoir that is attached external to the canister. Each reservoir also comes with a water reclamation system that passively condenses water in the air into usable water. The canister can be replaced or refilled as necessary, but will take at *least* one hour to replenish its capacity in a standard, breathable atmosphere. The reclamation feature takes longer in thin atmospheres and is unusable in locales lacking in humidity, such as space.

The second drawback is a drastically reduced *available* ammunition capacity. The Powder Cartridge's 'forward' compartment contains enough mixed gel to support 1/100th of the Cartridge's capacity in a ready-to-use form. The compartment will continue to refill itself so long as water is available. New gel can be mixed from a completely empty state in approximately thirty seconds. Users who manage their fire rate to match the weapon's 'refill' rate will have ammunition available for as long as water is available.

Ammunition Mix-ins

Mix-ins are a way to further customize a weapon's ammo selection. For weapons that support them, an optional mix-in cartridge can be attached external to the pre-firing chamber. This cartridge can release a single mix-in per shot, depositing the mix-in immediately before the gel is inserted into the pre-firing chamber. The mix-in is held in place while the gel encircles it and is then encased within the new ammunition.

Selecting a mix-in for firing automatically sets the shape of the ammunition to one that is suitable. This overrides the weapon's current setting.

By default, all mix-ins reduce the firing rate of the weapon by half and the DR by one step while in use.

Penetrating Mix-in

A shaped bead with a small explosive charge at its rear. Upon contact, the bead consumes any remaining plasma casing to ignite the explosive charge and drive itself deeper. This increases the impact of damage against unarmored or lightly armored targets (+1 DR step) but significantly reduces its damage against heavily armored targets (-2 DR steps, to a minimum of 0 DR).

Tracker Mix-in

A small tracking bead encased in an adhesive material. Upon impact, the heat from the ammunition's plasma activates the adhesive and the weaker ammunition shell shatters to allow the bead to attach.

This round is considerably less noticeable when fired compared to the others.

Chemical Mix-in

This bead contains a small amount of some user-defined chemical. It is kept in a thin, heat-resistant shell until impact. Typical chemical choices are paint, poison, or corrosives.

EMP Mix-in

This bead contains a small device that converts the ammunition's plasma shell into an ion discharge that may have an adverse affect on unshielded technology.

OOC Notes

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