

Technical Data Sheet

External Ammunition Sealant 59521

March 2013

Product Description

Hernon® External Ammunition Sealant 59521 is a single component U.V. anaerobic sealant. 59521 has a low viscosity penetrating material capable of bonding and sealing primers and case mouths in ammunition. It is specially formulated for pre-assembled components; it works by capillary action sealing ammunition and improving bullet pull force. Curing occurs when the adhesive is applied between mating surfaces. The cured adhesive is a thermoset plastic suitable for temperatures up to 400°F (204°C), and endures exposure to most solvents.

Ammunition Sealant 59521 cures quickly at room temperature without the need for surface activators or heat to seal primer and case mouth assemblies. Fixturing strength develops in two to three minutes, Full strength will be reached in 24 hours. Cure fillets at UV light irradiances above 60 milliwatts/cm² to insure proper cure.

Product Benefits

- UV fluorescence for in-process inspection
- 100% solid system (no solvents)
- Excellent environmental resistance
- Good gap filling properties
- Excellent Bullet Pull strengths with low Standard deviation
- UV and anaerobic curing mechanism suitable for metal parts
- Excellent capillary performance

Typical Properties (Uncured)

Property	Value
Appearance	Blue liquid
Fluorescent	Yes
Specific Gravity	1.03
Viscosity @ 25°C, cP	5 - 8
Flash Point	See MSDS
Anaerobic fixture time, brass	2 to 3 minutes
UV tack free time, s	≤3

Typical Cured Performance

Property	Value
Handling Time at 23°C, mins.	< 20
Full Strength, hrs.	24
Temperature range, °F	-65 to 400

General Information

This product is not recommended for use in pure oxygen and/or oxygen rich systems and should not be selected as a sealant for chlorine or other strong oxidizing materials.

For safe handling information on this product, consult the Material Safety Data Sheet (MSDS).

Where aqueous washing systems are used to clean the surfaces before bonding, it is important to check for compatibility of the washing solution with the adhesive. In some cases these aqueous washes can affect the cure and performance of the adhesive.

This product is not normally recommended for use on plastics (particularly thermoplastic materials where stress cracking of the plastic could result). It is recommended to confirm compatibility of the product with such substrates.

Directions For Use

Shake well before use.

Ammunition Sealant 59521 should be applied in sufficient quantity to fill the rim around Primer cavities.

Application of Adhesive for Bullet Sealing

1. **Ammunition Sealant 59521** is dispensed to the edge of the case where it penetrates around the joint in less than 5 seconds. Hernon dispensing equipment employs a valve fitted with a hypodermic needle that actually touches the joint; the air actuated valve controls the adhesive quantity dispensed.
2. Bullets can then be cured with a high intensity UV lamp (2 to 4 second cure at 365 nm).
3. UV protective glasses and gloves should be worn for protection against the UV light.
4. A low-powered UV lamp can be used to inspect for the presence of adhesive.

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Disassembly and Cleanup

Non-cured sealant can be removed with **Hernon[®] EF[®] Cleaner 62**.

Storage

Ammunition Sealant 59521 should be stored in a cool, dry location away from light in unopened containers at a temperature between 46°F to 82°F (8°C to 28°C) unless otherwise labeled. Optimal storage is at the lower half of this temperature range. To prevent contamination of unused material, do not return any material to its original container.

Dispensing Equipment

Hernon[®] offers a complete line of fully and semi-automated precision dispensers with inspection stations for bullet sealing and seal verification. **Hernon[®]** high-speed dispensers can seal over 1200 bullets per minute. Contact **Hernon[®] Sales** for additional information.

These suggestions and data are based on information we believe to be reliable and accurate, but no guarantee of their accuracy is made. HERNON MANUFACTURING, INC. shall not be liable for any damage, loss or injury, direct or consequential arising out of the use or the inability to use the product. In every case, we urge and recommend that purchasers, before using any product in full scale production, make their own tests to determine whether the product is of satisfactory quality and suitability for their operations, and the user assumes all risk and liability whatsoever, in connection therewith. Hernon's Quality Management System for the design and manufacture of high performance adhesives and sealants is registered to the ISO 9001:2008 Quality Standard.