

Technical Data Sheet Self Locker 523

June 2020

Page 1 of 2

Product Description

Hernon® Self Locker 523 is a pre-applied, micro-encapsulated adhesive for threaded fasteners. **Self Locker 523** stays on the bolt until the shearing action of an engaging nut applied to the coated bolt causes the capsules to break allowing the adhesive to cure. This material securely locks and seals against vibration loosening and fluid leakage.

Typical Applications

Locking & Sealing:

- Head bolts
- Truck Axle bolts
- Transmission nuts
- Pipe plugs and fittings

Product Benefits

- Improves reliability
- Prevents loosening of bolts due to vibration
- Seals against leakage
- Prevents threads from corroding
- Easily visible for inspection
- Pre-coated parts can be packaged and shipped in normal fashion
- Excellent solvent resistance

Typical Properties (Uncured)

Property	Value
Chemical Type	Dimethacrylate Ester
Color	Off White
Viscosity, DVE, spindle 6, 10 rpm (cP)	20,000-60,000
Flash point	See SDS

Typical Properties (Cured)

Property	Value
Temperature Range, °C (°F)	-54 to 150 (-65 to 300)
Fixture Time, RT, w/ Activator 21	2 – 3 mins

Typical Cured Performance

Tested on 3/8 x 16 grade 2 nuts and grade 5 bolts according to ASTM D5363. Cured and tested at 22°C

Cure	Substrate	Torque	Value N•m (in-lb)
24 Hours	Steel	Breakaway	5.6-22.6 (50-200)
		Prevailing	5.6-28.2 (50-250)
	Plated	Breakaway	0.6-11.3 (5-100)
		Prevailing	0.6-16.9 (5-150)

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 Safety Data Sheet (SDS).

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.

Mixing Procedure

Self Locker 523 must be mixed with **Hernon® Activator 21** in order to obtain strengths.

For small amounts: Add **Activator 21** to stock solution (Self Locker) and stir until well blended.

Use the following mixing proportions:

Total Amount, g	Stock Solution, g	Activator 21, g
25 gm	25.0	1.0
50 gm (2 oz)	50.0	2.0
100	100	4.0
440	440	18

Application

1. Make sure parts are clean.
2. Mix Self Locker with Activator as described above.
3. Application by Hand: Roll threads across a flat surface in material making sure to leave the lead threads clean and fill the rest of the thread roots completely.

4. Application by Machine: Adjust machine to keep lead threads clean and coat with a band width minimum of 1 in diameter.
5. Dry Bolt as soon as possible after coating.
6. Dry for 15 minutes at 65°C. Do not allow coated parts to air dry. Do not over-dry parts.
7. Once cooled to room temperature coated parts may be stored or packaged but do not assemble until 24 hours after drying.
8. Material will be activated when nut is applied.

Storage

Self Locker 523 should be stored in a cool, dry location in unopened containers at a temperature between 45°F to 85°F (7°C to 29°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

Heron[®] offers a complete line of semi and fully automated dispensing equipment. Contact **Heron**[®] **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. Heron's Quality Management System for the design and manufacture of high-performance adhesives and sealants is registered to the ISO 9001 Quality Standard.