

Technical Data Sheet

EF[®] Adhesion Promoter 42

September 2011

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Product Description

EF[®] Adhesion Promoter 42 is a single component product designed to improve adhesion to low surface energy plastics such as polyethylene, polypropylene and Santoprene to similar substrates using Quantum[®] and Instantbond[™] adhesives.

Typical Applications

- Increase adhesion to thermoplastic rubber.
- Increase adhesion of polypropylene to itself or to other materials.
- Increase adhesion of many other low-energy plastics.

Product Benefits

- Environmentally Friendly.
- Fast and reliable assembly of bonded parts.
- Ease of use.
- Quick dry.
- Strong and durable bond on treated low energy plastics.

Typical Properties

Property	Value
Appearance	Clear liquid
Specific Gravity @ 25°C	0.7
On Part Life, minutes	30
Flash Point	See MSDS

Typical Performance

Fixture time and cure speed achieved as a result of using EF[®] Adhesion Promoter 42 depend on the adhesive used and the substrate bonded.

Effect on Cure Speed of Cyanoacrylates

EF[®] Adhesion Promoter 42 also behaves as an activator and accelerates the cure speed of cyanoacrylate adhesives. Fixturing time on most primed substrates is less than 5 seconds but 24 hours at room temperature (22°C) should be allowed for adhesive to develop maximum bond strength.

Effect on Cured Properties of Cyanoacrylates

Product 124 is based on ethyl cyanoacrylate esters. Other Hernon[®] liquid products based on these esters will behave in a similar fashion to these examples. EF[®] Adhesion Promoter 42 is not recommended for use with gel products.

Shear Strength, ISO 4587

Cured for 24 hours at 22°C

Shear Strength, lap-shear specimens, ISO 4587

Substrates treated with EF[®] Adhesion Promoter 42

Substrate	Shear Strength (psi)	
	Prod 124	
Polypropylene	≥100	-----
HDPE to Steel ¹	≥100	-----
HDPE to Polypropylene	≥100	-----

¹ Steel untreated

Typical Environmental Resistance

Cured for 24 hours at 22°C

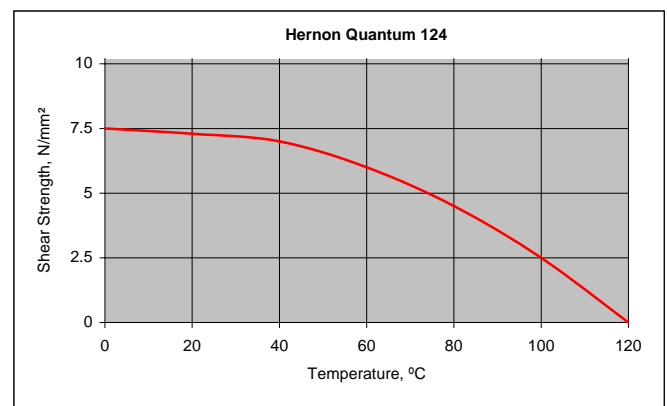
Shear Strength, lap-shear specimens, ISO 4587

Substrates treated with EF[®] Adhesion Promoter 42

Hot Strength

Tested at temperature

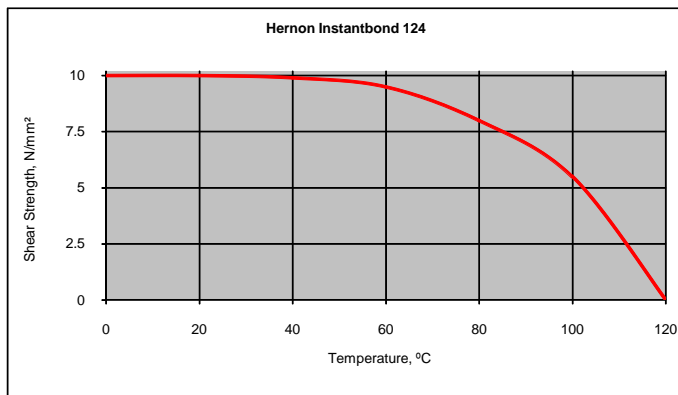
Polypropylene to polypropylene



Hot Strength

Tested at temperature

Gritblasted steel to polypropylene



General Information

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

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

Directions For Use

EF® Adhesion Promoter 42 may be applied to the surface by brush or spray. Materials may also be dipped in a container of product and allowed to drain after removal. Just one coat of primer is recommended; additional coats may result in reduced adhesion. Testing to determine optimum primer-coating thickness in your application is recommended. Allow primer to dry. The parts should be ready for bonding with **Quantum®** and **Instantbond™** Adhesives.

If the joint consists of two polyolefin type materials, apply EF® Adhesion Promoter 42 to both surfaces.

When the joint involves a bond between a polyolefin and a more active or easier-to-bond material, apply EF® Adhesion Promoter 42 to the polyolefin only. The cyanoacrylate adhesive should then be applied to the active material.

For optimum results, the adhesive should be applied within one hour of priming the surface. If necessary, EF® Adhesion Promoter 42 can be re-applied after one hour.

As with all cyanoacrylate adhesives, it is essential to complete the bond immediately after applying the adhesive to one surface only.

EF® Adhesion Promoter 42 in liquid form should not be mixed or brought in contact with cyanoacrylate adhesives.

Handling Precautions

This is a highly flammable material. When dispensing this material from a pressurized system, only nitrogen or argon should be used. Please check local, state and federal regulations regarding the use of flammable liquids in the workplace. For example, special care must be taken to avoid contact of the activator or its vapor with naked flame or any electrical equipment that is not flame proofed.

Storage

EF® Adhesion Promoter 42 should be stored in a cool, dry location 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 semi and fully automated dispensing equipment. 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 ISO9001:2008 Quality Standard.