H.B. Fuller | ROYAL ADHESIVES & SEALANTS

Hydra FAST-EN®

DC – 13634 TECHNICAL SALES BULLETIN

Hydra FAST-EN® DC-13634
2- Part Sprayable, Water-Based Adhesive for Foam / Nonfoam Fabrication

DESCRIPTION

***Hydra FAST-EN*® DC-13634** spray system is a two part sprayable adhesive designed to bond open cell urethane foams. It can also be used to bond open cell urethane foams to other porous or non-porous surfaces including other open or closed cell foams, some woods and metals, and various plastics and fabrics. The adhesive has good wet grab and can produce immediate bonds. The system is solventless, user-friendly and addresses many of the common problems encountered with other two part systems. Other applications where the use of solvent based, flammable and non-flammable systems are a concern for either health or environmental reasons may also be suitable candidates for the use of this product.

PRODUCT FEATURES

- ***Water-based*** -- Non toxic, easy clean up
- ***Two-part*** -- Ratio not critical to end performance
- ***Fast tack*** -- Parts can be mated immediately after spraying
- ***Delayed mating*** -- If desired, parts can be mated as long as 10 minutes after spraying
- ***Color tinted*** -- Aids in noting coverage and uniformity: Standard color is charcoal. Other colors are available.
- ***Environmentally Friendly*** -- Neither wet nor dry adhesive is considered a RCRA hazardous waste
- ***Equipment friendly*** -- 2 parts are mixed external to the spray gun
- ***Shear stability*** -- Part A and Part B are not affected by normal shear forces generated by mechanical pumps or mixers
- ***Temperature range*** -- The mixed adhesive when dry has a use range of -50 to 190°F
- ***Shelf life*** -- When stored between 40°F and 80°F in unopened containers:
  Part A : 4 months, Part B: 12 months

TYPICAL PROPERTIES

(Specification values available upon request)

DC-13634 Part A:

Base	Polychloroprene
Color	Charcoal (wet) / Black (dried)
Solvent	Water
Solids	47.5%
Viscosity	500 cps (#2 @ 10 rpm)
Weight/Gallon	9.13 lbs.
Specific Gravity	1.10
pH	12.0

DC-12239 Part B:

Base	Zinc Sulfate
Color	Clear
Solvent	Water
Solids	15%
Viscosity	Water thin
Weight/Gallon	9.28 lbs/gallon
Specific Gravity	1.115
pH	3.5

BONDING CAPABILITIES

***Hydra FAST-EN*® DC-13634** will allow sprayed parts to be bonded within seconds after application of the adhesive to both mating surfaces.

Parts can be handled immediately after mating. Foam tears can result within minutes, but will depend upon the substrates bonded. However, maximum strength is developed within 24 hours. It is within the 24 hour period that the residual water is dissipated.

If repositioning is desired because of misalignment, the system accommodates this characteristic. Parts can be realigned prior to pressure mating of surfaces.

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COVERAGE

***Hydra FAST-EN* ® *D*C-13634** is color tinted to aid in the determination by the operator of the correct amount to be applied. Custom colors are available at no extra charge. The coverage rate needed to achieve the desired level of adhesion will need to be established for each particular application. This rate will depend on the substrate's surface texture and bonding properties. In the case of urethane open cell foam, average laydown to achieve immediate holding power will depend upon properties such as density and compression.

The *approximate single surface* coverage of one gallon of Part A with the correct ratio of Part B when applied to PU foam is:

Laydown	Grams Wet per Sq. Ft.	Approx. Sq. Ft. Coverage per Gallon
Low	12.5	600
Normal	10.4	480
High	8.3	460

Once the coverage rates have been determined, color standards can be established and samples supplied to operators which indicate the desired shade of color (i.e., blue) to be applied to the part. The color tint also aids the operator in determining if even coverage is being achieved.

***Hydra FAST-EN* ® DC-13634** (Part A) requires the use of DC-12239 as an activator (Part B). Part B flow rate should be adjusted to guarantee full conversion of Part A to a solid adhesive film. The following are recommended approximate mix ratios:

	By Volume or Weight
DC-13634 Part A	100
DC-12239 Part B	10 – 20

These parameters are adjusted by air pressure settings to the required levels to achieve the effect desired. The air supply used must be consistent (no wide fluctuation in line pressures) and be oil free to achieve the best results using this system. Atomizing air pressures can be adjusted over a wide range to meet specific requirements.

EQUIPMENT CONSIDERATIONS

***Hydra FAST-EN* ® DC-13634** is compatible with several different external mix spray gun systems. These systems are designed to deliver Part A and B materials to the spray head via air pressure. Each part has its own pressure setting. Part B is delivered to the spray head and introduced to Part A external to the spray head, which minimizes spray head clogging problems. Contact your Royal Adhesives sales representative for spray gun and total system set up recommendations.

EASY CLEAN-UP

Since the mixed Part A and Part B are not in contact internal to the spray equipment, it is not necessary to clean the gun often. If the gun is to be used again within 16 to 24 hours, the gun can be left as is (with system pressurized) without any problems. It is recommended that the gun be cleaned every 5 days, or if it is not going to be used within 48 hours (i.e. over weekend).

Clean up is easily accomplished using commercially available liquid detergent in a water solution. Tap water alone is not recommended for clean up.

PRECAUTIONARY DATA

- This product is nonflammable when wet
- For professional or industrial use only
- Use with adequate ventilation
- Read the container label and the Safety Data Sheet carefully before use
- Keep away from children
- Keep container closed when not in use
- Keep from freezing

DISPOSAL INFORMATION

Do not reuse container or remove label. Safely dispose of container and contents in accordance with applicable Federal, State and Local regulations.

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