



Technical Data

Dated: April 1, 1988

1137 High Temperature Sealer

Description:

- 3M Brand 1137 High Temperature Sealer is an inorganic compound designed to withstand, for a short period of time, temperature as high as 2000°F (1093°C).
- It has good adhesion to cold rolled steel, stainless steel, and aluminum surfaces.

Typical Physical Properties:

Base Alkali Metal Silicate	Net Weight (Approx.) 15.2 lbs./gal.	Consistency Heavy Paste
Carrier Water	Color Silver-Gray	Solids Content (Approx.) 62.2% by weight

Application Characteristics:

3M Brand 1137 High Temperature Sealer can be easily applied with a spatula or putty knife.

Coverage per gallon of a 3/16 inch dry film is approximately 6 square feet.

Directions For Use:

3M Brand 1137 High Temperature Sealer should be thoroughly agitated to a smooth consistency before using.

Surfaces should be clean, dry and free from oil or grease.

Apply to openings of 1/4 inch or less and fillet along all seams and joints. A 3/16 inch thickness normally provides adequate protection as a sealer.

Parts sealed or bonded with 1137 should air dry 3 days before putting into service, however 7 days drying at 75°F (23.9°C), R.T., is needed for maximum moisture resistance.

A forced drying cycle of 6-8 hours at 250°F (121°C) will accelerate the drying action but only after drying for at least 48 hours at R.T.

Application equipment and work areas can be cleaned up using hot water.

Performance Characteristics:

Dried films of 3M Brand 1137 High Temperature Sealer remain unchanged when exposed to temperature up to 1500°F (927°C), fuse and weld to parent surface at 1700°F (927°C) and do not flow at 2000°F (1093°C).

Overlap Shear Strength – Metal OLS bonds were made using fiberglass threads as spacers and spring clamped through *drying cycle. They were then tested in shear at a speed of .1 inch/minute. Results in P.S.I., (pounds square inch) are average of 2-3 bonds each condition. (Solvent, MEK, wipe only)

Performance Characteristics: (cont.)

Substrate	Test Temperature		
	75° F (23.9° C)	250° F (121° C)	350° F (177° C)
Alclad Aluminum	408 psi	293 psi	448 psi
Bare Aluminum	355 psi	278 psi	303 psi
Colled Rolled Steel	456 psi	353 psi	440 psi
Stainless Steel	480 psi	355 psi	518 psi

*Dry cycle 48 hours R.T. plus 10 hours from R.T. to 250° F (121° C). Hold 8 hours at 250° F (121° C). Cool to R.T. for 2 hours.
The following bonds tested as above on Alclad Aluminum.

	Results P.S.I.
Control-Test dry	490
Age 7 days in water-test wet	304

Handling and Storage:

Store product at 60-80° F (15.6-26.7° C) for maximum storage life. Lower temperature cause increased viscosity of a temporary nature. 3M Brand 1137 will become unusable after prolonged aging below 40° F (4.4° C). If 1137 has been frozen it will no longer be useable even after thawing.

Precautionary Information:

See Material Safety Data Sheet for precautions during use. Product Information Source listed below.

Important Notice To Purchaser:

All statements, technical information and recommendations contained herein are based on tests we believe to be reliable, but the accuracy or completeness thereof is not guaranteed, and the following is made in lieu of all warranties, express or implied:

Seller's and manufacturer's only obligation shall be to replace such quantity of the product proved to be defective. Neither seller nor manufacturer shall be liable for any injury, loss or damage, direct or consequential arising out of the use of or the inability to use the product. Before using, user shall determine the suitability of the product for his intended use and user assumes all risk and liability whatsoever in connection therewith.

Any statement or recommendation not contained herein shall not have any force or effect unless in an agreement signed by officers of seller and manufacturer.

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Litho in U.S.A.

Product Information Source:
Material Safety Data Sheet

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