

2014, 2036 & 2069 Adhesive Kits

For use with RED THREAD® II and RED THREAD II and GREEN THREAD Performance Plus™ and piping systems (Maximum rated temperature 200°F(93.3°C))

2014 Kit

Contents		Bonds per Kit	
Description	Qty.	Pipe Size (In.)	No. Bonds
4.2 oz. Can Base Adh.	1	2	18
0.8 oz. Cont. Hardener	1	3	15
Paint Brush	1	4	13
Stir Stick	1	6	5
Vinyl Gloves	1 pr.	8	2
		10	1

2036 Kit*

Contents (One Each)	Bonds Per Kit	
25.3 oz. Base Adhesive	Pipe Size (In.)	No. Bonds
4.7 oz. Hardener	36	½

*(Refer to **F6036** for installation instructions.)

2069 Kit

Contents		Bonds per Kit	
Description	Qty.	Pipe Size (In.)	No. Bonds
8.5 oz. Can Base Adhesive	1	6	8
1.6 oz. Container Hardener	1	8	4
Paint Brush	1	10	3
Stir Stick	1	12	2
Vinyl Gloves	1 pr.	14	2
		16-18	1
		20	¾
		24	½

The 2000 series adhesive kits are room temperature, two component, epoxy adhesive systems. Once mixed, the adhesive's working life is limited to approximately 25 minutes at 75°F (23.9°C). **NOTE:** Bulletin contains condensed instructions. Refer to **Manuals No. F6000** or **F6036** for installation instructions.

Precautions

Testing piping systems with air or gas is **not** recommended due to inherent safety concerns. Refer to NOV Fiber Glass System's installation **Manual No. F6000** for hydro testing procedures.

Gloves and eye protection should be worn when working with adhesive components. Direct contact with adhesive components may cause skin irritation. If contact is made with skin wash area with soap and water until contamination is removed. Eyes should be flushed with clean water and evaluated by trained medical personnel. The work area should be well ventilated and direct inhalation of fumes should be avoided.

Adhesive that is allowed to setup (harden) in the metal container will undergo an exothermic reaction. Depending on the quantity of adhesive, the exothermic reaction may generate foul-smelling smoke and temperatures up to 400°F (204°C). An exothermic container of adhesive should be moved to a well ventilated area or outdoors. During this process wear gloves and avoid inhalation of the smoke.

The user should read and follow solvent manufacturers' safety recommendations when working with solvents.

Pot Life of Adhesive

The pot life (working life) of an adhesive is the time it takes for the adhesive to begin to harden in the mixing can. The life is measured from the time the hardener and adhesive are first mixed. Though the pot life is shorter at high temperatures, it becomes longer as temperature drops below 75°F (23.9°C).

The pot life of adhesive in hot weather can be extended by keeping the adhesive cool or by reducing the concentrated mass of adhesive in the can. These can be accomplished in the field as follows:

- Cool the can by wrapping with rags or paper towels and then keep the wrappings wet with water or solvent. The can will be cooled by evaporation of the water or solvent. **Do not put the water or solvent in the adhesive.**
- Reduce the concentrated mass by removing the mixed adhesive from the can and spreading the adhesive into a thin film onto a piece of tin or aluminum foil. This aids the dissipation of heat generated by the curing process.

Joint Preparation

A strong adhesive bond requires clean bonding surfaces. The bonding surfaces must be free of oily fingerprints, dirt, oils, grease and other contaminants. Freshly tapered spigots or factory-fresh spigots and bells do not require cleaning unless visibly contaminated. Soil or dirt may be removed by washing

with water. Surfaces may be cleaned with acetone or methyl ethyl ketone. Once the surfaces have been cleaned, do not contaminate them by touching with hands, laying pipe in the dirt, etc. The surfaces should be dry and freshly sanded before applying adhesive.

Warning: Acetone and methyl ethyl ketone are extremely flammable. When using these solvents, do not smoke or use near an open flame. Never use gasoline, turpentine, or diesel fuel to clean joints.

Adhesive Mixing

The ideal temperature range for mixing the adhesive base and hardener is 70°F (21.1°C) to 80°F (26.7°C). To mix, pour the entire contents of the hardener container into the adhesive container. The ratio of hardener to adhesive is critical and partial mixing is not allowed.

Mix the adhesive and hardener together with the wooden mixing stick. Continue mixing until a uniform mixture is obtained and all adhesive is mixed in from the sides and corners of the can. A smooth uniform consistency and color indicates adequate mixing of the adhesive.

If the adhesive becomes warm and begins to set up in the container, safely dispose of the container. **DO NOT USE THIS ADHESIVE.**

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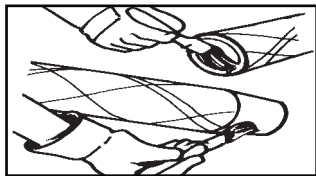
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 **Fiber Glass Systems**

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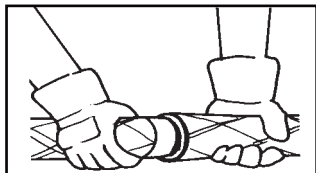
Bonding Operation

- Using a clean paint brush, apply a thin, uniform coat of adhesive to the bonding surfaces. First coat the bell and then the spigot.



Note: Remove any loose paint brush bristles in the adhesive.

- Align and Lock the joint



For 2 inch diameter pipe, insert the spigot into the bell until the tapered surfaces touch. Then while pushing, turn the joint until it locks tight. Normally, one half to a full turn is needed. Hold in locked position until excess adhesive squeezes out.

For 3 thru 6 inch diameter pipe, turning is not practical, so align the pipe and push until the tapered surfaces touch. A driving force must be used to lock the joint. The additional force can be provided by using a piece of hard wood and a hammer.

Threaded and Bonded "T.A.B." Joints

T.A.B. joints are available for 2 thru 6 inch diameter RED THREAD II pipe to pipe connections. T.A.B. joint installation procedures follow the normal bell and spigot operations of cleaning, adhesive mixing, etc. as described previously. The threads on the bonding surfaces are designed for ease of installation and to improve the reliability of the bonded joint. See NOV Fiber Glass Systems installation **Bulletin No. F6000** for additional installation instructions.

For 8 thru 36 inch diameter pipe, a NOV Fiber Glass Systems hydraulic or manual come-along is recommended. Connect two come-alongs to the pipe and pull the joint together slowly while firmly hammering on the sides of the joint with a rubber mallet or 5 pound dead blow hammer. The vibrations from the hammer blows will aid joint lock up. Continue until joint insertion stops and locks tight. Take care not to damage the pipe.

Note: When using a hydraulic come-along, refer to **Manual No. F6000, F6036, F6618** or **F6619** for come-along pressure requirements. A NOV Fiber Glass Systems strap clamp kit is also available for pipe to fitting connections.

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- To ensure joint lock up a pen mark should be placed on the pipe as a visual reference point. The mark is usually made after the joint has been pushed together snugly but not completely made up. The mark should be placed 1/4 to 1 inch from the end of the female side of the joint. The joint is then driven together until insertion of the male end stops. The mark is used as a visual point of reference between the two halves of the joint.
- 2"-24" pipe or sub-assemblies may be moved after the joints are locked up as long as the joints are not loosened by excessive bending or abrupt movements unless, 30" and larger joints must remain fully supported until adhesive is cured.
- When the joints are fully cured the assemblies may be handled, pressurized or hydro tested per Fiber Glass Systems' recommendations in **Manual No. F6000** "Pipe Installation Handbook" or **Manual No. F6036**.

Adhesive Cure

- The time required to fully cure an adhesive joint is dependant on the ambient temperature. The following table shows the time required for complete cure at specific temperatures.

Ambient Temperature Cure Times

Temperature °F (°C)	Time Hours
50 (10°C)	24
60 (15.6°C)	16
70 (21.1°C)	9
80 (26.7°C)	4
90 (32.2°C)	3
110 (43.3°C)	2

Piping systems must not be pressurized until the adhesive joints are fully cured.

- When the temperature is between 50°F (10°C) and 70°F (21.1°C) joints may be heated to accelerate the curing process. Below 50°F (10°C) the joints must be heated to cure the adhesive. NOV Fiber Glass Systems offers customized electrical heating collars for this purpose. The collars are reusable and operate on standard 110-120V AC power. Refer to **Bulletin No. F6640** or **Manual No. F6000** for additional information.
- When using a heat assisted curing method do not handle or pressurize pipe assemblies until they have cooled to ambient temperature.



Adhesive Disposal: Once the adhesive and hardener have been mixed and reacted, nothing can be extracted, and it is classified as non-hazardous material. Dispose of in a normal manner as other solid wastes. Excess adhesive and hardener can be mixed, allowed to react, and disposed of as above. If extra jars of adhesive or hardener have accumulated without the other component to mix and react, contact your NOV Fiber Glass Systems regional manager. When hardener jars are empty, they are not subject to EPA regulations and can be disposed of in a normal manner. These guidelines are based on federal regulations. State and local regulations and ordinances should be reviewed.

NOV Fiber Glass Systems

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