Fiber Glass Systems NOV
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Bulletin D4010
April 15, 2007

7014, 7024 & 7069 Adhesive Kits

For use with RED THREAD® and UL-Listed RED THREAD IIA Piping Systems

NOTE: This bulletin contains limited installation information. It is important to read and fully understand the instructions in Manual No. F6000 for standard products or Manual No. B2160 for UL-Listed products before beginning installation.

7014 Kit			
Contents		Bonds Per Kit	
Description	Qty.	Pipe Size Inches	No.
5.4 oz. Can Base Adhesive	1	2	25
1.5 oz. Container Hardener	1	3	18
1" Paint Brush	1	4	10
Mixing Stick	1	6	6
Vinyl Gloves	1 pr.	8	3
		10	2
		12	1

7024 Kit			
Contents		Bonds Per Can*	
Description	Qty.	Pipe Size Inches	No.
2.0 oz. Can Base Adhesive	2	2	9
0.6 oz. Container Hardener	2	3	6
1" Paint Brush	2	4	4
Mixing Stick	2	6	2
Vinyl Gloves	2 pr.	8	1

*Total for both kits is double the number of joints.

7069 Kit			
Contents		Bonds Per Kit	
Description	Qty.	Pipe Size Inches	No.
7.8 oz. Can Base Adhesive	1	6	8
2.3 oz. Container Hardener	1	8	4
2" Paint Brush	1	10	3
Mixing Stick	1	14	2
Vinyl Gloves	1 pr.	16	1

The 7000 series adhesives are room temperature, two component, epoxy adhesive systems. Once mixed, the adhesive's working life is limited to approximately 25 minutes at 75ºF. Adhesive is recommended for use with FGS Smith Fibercast piping systems in recommended services where continuous service temperatures do not exceed 150ºF.

PRECAUTIONS

FGS Smith Fibercast DOES NOT recommend testing of any installation with air or gas because of the safety hazards created.

Wear gloves and eye protection. Avoid contact with the adhesive and hardener since they are capable of causing skin and eye irritation. If contact is made, flush with water and wash with soap and water. Avoid inhaling fumes. Work in a well ventilated area.

When adhesive is allowed to set up (harden) in the metal container, the container may reach approximately 400ºF. Do not handle hot containers without heavy gloves. This exothermic reaction will generate a heavy, dense, foul-smelling smoke. The container should be placed outdoors in an open area until it cools. Avoid inhaling smoke.

Solvent containers may be under pressure. Use caution when removing inner seals, especially in warm weather. Use eye protection. Concentrated vapors can be ignited. When using solvent, do not smoke or use near an open flame. Use with adequate ventilation. Refer to the warning label on each container for additional information.

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 quite short at high temperatures, it becomes longer as the temperature drops below 75°F.

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 easily 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 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 PREP

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 when necessary. The surfaces should be dry before applying adhesive. Once the surfaces have been cleaned, do not contaminate them by touching with hands, laying pipe in the dirt, etc.

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 and 80°F.

To mix, pour the entire contents of the hardener container into the adhesive container. Mix the adhesive and hardener together with the wooden mixing stick.

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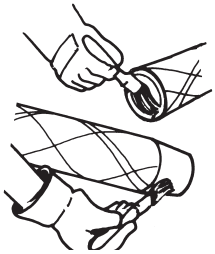
7014, 7024 & 7069 Adhesive Kits

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 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 TO BOND A JOINT!

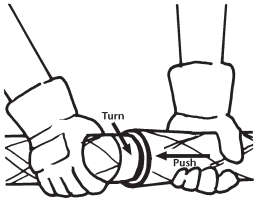
BONDING OPERATION

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



Note: Completely coat both bonding surfaces of the joint and remove any loose paint brush bristles in the adhesive.

2. 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 Fiber Glass Systems installation Bulletin No. F6000 for additional installation instructions.

For 8 thru 24 inch diameter pipe, a 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, F6618 or F6619 for come-along pressure requirements. A Fiber Glass Systems strap clamp kit is also available for pipe to fitting connections.

3. 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 ¼ 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.

4. 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.

5. 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”.

ADHESIVE CURE

1. 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 ºF	Time (Hours)
55	24
60	18
70	8
80	5
90	3
110	2

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

2. When the temperature is between 50 and 70°F joints may be heated to accelerate the curing process. Below 50°F the joints must be heated to cure the adhesive. Fiber Glass Systems offers customized electrical heating collars for this purpose. The collars are reusable and operate on standard 110-120 AC voltage. Refer to Bulletin Number F6640 or Manual Number F6000 for additional information.

3. 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 catalyst 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 waste. Excess adhesive and catalyst can be mixed, allowed to react, and disposed of as above. If extra cans of adhesive or tubes of catalyst have accumulated without the other component to mix and react, contact your FGS regional manager. Catalyst tubes, when empty are not subject to EPA regulation 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.

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