

MANHOLE/WETWELL ADHESIVE JOINT INSTRUCTIONS (KIT-AD)

1. INTRODUCTION

- 1.1. The manhole/wetwell adhesive joint facilitates a watertight connection between a CSI open bottom manhole and a fiberglass base manhole. These instructions will explain how to properly seal the joint using CSI's EZ-Fit adhesive channels and adhesive kits (KIT-AD).
- 1.2. Follow the Supplemental Instructions as well as all instructions covered in the most recent edition of Containment Solutions, Inc. (CSI) Manhole Installation Instructions (Pub. No. MAN 4033).
- 1.3. Read the following instructions completely before attempting to mix or apply the adhesive material.

2. HANDLING & PREPARATION

⚠ CAUTION

In freezing conditions, protect adhesive channel from water accumulation. Freezing water may cause damage.

- 2.1. Visually inspect the riser components for shipping or handling damage. If damage is found, contact CSI Field Service.
- 2.2. Wear gloves.
- 2.3. Do not roll, drop or bounce manhole.
- 2.4. All assembly kits (Kit-AD or Kit-LK) should be stored in a cool/dry location at 50° - 70°F. Higher temperature will shorten shelf life. Use by expiration date shown on the box label

3. ASSEMBLY INSTRUCTIONS

- 3.1. Dry fit all manhole components prior to installation.
- 3.2. Remove any rocks, and/or debris from adhesive channel.
- 3.3. Even if mating surfaces have arrived from the factory abraded, the contractor must re-sand the mating surfaces within four hours of adhesive or layup application.
- 3.4. Ensure mating surfaces are free of contaminants.
- 3.5. Do not use oil-based solvents, soap, or water to clean surfaces.
- 3.6. Position manhole inside EZ-Fit adhesive channel.
- 3.7. Confirm that surfaces and/or adhesive channels are dry and clean before mixing or applying the adhesive.

4. ADHESIVE INSTRUCTIONS

⚠ WARNING

To prevent fire or explosion hazard, air driven tools must be used. Do not use electrical power tools where flammable vapors or liquids exist. Also, when electric hand tools are used, be aware of potential shock hazards. Wear protective clothing and eye protection.

Manholes & Wetwells may be a confined space. Do not enter unless following OSHA guidelines for confined space entry. Failure to follow OSHA guidelines could result in death or serious injury.



ASPHYXIATION



FIRE



EXPLOSION

⚠ WARNING

Always wear protective goggles and gloves when mixing and applying adhesive and resin. The liquid materials are flammable. Keep adhesive and resin away from sparks and ignition sources.

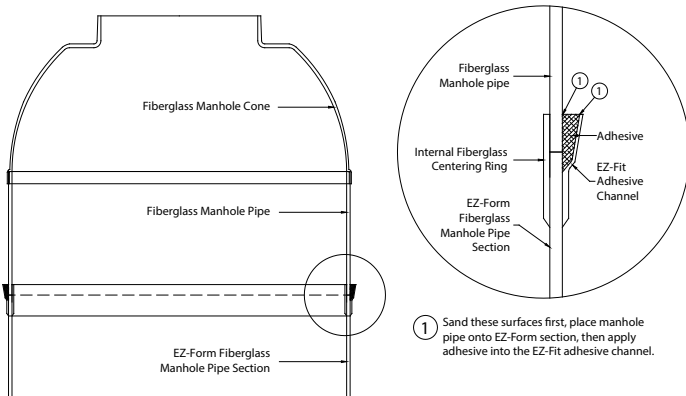
- 4.1. CSI manholes must be installed using only CSI supplied adhesive kits (Kit-AD).
- 4.2. Temperature Considerations:
 - 4.2.1. After mixing adhesive and hardener, you will have no more than 20 minutes to complete the application before the resin begins to harden.
 - 4.2.2. Recommended method for supplemental heat is to transfer warm air to the manhole while keeping ignition sources away.
 - 4.2.3. Cool Weather (less than 60°F):
 - 4.2.3.1. Preheat the resin or adhesive to 60-75°F.
 - 4.2.3.2. Before adhesive is applied, add supplemental heat. Apply heat to keep joint surfaces over 60°F.
 - 4.2.3.3. After adhesive is applied, continue to apply supplemental heat until it hardens (30 minutes minimum).
 - 4.2.4. Warm Weather (between 61°F and 85°F):
 - 4.2.4.1. Adhesive will harden in approximately 30 minutes, no supplemental heat required.
 - 4.2.5. Hot Weather (above 85°F):
 - 4.2.5.1. Apply adhesive more rapidly (adhesive and resin may harden in less than 10 minutes).
 - 4.2.5.2. To increase working time, cool the adhesive or resin to 60°F to slow down chemical reaction.
- 4.3. KIT CONTENTS: This kit is designed for Adhesive Joints.

Items	Size	Qty.
Mix Instructions Sheet (INST 6051)		1
MSDS for Adhesive Mix (INST 6023)		1
MSDS for Catalyst (Cadox L-50A)		1
Styrene Warning		1
Putty Knife		1
Adhesive Mix (Part A)	1 gal.	1
Catalyst (Part B)	5 gm tubes	12
Sandpaper	36" long	1
Grout Bag		1
Mixing Stick		1

- 4.3.1. Dry fit all manhole components prior to sealing joints, as outlined in Section 2.
- 4.3.2. Thoroughly mix two part adhesive by hand or with a powered mixer following the mixing instructions contained in the adhesive kit.

4.3.3. Apply the adhesive with the supplied grout bag and putty knife. Fill the adhesive channel from outside of the manhole (see Figure 3-1).

Figure 3-1



① Sand these surfaces first, place manhole pipe onto EZ-Form section, then apply adhesive into the EZ-Fit adhesive channel.

4.3.4. All adhesive must be dispensed at the time of installation, so if two adhesive kits are required based on manhole diameter, both kits must be thoroughly mixed, poured into grout bags and emptied into the adhesive channel simultaneously.

4.3.5. Fill the channel with the appropriate cans of adhesive per the chart in Table 3-1.

Table 3-1

MANHOLE DIAMETER	NUMBER OF KITS
48"	4
54"	4
60"	5
66"	5
72"	6
92"	7
96"	7
120"	9

4.3.6. Allow adhesive to cure at least 5 hours without moving the joined parts. The surface of the adhesive should be hard; if not hard after 5 hours, wait up to 24 hours.

4.3.7. Properly dispose of any unused adhesive kit contents by following the mixing instructions contained in the adhesive kit.