

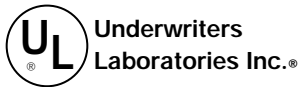
B20 Adhesive Kit

for bonding fiberglass-reinforced epoxy pipe and fittings

Description

Ameron B20 adhesive is a two-part amine-cured epoxy resin system designed to permanently bond matching tapered joints on fiberglass reinforced epoxy pipe and fittings. Each adhesive kit contains resin, hardener, mixing stick, detailed instructions, towels, sandpaper, gloves and an application spatula and/or brush.

Listings and approvals



Ameron B20 adhesive is listed by Underwriters Laboratories under File MH 9162 for use in Nonmetallic Underground Piping for Flammable Liquids and with Underwriters' Laboratories of Canada under File CMH 715. B20 adhesive is particularly suited for piping systems conveying petroleum products including diesel fuels, kerosene, etc., alcohols and alcohol-gasoline mixtures.

Storage

Do not store B20 adhesive at elevated temperatures. Stored adhesive kits should not be exposed to temperatures in excess of 100°F (37°C) or in the direct sunlight. Rotate stock frequently. Refer to the manufacturing date indicated on the packaging. Extended storage at elevated temperatures may result in partial polymerization of the resin. Do not use the adhesive if the resin is hard or stringy. Extend shelf life by storing in a cool location.

Preparation of pipe and fittings

Remove end protectors sufficiently far in advance to allow trapped moisture to evaporate from the bonding surfaces. **Inspect** the tapered ends and the entire pipe length. **Remove** any damaged joints for repair. Using the sandpaper supplied in the adhesive kit, **clean** both the bell and the spigot **thoroughly** to remove all dirt, grease and foreign materials. Do this just prior to applying the adhesive.

Do not touch the bonding surfaces with bare hands, dirty or greasy gloves or rags after cleaning them. **Badly weathered tapers should be abraded** with sandpaper, then wiped clean with towels. All **bonding surfaces must be dry** prior to applying adhesive. If moisture is visible on the bonding surfaces, use a heating blanket or hot-air gun to dry them. Then sand the surfaces and wipe with a dry paper towel before applying adhesive.

Align pipe lengths or fittings to prevent cocking during insertion.

Mixing the adhesive

In cold weather it is necessary to warm the resin to 50°F (10°C) to permit good mixing and easier application.

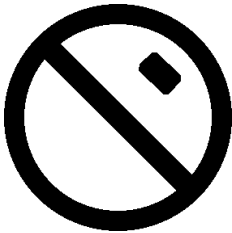
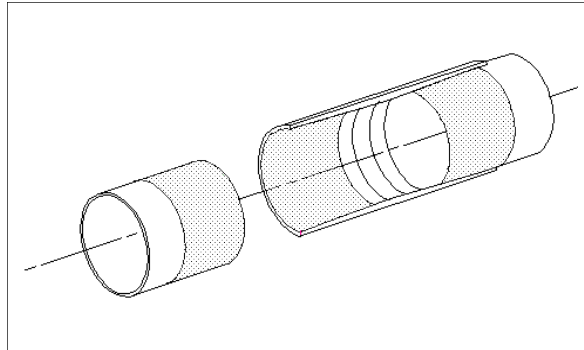
Combine all of both components in the mixing container in the supplied proportions. **Never try to split a kit.** Mix thoroughly with the mixing stick until all streaks are gone and the adhesive has a smooth, uniform color. Mixed adhesive color is red.

The hardener contained in the adhesive kit may burn the skin. Avoid inhaling the vapors. Read and follow label precautions.

Joining primary piping

Do not use the adhesive beyond its pot life. The pot life (working time) of mixed adhesive is dependent on temperature and is reduced as the temperature increases. When the pot life expires, the can may begin to feel warm and the adhesive will be gummy or sticky when applied to the pipe. See POTLIFE/CURETIME table below.

Apply a thin, even coat of mixed adhesive to the inside of the bell and to the tapered spigot ends (indicated by shading), completely wetting all machined surfaces with the adhesive. Wipe off excess adhesive with the spatula provided in the kit.



Bring the bell and spigot together in a straight, even line. Insert the spigot until contact of the matching taper in the bell occurs. When assembling 2 through 6-inch pipe, rotate the spigot end approximately 90° to redistribute the adhesive and work out any trapped air whenever possible. Since tapers are matching, you should feel the joint “lock” when a proper interference fit is obtained. If the joint will not lock, it is usually due to excess adhesive, adhesive which is stiff because of cold weather, or adhesive whose pot life has expired. When the joint has locked, hold the pipe and fitting together for a few seconds to insure lock-up. **Do not use any type of hammer or mallet to make up the joint.**

Do not disturb the lock of the mated joint when installing additional lengths.

Do not move the joined piping until the adhesive has cured.

Note: For 8-inch and larger nominal pipe sizes, refer to the Ameron installation manual or consult Ameron.

Cutting the pipe

Use a hacksaw with fine blade, a chopsaw, a reciprocating saw or an abrasive cutoff wheel when cutting the pipe. Mark pipe with a wrap-around or heating blanket to insure an even cut. If pipe is delivered with a factory-joined coupling, cut off the spigot end, not the coupling. If necessary, pipe may be joined to a sleeve coupling to form a new female bell end.

Taper the cut end of the pipe using the Ameron Taper-Tool (U.S. Pat. No. 3,540,328), Taper-Tool II, Taper-Maker or Unique Tapering Tool or a ‘pencil-sharpener’ type tool available from third parties or Ameron distributors. See instructions packed with tool for details.

Pot life/cure time

Piping systems incorporating B20 bonds can be put into service after curing at ambient temperatures for the times indicated in the table. The table also indicates the pot life (working time) of a mixed 5-oz kit at various temperatures. The pot life of adhesives is measured from the time the hardener and resin are first mixed until the adhesive starts to thicken and can no longer be used.

Minimum Ambient Temperature		Adhesive Pot Life	Minimum Joint Cure Time
(°F)	(°C)	(minutes)	(hours)
40	5	70	12
65	18	40	5
75	24	30	4
95	35	20	3

In sub-zero or extremely windy conditions, extend the heat-cure times accordingly and use insulation as necessary to insure adequate bonding. Cap the ends of the piping to prevent the passage of cold air. In severe conditions, warm air may be blown through the interior of the pipe.

A heat cure is recommended for installations with service temperatures above 180°F (82°C) or operating pressures over 300 psi. For ambient temperature conditions below 40°F (5°C), an external heat cure must be used. A minimum heat cure time of at least 30 minutes is recommended for 2 through 6-inch pipe. Even after the adhesive has turned solid at ambient temperatures, heat curing will promote chemical cross-linking of the adhesive, thus increasing its strength, temperature resistance and corrosion resistance. A single Chem Cure Pak may be applied or an Ameron-approved electric heat blanket may be used. The heat cure may be applied at any time after the bond is made and before the pipe has been tested or put into service. The heat may be applied at any time after making the bond while the adhesive is still liquid or after it has gelled to a solid.

Kit sizes and bonds per kit

Adhesive kits are available in 1, 5, and 8-oz sizes. The table indicates the number of bonds per kit for each respective pipe size. Values in the table are based on the quantity of adhesive required by an experienced crew working at a temperature of 75°F (24°C) with a 30-minute adhesive pot life.

Primary Fittings Bonds per Kit

Kit Size (oz)	Shipping Weight (lb)	Bonds per Kit								
		Nominal Pipe Size (in)								
		2	3	4	6	8	10	12	14	16
1	0.5	2	1	1	-	-	-	-	-	-
5*	1.2	12	8	6	2	2	2	2	1	1
8*	1.4	-	14	9	4	3	3	3	2	2

* Available in six-pak kits.

Containment Fittings Bonds per 5-oz Adhesive Kit

Nominal Pipe Size (in)	(mm)	Adhesive Type	90° Elbows	45° Elbows	Tees	Concentric Reducers	Saddles	Couplings
3	80	B20	2	2	1½	3	2	1½
4	100	B20	2	2	1	1	1	1

Toxicity

Hardener: The hardener is irritating to the skin, eyes and respiratory tract. It is toxic orally and may cause sensitization.

Resin: The resin may be mildly irritating to skin and eyes and may cause sensitization.

Handling precautions

Hardener: Do not get in eyes, on skin or clothing. Avoid breathing vapor. Wear rubber gloves and apron and NIOSH-approved respirator. Wash thoroughly after handling.

Resin: Avoid contact with eyes, skin or clothing. Wear rubber gloves and eye protection. Wash thoroughly after handling.

First aid

In case of contact

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes. Call a physician.

Skin: Wash skin with water and soap, if available.

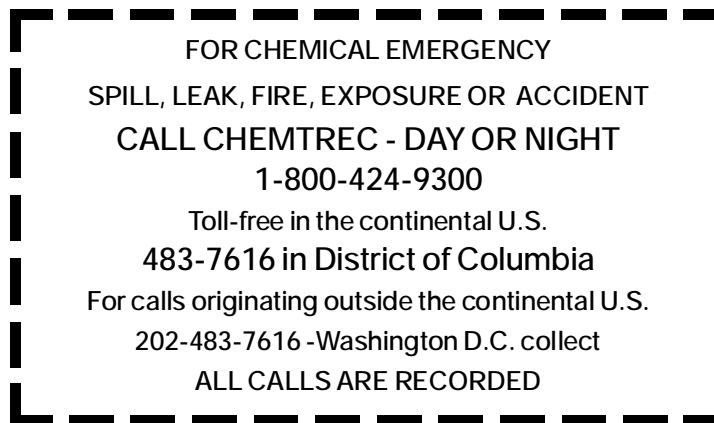
Clothing: Remove contaminated clothing and wash before reuse.

Inhalation: Remove to fresh air. Give oxygen or artificial respiration if necessary.

Ingestion: If hardener is swallowed and patient is conscious, give plenty of water or milk to drink. *Do not induce vomiting.* Call a physician. If resin is swallowed, give 100 grams (about 1/4 lb) activated charcoal slurry in water. *Do not induce vomiting.* Call a physician.

Important notice

This literature and the information and recommendations it contains are based on data reasonably believed to be reliable. However, such factors as variations in environment, application or installation, changes in operating procedures, or extrapolation of data may cause different results. Ameron makes no representation or warranty, express or implied, including warranties of merchantability or fitness for purpose, as to the accuracy, adequacy or completeness of the recommendations or information contained herein. Ameron assumes no liability whatsoever in connection with this literature or the information or recommendations it contains.



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Manufacturing plants: Burkburnett, Texas; Spartanburg, South Carolina; Geldermalsen, The Netherlands and Singapore. Bondstrand pipe is also manufactured in Japan and Saudi Arabia.