



THANKS for selecting ACRAGLAS

Since its Introduction in 1959, "GLAS" has proven itself as the most versatile bedding compound available, and we guarantee your satisfaction 100%. Taking the time and effort to "bed" a gun is one of the most rewarding things you can do to improve a rifle's accuracy and consistency. These instructions will walk you through the process.

The basic "QUICK INSTRUCTIONS" appear to the left of this page, but you'll get the best job possible if you read the "DETAILED" instructions that follow below. There are a lot of "tricks" explained there that will help the job go faster and easier, and avoid potential problems, especially with synthetic stocks.

KIT CONTAINS: 1 jar **ACRAGLAS** Resin; 1 jar **ACRAGLAS** Hardener; 1 jar **ACRAGLAS Non-Flammable** Release Agent; Floc; 1 pak brown **ACRAGLAS** Dye; 1 pak black **ACRAGLAS** Dye; Mixing Cups and Mixing Sticks.

ACRAGLAS Resin NET WEIGHT: 2 oz./57 g

ACRAGLAS Hardener NET WEIGHT: $\frac{7}{8}$ oz./21 g

NON-FLAMMABLE RELEASE AGENT NET CONTENTS: $\frac{7}{8}$ oz./21 g

DETAILED BEDDING PROCEDURE

REGARDING THE FOLLOWING INSTRUCTIONS:

These instructions were written assuming you have never epoxy-bedded a gun. For you pros using **ACRAGLAS** for the first time, we'd still suggest a read-through because all bedding products are definitely not the same. If you have any questions, please call our Technical Support staff at 641-623-5401. They are available Monday through Friday, 8:30 am to 4:30 p.m., Central Time.

DISASSEMBLY

Be absolutely certain the gun is unloaded and the magazine or clip is empty. Take the gun completely apart, following the manufacturer's instructions. The bolt has to come out of the action and the barreled action taken out of the stock (do not remove barrel from action). Remove the trigger group, magazine box (if present), scope and/or sights and anything else attached to the action. Barrel-mounted open sights and scope mount bases can normally stay in place.

Note: When bedding a bolt action rifle with **ACRAGLAS**, we recommend that you use Inletting Guide Screws to align the action within the stock while the **ACRAGLAS** cures. Inletting Guide Screws are available from Brownells to fit a number of different bolt action rifles.



INLETTING & STOCK PREPARATION

Wood Stocks:

You'll need $\frac{1}{32}$ " to $\frac{1}{16}$ " clearance between the barreled action and the barrel channel, action recess, and behind the recoil lug. Cut away wood as needed using chisels, scrapers or a miniature grinder. Do not cut away or lower all surfaces within the receiver area, only the areas that will be filled and supported by **ACRAGLAS**. Leave some uncut areas to serve as "stop points" that will help locate the barreled action at the proper depth within the stock.

Fiberglass or Synthetic Stocks:

Rough up the interior stock surfaces with 220 grit sandpaper to take off any glaze or residual mold release which might prevent **ACRAGLAS** from bonding to the stock material itself. Put on rubber gloves, provide proper ventilation and use **Brownells TCE Cleaner Degreaser**, Birchwood Casey Gun Scrubber, acetone or a similar solvent to degrease the interior stock surfaces. Be sure to read the notes **Solvent Caution** and **Bonding To Plastics** under the section **Making The Job Easier**, located at the end of these instructions.



All Stocks:

Run a line of Brownells Wide Bedding Tape, Scotch, masking or electrical tape along the finished edge of the stock's barrel channel and action cut-out area where they meet the barreled action. Coat the tape with Release Agent as explained in **Metal Preparation - Use Of Release Agent**. Not only will this make cleanup easier, it will also make sure that any **ACRAGLAS** that squeezes out during the bedding process won't stick to the stock. Test your tape to make sure its glue doesn't react with your stock finish or pull it off. **ACRAGLAS** is runny. It will find any crack or opening and try to fill it. Build modeling clay dams to control this flow.

METAL PREPARATION - USE OF RELEASE AGENT

In addition to being a specially formulated, powerful bedding epoxy, **ACRAGLAS** is also a superb glue for attaching metal to wood or fiberglass. Using **ACRAGLAS** Non-Flammable Release Agent selectively lets **ACRAGLAS** bond to the stock but not to the barreled action.

IMPORTANT: You **MUST** do some things to prevent mechanical "locks" that can connect barreled action and stock permanently. Fill all milled-out sections, openings, pits, recesses and deep machine marks in the barreled action, recoil



lug and triggerguard/floorplate with modeling clay. Smooth with scraper to keep all surfaces flush. Make certain the recoil lug, or any other projection, is not wider at the bottom than at the top. A reverse taper like that can mechanically lock the barreled action into the stock once surrounded by **ACRAGLAS**.

Another mechanical lock is possible if the barreled action rests so deeply in the stock that the edges of the stock are higher than the largest diameter of the barrel or action body. Cover the front, sides and bottom of the recoil lug with a single layer of Brownells Wide Bedding Tape or smooth, electrician's tape. The slight clearance created by the tape will make it easier to remove the barreled action from the stock for cleaning

and repair. The rear lug surface transfers recoil energy to the stock so it must remain uncovered; just fill any pits with modeling clay.

Stir the Release Agent or shake it vigorously before using. Use a Q-Tip or small paint brush to apply Release Agent to the barreled action. Make sure you get it into all recesses and corners. Apply two or more **THIN** coats of Release Agent on all exposed metal surfaces of the barreled action, triggerguard/floorplate, modeling clay and bedding tape that might contact **ACRAGLAS**. Be sure to cover ALL surfaces and recesses. Let dry thoroughly between coats so carrier evaporates completely. Thick coats will "skin over", trapping unevaporated carrier which may damage bluing/metal. Wait for about 5 minutes, or until the Release Agent is dry to the touch. Hold the barreled action up toward a light and look across all surfaces. You should see a nearly transparent, continuous, vinyl film covering them. If you see any bright reflections or a break in the coating, put more Release Agent on those areas. Give the guard screws and any stock pins a **THIN** coat of gun grease or paste wax after the Release Agent dries on them. Be certain the coat of Release Agent is **THOROUGHLY DRY** before bedding. When the bedding job is done, you can remove Release Agent from both gun and bedding with warm water. Gun and Release Agent must be room temperature (68°F) or higher before beginning the bedding operation.



CAUTION: BEFORE PROCEEDING FARTHER,
MAKE SURE YOUR STOCK IS CLEAN & OIL-FREE



MIXING YOUR ACRAGLAS

ACRAGLAS doesn't have to be mixed all at one time. The mixing ratio is 4 parts Resin to 1 part Hardener by volume. **Do Not** weigh the resin and hardener for mixing, you'll get the wrong ratio. The mixing cups supplied in the kit work well for bedding and touch-up or repair applications. For bedding, pour one ounce of **ACRAGLAS** Resin into the mixing cup. Add one-quarter ounce of **ACRAGLAS** Hardener to the Resin in the mixing cup. There isn't a mark at 1¼ ounces but there is a 10 DR (dram) mark which splits the difference between 1 ounce and 1½ ounce lines. Add Hardener until the liquid is level with the 10 DR line.

Thoroughly mix (do not whip) the Resin and Hardener with the mixing stick for two (2) minutes. At this point you are ready to color the **ACRAGLAS** to match your stock. Use a needle or straight pin to poke a small hole in one corner of the foil dye packet. Squeeze one or two small drops of the concentrated, brown or black dye into the Resin/Hardener mixture. Begin stirring the dye in and check the color. We've found it works best to have the mixed, dyed **ACRAGLAS** just a bit lighter than the stock. If the color is too light, add another drop of dye, stir briefly and check the color. The dye is extremely potent and a little goes a long way. Once you have the color right, mix thoroughly for another two (2) minutes, for a total of four (4) minutes. **Always mix a total of FOUR MINUTES** whether you add dye or not. Your **ACRAGLAS** is now ready to use.

Time/Temperature Note: At 72°-75° F, you have approximately 15 minutes working time before your **ACRAGLAS** begins to set up. At higher room temperatures the stiffening occurs more rapidly, with proportionate decrease in working time. Working time can be lengthened by setting the mixing cup in a shallow pan of ice water and stirring the water occasionally.

In cold weather, make sure your **ACRAGLAS** is at least 68° F. before mixing and spreading. This same minimum temperature must be maintained during hardening as well. In hot conditions, chill **ACRAGLAS** to approximately 76° F. before mixing to prevent accelerated setup.

To speed up the setting process, you can heat the barreled action and stock to about 100° - 120° F, before putting the **ACRAGLAS** into the stock. For even more rapid setting, place a heat lamp 12" - 18" away from the area where the **ACRAGLAS** has been applied. **DO NOT** try to speed the setting process by adding extra hardener - doing so will actually *PREVENT* complete hardening.



BEDDING

Wood Stocks:

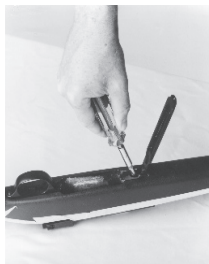
Pour a small line of **ACRAGLAS** into the stock's front action ring recess, recoil lug recess and rear tang area, and use the mixing stick to spread it evenly over all those surfaces. Make sure there is good coverage where the rear tang and front receiver ring of the action rest in the stock. Fill the recoil lug recess approximately half full. Avoid getting any **ACRAGLAS** in the action screw recess. We suggest bedding the barrel channel of a wood stock as a second step, after the tang and lug bedding are fully cured. To bed a barrel channel, tape and dam everything as before, then pour a line of **ACRAGLAS** down the barrel channel. Don't put on a thick coat or leave any excess in this area. Excess **ACRAGLAS** can create a mechanical lock and trap the barreled action in the stock.

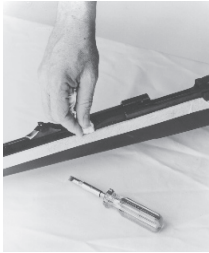


Install the Inletting Guide Screws into the action. Press the stripped barreled action into the stock until it bottoms out against the "stop points" (see Inletting Section). Install the triggerguard and/or floorplate unit. Wrap the action area with surgical tubing or large rubber bands to squeeze and seat the action into the stock. Tightening the tubing or rubber bands is a "just enough" but not "too much" process. Too tightly will squeeze the **ACRAGLAS** out and distort the stock, too loosely may keep the action and triggerguard/floorplate from seating fully within the stock.

Synthetic Stocks:

Some of these stocks have a hollow barrel channel, some don't. Either is fine since there's usually no need to have full-length barrel channel-to-barrel contact in a synthetic stock. But, if you want this contact, follow the directions below covering bedding of the action area and then build modeling clay dams and pour a line of **ACRAGLAS** into the channel, or along the edges of a hollow channel. Don't try to fill a hollow unless you want the extra weight. To bed the action area of a synthetic stock: pour a small amount of **ACRAGLAS** into the stock's front action ring recess, recoil lug recess and rear tang area. Fill the recoil lug recess approximately half full. Use the mixing stick to distribute **ACRAGLAS** evenly. At this point, follow the directions shown above for inserting the barreled action into the stock and securing the barreled action while the **ACRAGLAS** cures. Synthetic stocks may or may not require the use of Inletting Guide Screws. If you choose not to use Inletting Guide Screws, be very careful and avoid getting any **ACRAGLAS** in the action





screw or guard screw holes. Make sure the threaded portions of the Inletting Guide Screws or the guard screws are well-coated with Release Agent.

CLEANUP

We have two favorite methods to clean up the excess **ACRAGLAS** that often squeezes out onto the stock. First, and easiest, just wipe or scrape the excess away, immediately, with a clean, cotton-tipped applicator or a small scraper made of wood or plastic. Second, wait until the **ACRAGLAS** is firmly set, about 9 hours after application. Then, trim the excess **ACRAGLAS** off with a knife. Be careful, don't scratch the bluing or stock finish.

ACRAGLAS on your cutting instruments and hands can be removed while still tacky by rubbing with a vinegar-saturated cloth (don't get vinegar on blued steel). You can remove the gun from the stock after 10 hours.

Separating The Stock And Barreled Action:

After the **ACRAGLAS** has cured, take out the action screws, remove the triggerguard/floorplate and secure the stock, right side up, in a padded vise. Put a wooden dowel into the bolt opening and slowly, firmly, lift both the dowel and the barrel to remove the barreled action from the stock. Don't expect the metal to jump out of the stock, especially a wooden stock which is now fitted more tightly than possible with any other method. If they won't come apart, tap along the length of the barreled action with a soft, rubber mallet and try again. Proceed with the firm, slow lifting. If you can't get the barreled action out, don't force it! Give our Tech Support Staff a call and we'll help.

REASSEMBLY

Clean Release Agent residue off the barreled action and stock. Remove all bedding tape and modeling clay. Lightly oil all the metal parts, then follow the gun manufacturer's instructions and reassemble the trigger group, magazine box (if applicable) and other parts onto the barreled action. Check the bedding in the magazine and trigger area and remove any excess **ACRAGLAS** with files and sandpaper to get proper clearances. Re-install the barreled action into the stock.

Congratulations! You have just given your gun the finest of accurizing jobs. It can be fired in three days, but giving the **ACRAGLAS** a full week to cure will be much, much better.



TIPS TO MAKE THE JOB EASIER

Storage - Store in a cool place (68°-72° F). Shelf life of unmixed **ACRAGLAS** components is Fifteen to Twenty years.

Vinegar - Great for cleaning up sticky **ACRAGLAS** , but don't use on blued steel. It is an acid and can dull or remove bluing.

Solvent Caution - Some solvents may react with some synthetic stocks or wood stock finishes. If a synthetic stock has exposed, foam filling, be very careful when using solvents for degreasing. The solvent could actually "melt" the foam. Solvents can also remove the paint used on some synthetic stocks or the finish from a wooden stock. We suggest you test any solvent on a part of the stock that won't show in normal use.

Bonding To Plastics - **ACRAGLAS** "sticks" easily to stocks made from laid up fiberglass, Kevlar™ and graphite cloths which are bonded with epoxy resin. Brown Precision and H.S. Precision brand stocks are examples of this type. **ACRAGLAS** may have problems sticking to some injection-molded, plastic stocks, especially if they contain a high percentage of polypropylene. Six Enterprises, Ramline, Butler Creek, Choate and some factory Remington stocks are made by this process.

Don't worry! You can **ACRAGLAS**-bed these stocks! The first trick is to create mechanical locks by making undercuts in the bedding areas. This is the same thing an engraver does when putting gold inlays into a gun, or a dentist does when putting in fillings. Create some undercut grooves in the bedding recesses with a chisel or miniature grinder and drill several small holes at random angles into the bedding surface. Keep the holes small: 1/16" to 1/8" diameter is plenty, and there's no need to go deeper than 1/8" to 1/4". After grooving/drilling, sand and degrease as explained earlier. **ACRAGLAS** will flow into these cuts and holes and mechanically lock itself in place after setup. Give our Tech Staff a call if you have questions.

Another method that will increase epoxy bedding adhesion with injection molded stocks is to heat the area to be bedded with a propane torch, just prior to applying **ACRAGLAS**. A low flame is all that's needed. Simply warm the area until it becomes slightly softened. Do not overdo this and melt the plastic, and stay away from any small edges that will show on the outside surface of the stock. You may observe the flame turning blue and hear a small, popping sound while you are playing the flame against the surface of the bedding area. This is caused by oil being driven out of the synthetic material and burning off. After heating, and while the bedding area is still warm, immediately apply the **ACRAGLAS**.

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QUICK INSTRUCTIONS

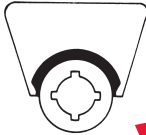
- (1) Take off the scope and rings. Pull the barreled action out of the stock and strip it down to the basic unit.
- (2) Sand and clean the inside of the stock. If there isn't enough clearance, remove stock material to make room.
- (3) Thoroughly clean the barreled action, triggerguard and guard screws to remove any grease or oil. Fill all nooks, crannies, pits and openings with modeling clay. Build modeling clay dams as needed to confine the "flow" of the **ACRAGLAS**. Coat thoroughly with Release Agent. Cover the edges of the stock with tape where they meet the barrel and action. Coat the tape with Release Agent.
- (4) Clamp the stock in a padded bench vise or gun-cleaning vise with the action recess and barrel channel "up".
- (5) Pour one ounce of **ACRAGLAS** Resin into the mixing cup. Add ¼ ounce of **ACRAGLAS** Hardener to the Mixing Cup. Stir Resin and Hardener together, mixing for 4 minutes.
- (6) Pour **ACRAGLAS** into the stock's front action ring recess, recoil lug recess and rear tang area. To bed the barrel channel of a wood stock, pour a coating of **ACRAGLAS** down the barrel channel (bedding the barrel channel should be a separate process).
- (7) Place barreled action into stock, install triggerguard and its screws.
- (8) Wipe away any **ACRAGLAS** that oozes out with a cotton-tipped applicator or small wooden/plastic, scraper. Don't let **ACRAGLAS** ooze up, over and around, the action or barrel. It could trap the metal in the stock.
- (9) Let the **ACRAGLAS** harden for 10 hours.
- (10) Take the barreled action out of the stock and clean off Release Agent, clay and tape from metal, stock, screws and parts.
- (11) Reassemble the barreled action and reinstall it in the stock.
- (12) Put the gun to one side for 2½ days before firing. This allows the **ACRAGLAS** to reach maximum hardness.

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100%
WOOD TO METAL
CONTACT

PROFESSIONAL QUALITY
ACCURIZING/BEDDING
SERVICE KIT

SKIN-TIGHT
BEDDING JOB



ACRAGLAS[®]

EASY TO USE

INSTRUCTIONS & Technique

WARNING: Resin/Hardener: IRRITANT. CAN CAUSE EYE BURNS. STRONG SENSITIZER. Resin contains: Epoxy resin, Dibutyl Phthalate. Hardener contains: Phenol, Triethylenetetramine. Keep away from heat and flames. Prevent contact with eyes and skin. Do not swallow. Wear rubber gloves and eye protection when handling. **FIRST AID:** For eyes: Flush thoroughly with water for at least 15 minutes. Seek medical treatment immediately. For skin: Wash with soap and water. Remove contaminated clothing. For ingestion: Do not induce vomiting. Consult physician or Poison Control Center **IMMEDIATELY.**

KEEP OUT OF REACH OF CHILDREN