



**1** Ensure that the condition of asbestos containing insulation is such that friable fibers will not be released from damaged sections of pipe covering during removal procedures. If covering has been damaged, the damaged areas should be encapsulated with a chemical encapsulant prior to removal operation. Carefully vacuum the pipe with the HEPA vacuum cleaner to remove any asbestos dust. Vacuum the pipe you plan on abating and the adjacent pipe that may come in contact with workers or be affected by vibrations from the removal process.



**2** If the insulation is friable, that is if it crumbles easily, wrap the pipe with a layer of polyethylene sheeting and wrap the area of pipe adjacent to the work area with two layers of 6-mil poly to prevent release of fibers during the project. Secure it by wrapping it with duct tape in a 'candy-stripe' pattern. Place one layer of duct tape around the pipe at each location the glovebag will be attached. Next, measure the length of pipe to be abated. To determine the number of chambers to cut from the roll, consult the chart on the back of the AVAIL brochure.



**3** Unroll the appropriate length of AVAIL QuickTwist Glovebags. Plan to allow a small amount of slack in each glovebag chamber so that you can easily access the full diameter of the pipe. Using a utility knife cut the glovebag at the collar that separates the chambers. Place the required tools in the tool pouch of the chamber or chambers where the work will begin. One of the advantages of AVAIL QuickTwist extended-run glovebags is that multiple chambers can be used simultaneously. Set-up time efficiency is increased due to the elimination of repetitive tasks ... one large bag set-up versus multiple single bags ... could save you up to 40% in labor.



**4** The next step is to install the glovebag. Take each end of the bag and lift it to the pipe. Move along the glovebag and pull the opening around the pipe. Overlap the ends, but don't pull them taut. Tack the bag in place with small pieces of duct tape. Beginning with the first chamber in the glovebag run, lay the seam flat and seal the bag opening from one end to the other with duct tape. Duct tape should not come in contact with pipe insulation during this step. Leave openings where pipe hangers are located.



**5** You are now ready to remove the insulation. Put your hands and arms into the first glove/sleeve assembly. Generously wet the insulation with surfactant. Using tin snips cut any standing or wires that hold the jacketing in place. Carefully remove the jacketing, especially if it is made of metal. The sharp edges can cut the glovebag. Fold the jacketing inward so no sharp edges are exposed. Some contractors insert woven bags to hold the jacketing material and protect the glovebag.



**6** Gently lower the jacketing to the bottom of the bag. Wet down the insulation again with surfactant. If the insulation is firmly attached to the pipe, it may be necessary to use a flexi-wire saw to cut through the insulation. The unique shape of the Quick-Twist glovebag allows you to easily remove whole sections of pipe insulation intact and safely detach the debris from the pipe.



**7** Lift the insulation off the pipe and lower it to the bottom of the bag. Be sure to remove the insulation that extends into the collar. Typically, insulation attaches to pipes in semicircular segments. Insulation is typically installed in 3-foot or 1-meter sections. So, if you are careful to find the seam, you can easily remove the insulation intact. Unless the insulation is severely deteriorated or friable, these segments usually come off easily.



**8** One of the benefits of extended run QuickTwist glovebags is the ability to work a continuous piece of pipe ... reaching between chambers. Thoroughly scrape or chip off the remaining asbestos using a scraper. Once the insulation has been removed, scrub the pipe clean using the brush and surfactant.



**9** Immediately place the contaminated chamber into a properly marked asbestos disposal bag. You're now ready to move to the next chamber and repeat the process. The Quick-Twist debris chamber is a major improvement over earlier glovebag designs. Early designs were too wide at the debris chamber, which made this critical process cumbersome.



**10** Once you've finished work in the final chamber of the QuickTwist extended-run glovebag, you have to remove the tools. Grasp them with one of the glove/sleeve assemblies, and pull the sleeve inside out. Twist the sleeve above the tools, wrap the twisted area securely with duct tape, cut the center of the taped area, and remove the tools.



**11** Then remove the last chamber of the glovebag using the previously described procedures.



**12** Remove all stubs remaining, starting at the collar, slitting the top of the stubs free while folding inward into an asbestos disposal bag.



**5** Turn to the start of the run. Gather the open collar around the pipe and seal tightly to the pipe with several layers of duct tape. Repeat the procedure at the end of the glovebag. Attach the end of the glovebag. According to the maximum work area. There should be some slack. This extra space will be important to comfortably access the contained work area and when removing glovebag chambers. Attach the glovebag where pipe hangers occur by carefully cutting with a utility knife and sealing with duct tape. Loosely support the collars between chambers using either lengths of duct tape or straps. Leave room enough to reach the insulation that runs through the collars.



**6** Fill the sprayer with the surfactant. Follow the manufacturer's instructions for details on mixing and using the surfactant. Insert the HEPA vacuum and wetting wand of the pump sprayer through the entry ports. Seal each to the entry port socks with duct tape.



**7** Now test the glovebag tape seals for integrity using the smoke test kit. First, tightly cinch off the collar in the first compartment using the strap or duct tape. Insert the smoke generator through one of the entry ports and introduce just enough smoke to fill the chamber. Remove the smoke generator and seal the entry port with duct tape. Gently squeeze the bag and watch for escaping smoke at the tape seals.



**8** Seal any leaks with additional duct tape and loosen the collar. Repeat this procedure for each glovebag chamber before working in it. Should the glovebag become punctured during any part of asbestos removal, quickly repair it with duct tape.



**13** Use the pump sprayer with encapsulant and spray a generous coating of it onto the pipe and inside the glovebag. This kills down any residual asbestos fibers. Now pass the tools into the next work chamber.



**14** The next step is to seal off the contaminated chamber. Tightly wrap the collar around the uninsulated section of pipe using duct tape or strap. Activate the HEPA vacuum evacuating the air from the glovebag.



**15** When empty, simply twist off the contaminated chamber just below the pipe, between the work area and the debris chamber, and tightly wrap the twisted section with duct tape.



**16** While the vacuum is running, detach the wetting wand and seal the port with duct tape. Deactivate the vacuum and cut the chamber away from the pipe through the center of the taped area. By cutting through the center of the tape you are maintaining an airtight seal, and preventing fiber release. Next, remove the vacuum wand from the glovebag and reseal the port with duct tape.



**21** Pull down the full length of abated pipe. After all glovebag work chambers are removed.



**22** After the last chamber of the glovebag has been taken down and safely disposed of, proceed with clean up and decontamination. Fold the drop cloth inward and place it in an asbestos disposal bag. Be careful not to spill any material that may have fallen during the removal process. Seal up all asbestos disposal bags and discard them in accordance with all regulations. If a decontamination unit has been set up, follow all applicable procedures.



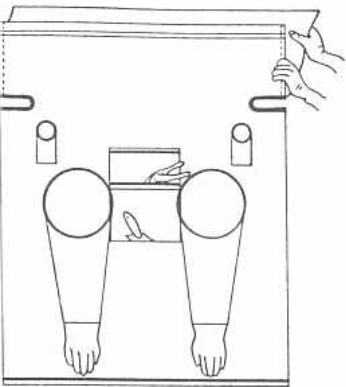
**23** Vacuum, clean and lock down the area for final clearance. While still wearing your respirator, remove your coveralls, boots and gloves. Place them in an asbestos waste bag and dispose of it properly. Finally, remove the barricade tape and warning signs.

Congratulations, your glovebag job is now complete.



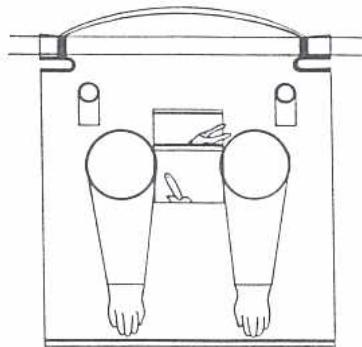
Grayling Industries, Inc.  
1008 Branch Drive

HORIZONTAL  
**AVAIL**  
 Protective Removal Chamber



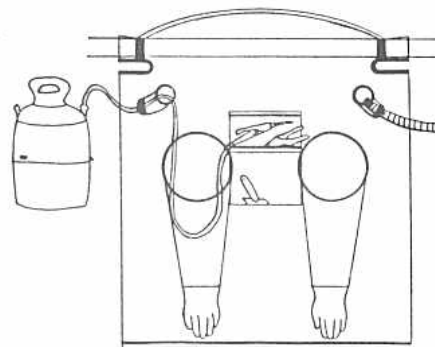
1

Inspect the work area and place the required tools inside the AVAIL PRC dual entry tool pouch. Pull open the no cut/perforated sides.



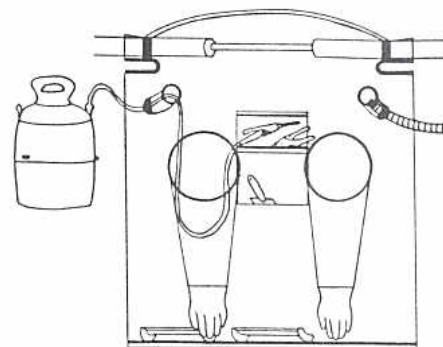
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Place the AVAIL PRC around the pipe and seal with the self adhesive strip. Seal the ends of the chamber by strapping or taping to the recessed collar area.



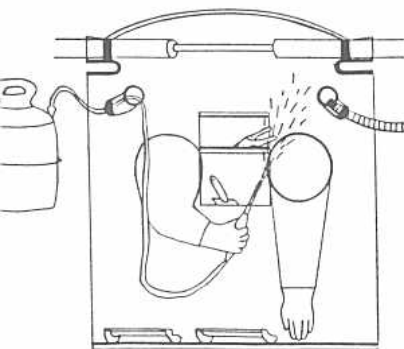
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Reverse the HEPA and water wand entry sleeves outside the chamber wall. Cut the ends and insert the spray nozzle and HEPA vacuum hose, seal with tape.



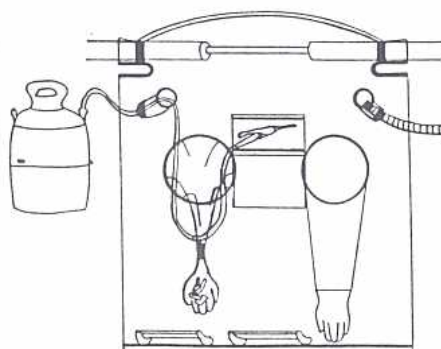
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Enter the chamber through the arm openings, extending your hands into the gloves. Thoroughly wet and remove the insulation from the pipe.



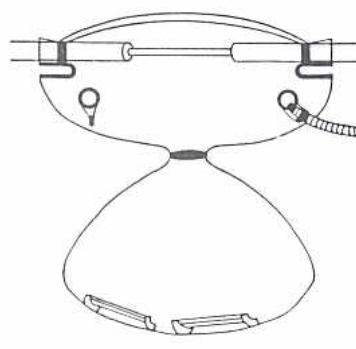
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Wash down the pipe, chamber walls, and tools. Thoroughly wet all exposed insulation and waste debris.



6

Retrieve the tools by grasping them in one hand and pull them out of the chamber, reversing the sleeve. Twist the sleeve above the retrieved tools, tape, and cut the center of the tape.



7

Activate the HEPA vacuum and remove the flexible water wand, resealing the sleeve. Evacuate the remaining contaminated air. Gather the chamber above the sleeves and seal.



8

Detach the chamber from the pipe and place in a AVAIL ASBESTOS BURIAL BAG, and dispose of properly.

**CAUTION:** The user should determine the suitability of this product for the particular use. Additional information as to use, applicable laws or governmental regulations may be necessary for the user to determine this product's suitability for the particular use. Since the manner in which this product is used is beyond the manufacturer's control, the manufacturer makes no warranty of any kind, express or implied, including the warranties of fitness for a particular purpose or merchantability. The manufacturer does not assume any liability arising out of the use by others of this product.