



# LIFETIME SOLDERLESS BONDING

## For Copper, Brass, Aluminum and Titanium

A Permanent Lifetime Bond without Heat or Flame.

Makes  
Hundreds  
of Bonds



### HVAC SUPER PRO ...

is an innovative, single-part, braze-less bonding product that is easy to use and specifically formulated for copper, brass and aluminum in HVAC systems.

- Makes approximately 200 bonds on 1/2-inch pipe
- Eliminates risk of damage by fires and burns associated with soldering
- Compatible with all refrigerants and oils
- Holds 1200 psi of refrigerant pressure 20 minutes after bonding
- Temperature range -65°F to 350°F (-54°C to 176°C)
- Adherence Strength (ASTM 4541):  
Pull apart: 1500 foot pounds;  
Rotational: 450 foot pounds

Ensure proper fit with a hydraulic swedge tool - Then ...

## Easy as 1 - 2 - 3

1. Clean the pipe and connector with 60 grit
2. Apply HVAC Super Pro to both parts
3. Insert pipe into fitting and hold for 5 seconds



Product No  
10 gr 32097  
50 gr 32098

HVAC SUPER PRO® braze-less bonding is a one part scientifically formulated anaerobic polymer that has an affinity for metals with a negative valence like copper, brass, and aluminum. HVAC SUPER PRO® can be used on aluminum copper and brass in any combination. Galvanic corrosion is not created when bonding aluminum to copper because the copper and aluminum never touch due to a high strength layer of acrylic bond between the two metals. HVAC SUPER PRO® eliminates the risk of fire, burns and damage to electronic circuits such as TXV's, service modules, and reversing valves. Once cured, HVAC SUPER PRO® is permanent, and has been tested to last 50 years of more.

HVAC Super Pro® is effective for all installations including TXV and Reversing Valves ... A lifetime installation process with no heat.

Makes the same  
number of bonds as  
1 1/2 pounds  
of Braze at  
approximately 25%  
of the cost of  
Silver Braze

BEFORE MAKING  
THE FIRST BOND,  
READ INSTRUCTIONS  
COMPLETELY  
AND WATCH VIDEO:



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# BONDING INSTRUCTIONS FOR HVAC SUPER PRO®

**STEP 1:** Verify that pipe and connector are round and that the connector I.D. is a minimum of 0.010 larger than the tubing O.D.

**STEPS 2 and 3:** Sand the inside of connector and outside of pipe using 60 grit emery cloth provided. To sand the inside of a connector, roll the sanding cloth and insert into the connector and rotate. **(NOTE: DO NOT WIPE THE SANDED AREA OR CLEAN IT WITH A CLOTH OR SOLVENT – LEAVE THE SANDING DUST ON THE PIPE AND CONNECTOR.)**

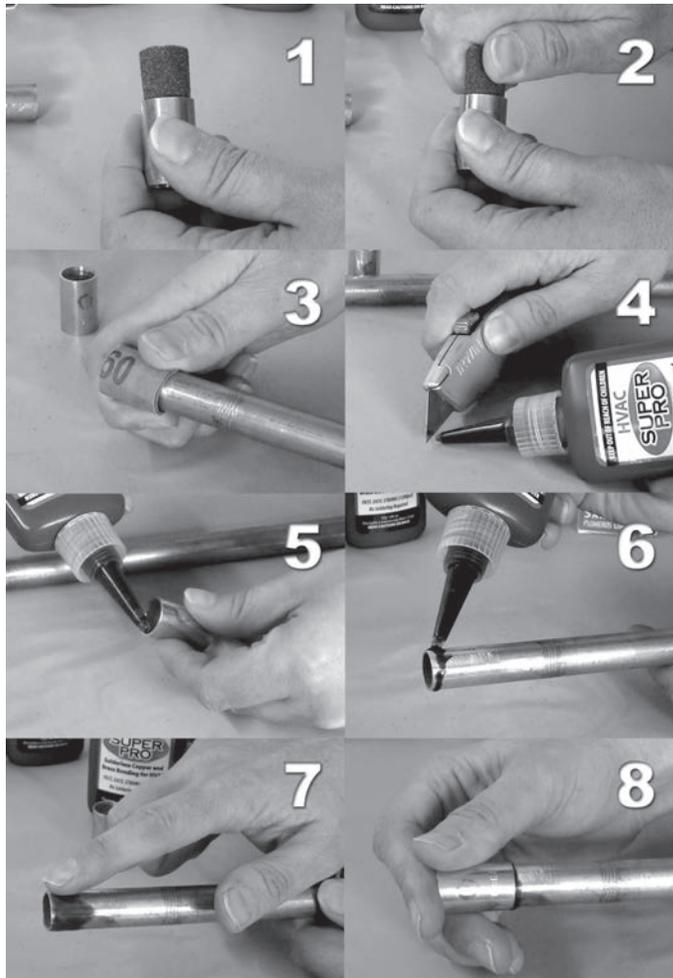
**STEP 4:** Cut the tip from the HVAC SUPER PRO bottle. (Note: The orifice should be small.) Shake the bottle and squeeze a small amount (one or two drops) out and discard (this is the product that is in the tip of the tube and does not get mixed when shaken)

**STEPS 5 and 6:** Apply a small bead of HVAC SUPER PRO around the inner circumference of the connector, and the outer circumference of the pipe. If you cannot correctly apply HVAC SUPER PRO from the bottle into the inside of a connector or underneath a pipe, use a tooth pick to spread the HVAC SUPER PRO around the inside of the connector. **(NOTE: NEVER USE A Q-TIP AS THE COTTON PORTION OF A Q-TIP ABSORBS THE HVAC SUPER PRO AND LEAVES DRY AREAS THAT WILL RESULT IN LEAKS.)** You may use your finger to spread HVAC Super Pro. Spread the HVAC SUPER PRO around the entire bonding area on the pipe – making sure that no area is wiped dry. Be sure to leave a heavy coat of HVAC SUPER PRO.

**STEPS 7 and 8:** Insert pipe into connector and hold for 10 seconds. Let the bond sit undisturbed for 3 minutes. (For aluminum, allow bond to set for 5 minutes undisturbed.)

**NOTE:** After 20 minutes the bond is ready for a vacuum or pressure test and will withstand a minimum of 1200 psi.

**NOT FOR USE ON MEDICAL OXYGEN LINES.**



## HVAC SUPER PRO® SOLDERLESS COPPER BONDING

... is simple to use. Sand the copper or brass with 60-grit sanding cloth that comes with the kit until it is shiny and free of all contaminants. Do not wipe the sanded area or clean it with a solvent. Leave the sanding dust on the pipe and connector. **YOU MUST USE 60-GRIT SANDING CLOTH PROVIDED.**

Shake the bottle and squeeze a small amount (one or two drops) out and discard (this is the product that is in the tip of the tube and does not get mixed when you shake the bottle.)

Squeeze a small bead of HVAC SUPPER PRO around the circumference of the leading edge of the pipe (about 1/8-inch from the end); and squeeze a small bead around the leading inner edge of the connector (as close as possible to edge.) Bring the pipe and connector into proper alignment ("T"s and "elbows") within 10 seconds. The way to determine the proper alignment is to mark the pipe and connector before applying HVAC SUPER PRO. **DO NOT MOVE THE BONDED AREA FOR 3 MINUTES AFTER THE 10-SECOND PERIOD. MOVING THE BOND DURING THE 10-SECOND TO 3 MINUTE PERIOD WILL BREAK THE BOND AS THIS IS THE TIME THAT THE HVAC SUPER PRO IS CHANGING FROM A LIQUID TO AN ACRYLIC.** When bonding aluminum, leave the bond alone for 5 minutes.

### IMPORTANT SPACING

Make sure the tubing fits properly inside the connector. The tubing must have a minimum of five thousandths of an inch clearance completely around the connector. A good way to check the minimum clearance is to wrap a sheet of paper, like a sticky note, around the tubing. The tubing, with the paper wrapped around it, should

be able to be inserted into the connector without damaging the paper. If the clearance is too tight, use a swaging tool to enlarge the connector; otherwise, the HVAC SUPER PRO® will be wiped from the bonding area as the tube is inserted into the connector and the bond will not hold. The maximum clearance allowed between the tubing and the connector is 20 thousandths of an inch.



When bonding aluminum, leave the bond alone for 5 minutes.

**NOTE:** If you cannot get the neck of the applicator around the tube or connector, squirt a small amount on your finger and wipe a heavy coat of HVAC SUPER PRO all around the outside of the pipe and inside of the connector, making sure that the entire bonding area is covered. Or in really tight places squirt HVAC SUPER PRO on finger and use a toothpick, or something similar, and transfer the bonding agent around the inside of the connector or the outside of the pipe. **DO NOT USE A COTTON SWAB. A BOND MADE WITH A COTTON SWAB WILL NORMALLY LEAK.**

## TEHCNICAL DATA

HVAC SUPER PRO® braze-less bonding is a one part scientifically formulated anaerobic polymer that has an affinity for metals with a negative valence like copper, brass, and aluminum. HVAC SUPER PRO can be used on aluminum copper and brass in any combination.

Galvanic corrosion is not created when bonding aluminum to copper because the copper and aluminum never touch due to a high strength layer of acrylic bond between the two metals. HVAC SUPER PRO eliminates the risk of fire, burns and damage to electronic circuits such as TXV's, service modules, and reversing valves. Once cured, HVAC SUPER PRO is permanent, and is formulated to last the lifetime of the equipment.

HVAC SUPER PRO starts to change from a liquid to a solid acrylic in 10-seconds after the tubing is inserted into the connector and forms a solid acrylic bond in 3 minutes. Do not handle the bonded tubing or connector after 10 seconds and before (3) minutes as this will break the bond. After 3 minutes, the bonded tubing can be handled without breaking the bond. When bonding aluminum to aluminum, do not handle the bonded tubing after 10-seconds and before (5) minutes.

In 12 minutes, a HVAC SUPER PRO bond involving copper or brass will withstand a minimum of 850 psi of refrigerant pressure. When fully cured (approximately 2 hours) the bond will withstand a minimum of 1200 psi of refrigerant pressure. Aluminum to aluminum bonds require 20 minutes

before the bond reaches 850 psi.

HVAC SUPER PRO is compatible with all refrigerants and oils including R410A and POE oil.. HVAC SUPER PRO can be used with soft and hard tubing and with standard ANSI copper or brass connectors eliminating the necessity for costly specialty fittings and tools. Temperature range after cure: -65°F to 350°F (-53.9°C to 176.7°C)

A HVAC SUPER PRO bond requires a minimum of 0.005 inch clearance between the tubing and connector, all the way around the tubing, to achieve a lasting bond. Maximum fill space is 0.020 inch.

HVAC SUPER PRO bonds can be taken apart by heating the bond to a minimum of 450°F and pulling the bond apart. Sand and re-bond the connection with HVAC SUPER PRO.

Adherence Strength (ASTM 4541): Pull-apart: 1500 foot pounds; Rotational: 450 foot pounds



**Emergency Call - 800-255-3924 24 Hours  
FOR PROFESSIONAL USE ONLY  
Warranty limited to replacement of product.  
KEEP OUT OF REACH OF CHILDREN**