



ThermaClear[®] DX

Treatment Instructions

ThermaClear®

... SAFETY

DX Formula

Safe Handling, Storage, and Disposal of ThermaClear®

- **Moisture-sensitive (hygroscopic):** Keep sealed and minimize exposure to air.
- **Storage:** Use nitrogen gas (N₂) to displace any air from the Treatment container after opening. Store in a cool, dry location, away from heat or open flames.
- **Aquatic Hazard:** Treatment is toxic to marine life. Handle according to applicable environmental regulations and prevent release into sinks, drains, sewers, or waterways.
- **Disposal:** Do not dispose of unwanted treatment or any removed oil in municipal or landfill waste streams. Refer to SDS and follow applicable regulations for correct disposal.
- **Safety:** Keep out of reach of children. Use Personal Protective Equipment when handling or installing treatment.
- **CAS Registry Numbers:** 67762-38-3 and 64742-88-7



Required Supplies

- **Personal Protective Equipment (PPE):** Hand, ear, and eye protection.
- **Treatment:** Sealed quart-size (32 oz.) or one-gallon (128 oz.) containers of ThermaClear® DX.
- **Approved Pump System:** ThermaClear® Pump (64 oz. reservoir) with charging hose and valve.
- **Oil draining:** Separate, six-foot (6') hose with shut-off valve and Schraeder fitting to drain oil.
- **Oil recovery:** Wide-mouth, sealable container to safely collect and dispose of removed chiller oil.
- **Tools:** Service wrenches, shop towels, and ECM Technologies treatment stickers.
 - **NOTE:** specialty valve adaptors may be required for mini-splits or other system types.

Step 1 - Preparation:

Inspect A/C units for basic issues prior to ThermaClear® treatment. Ensure the A/C compressor is running during the inspection. Discuss equipment status and operation with responsible personnel.

Only treat A/C compressors confirmed to be in proper working condition.

- Set the thermostat to the coldest setting to keep the cooling mode (compressor) on.
- Open system access panels to expose the compressor(s) and low-pressure port(s).
- Check for oil leaks, noise, visible damage, faulty Schrader valves, faulty thermal expansion valves, or filter driers with more than a 2 deg. F temperature differential.
- Verify refrigerant type and compressor tonnage for each circuit to be treated.
- Calculate Treatment Volume:
 - Use 1 oz. of ThermaClear® DX per rated ton for standard package and split units
 - Use 1 oz. of ThermaClear® DX per rated ton for inverter units and VRV/VRF units

Step 2 - Fill and Bleed the ThermaClear® Pump:

- Close the valve on the charging hose, remove the pump reservoir cap and carefully pour the desired amount of ThermaClear® DX into the pump reservoir. Add an extra 5 oz. for bleeding the pump.
- Immediately reattach the pump reservoir cap and close the cap on the ThermaClear® Treatment container.
- Connect the hose (valve side) to the Schrader valve fitting on the pump reservoir cap and open the valve.
- Ensure that the bleeder valve on the pump reservoir cap is open to let air escape while bleeding.
- Pump ThermaClear® treatment back into the reservoir until the stream is bubble-free.
- Close the valve on the charging hose once the pump is bled and the handle is fully depressed.
- Disconnect the charging hose from the fitting Schrader valve on the pump reservoir cap.
- BEFORE treatment, note the liquid level in the pump reservoir using the markings on the cylinder.
 - Use the 5 oz. and 1 oz. marks on the reservoir cylinder to confirm the starting volume.
 - Place the Reservoir Marker Ring to mark the correct liquid level AFTER treatment. This will indicate when to stop pumping ThermaClear® into the unit.



Step 3 - Treatment Process:

- Pump TAttach the charging hose to the low-pressure service port (Schrader valve) of the A/C unit.
- Leave the bleeder valve on the pump reservoir cap open

- Open the valve on the hose and pump the correct volume of ThermaClear® DX into the unit.
 - Each pull draws a fixed volume from the reservoir, and each push injects the same volume.
 - Carefully track the liquid level and stop pumping when the level reaches the marker ring.
 - **WARNING:** The pump handle should depress with medium-firm pressure. If the handle will not depress under force, stop and verify all connections/valve position to avoid pump damage.
- Close the valve immediately after reaching the desired treatment volume.
- Disconnect the hose and use a shop towel to clean up any drips during disconnection.
- Re-seal all low-pressure service ports used for treatment.



Step 4 - Recover Unused Treatment:

- Place the charging hose inside the original ThermaClear® DX container.
- Open the valve and pump out all remaining Treatment.
- Close the valve and use a shop towel to remove drips from the end of the hose.
- Use nitrogen gas (N₂) to displace air from the treatment container before resealing.
- Confirm that the pump reservoir cap, charging hose valve, and Treatment Container are all closed.



Step 5 - Post-Treatment Checklist:

- Run the cooling system for 10 minutes before returning to normal operation
- Record circuit size, treatment amount, observations, and the time and date of treatment.
- Re-install and secure all access panels that were removed during treatment.
- Affix a ThermaClear® treatment sticker by the name plate of each treated unit.
- Notify the appropriate parties that treatment has been completed successfully.



Spill Cleanup and Safety Procedures:

- Contain spills immediately with absorbent materials.
- Place ThermaClear-soaked absorbent into a heavy-duty plastic bag or oil-resistant container.
- Clean remaining residue with an appropriate degreaser or cleaning solution.
- Refer to the ThermaClear® SDS and follow local regulations for disposal of saturated materials.
- Never dispose of ThermaClear® down any drains, sinks, sewers, or into local waterways.
- For skin contact, wash immediately with soap and water.
- For eye contact, flush with water and seek medical attention.

