

Technical Bulletin #260401

HVAC Condensate Drain Lines

CPVC products like FlowGuard Gold® pipe and fittings are an excellent, cost-effective condensate drainage system commonly used in residential, commercial, and institutional applications. However, there are specific precautions that installer must implement to ensure the system's long-term viability.

Prior to installation, check with the manufacturer of the HVAC equipment to confirm the compatibility of residual oils and refrigerants with ABS, CPVC, or PVC.



Photograph depicting a typical failure in a condensate-drain application

Exercise caution when using FlowGuard Gold® CPVC pipe or fittings for HVAC- or refrigerant-condensate lines. Some refrigerant systems contain oils that may damage CPVC products. In HVAC applications, some heat exchangers or condenser coils may contain residual oils from the manufacturing process which can cause cracking of CPVC. Caution should be exercised when installing CPVC in combination with hot water/air heating units or as condensate-drain lines from air conditioning systems. Confirm the compatibility of CPVC with residual oils prior to installation. The interior of heat exchangers or the exterior of condenser coils should be thoroughly flushed with a mild ionic detergent solution (2% Trisodium Phosphate in water, for example) to remove incompatible oils prior to piping installation. A rinse with clean water to completely clean the system is advisable as a final flushing. Some refrigerant systems contain oils, commonly referred to as poly olester (POE) oils that may damage ABS, CPVC, and PVC and such exposure may result in pipe or fitting failure regardless of cleaning or flushing the system.

Charlotte Pipe and Foundry will not accept responsibility for failure resulting from exposure to compressor oils in HVAC - or refrigerant-condensate lines.