# Plumbing Inspector's Checklist for CPVC Piping Systems

## Components

- CTS Tube & Fittings ASTM D 2846, NSF 14* (Tan), ½-inch through 2 inch.
- IPS Pipe ASTM F 441/Fittings ASTM F 437 & F 439 Sch 80 NSF 14*
- Primer ASTM F 656 NSF 14* (Primer not required for One-Step Cement).
- Solvent Cement ASTM F 493, NSF 14*
- Cement used in typical plumbing should be orange or yellow in color
- Transition fittings; only those designed and recommended for CPVC, including brass ferrule compression connections.

*NSF –PW mark on product indicates conformance with NSF 14.

## Joining

- Tube/Pipe ends free of cracks or splits.
- Ends cut square and free of interior or exterior burrs.
- Joint surfaces clean and dry. Joints solvent welded according to PPFA's *CPVC Installation Handbook* instructions.
- Wipe off excess solvent cement once joint is made.

## Underslab Installations

- Pipe embedded in sand or clean soil. Backfill free of sharp rocks or other harmful materials.
- The completed system tested two hours before pouring cement slab.
- Before testing, allow all joints to cure sufficiently. Refer to the curing table found under "Testing."
- Stub ups protected by ½-inch foam insulation, or other protective sleeving, where they penetrate the slab and at construction points.

## General Recommendations

- Supports, hangers, and straps free of burrs. Use hangers that allow for expansion/contraction of the piping.
- Hanger support spacing should be per manufactures recommendations.
- Vertical runs supported at floor level and mid-story or per engineer's design.
- CPVC passing through metal studs must be protected with isolators.
- CPVC permanently exposed to sunlight must be protected with a water-based latex paint.

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- Test with water at line pressure (150 psi max.).
- Testing for a minimum of 1 hour is recommended.
- CPVC piping shall not be tested with compressed air.
- After testing, thoroughly flush the system for at least 10 minutes to remove any residual traces of solvent cement components.

## Limitations

- CPVC shall not be installed downstream of any commercial or industrial sized instantaneous type water heater. Use of CPVC pipe with residential gas or electric tankless heater units with proper regulation is acceptable. Check local codes.
- CPVC shall not be located within 6 inches of a single wall gas appliance, vent pipe, and/or lighting fixture.
- CPVC piping shall not be used for compressed gases and shall not be tested with compressed air.
- Only thread sealants (Teflon ® tapes are preferred) recommended by CPVC fitting and sealant manufacturers should be used.
- Tubing/pipe and fittings should not be installed under stress.
- CPVC is acceptable for hot water circulating loops and T & P relief valve drain lines – check local codes.
- Check your local codes for limitations with regards to direct attachment of CPVC to hot water heaters.

## Testing

- The following cure times are recommended:

| | 1/2"-1" | 1-1/4"-2" |
|---|---|---|
| Above 60°F | 1 hour | 2 hours |
| 40 - 60°F | 2 hours | 4 hours |
| Below 40°F | 4 hours | 8 hours |

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