



## Certified Safe Alternative to Metal Plumbing Systems



All conventional metal plumbing systems corrode leaving their corrosive wastes for deposit into the water system. CPVC thermoplastic system components never corrode. Spears® EverTUFF® CTS CPVC system of fittings, pipe, supply stops, valves & solvent cement are Certified lead-free by NSF® International (NSF®) in accordance with ANSI/NSF® 61 and NSF® 372 for compliance with all State & Federal Regulations. Approved by national, state and most municipal building codes\* and listed by ICC to ASTM E84 for Flame & Smoke Characteristics of less than 25/50 for use in return air plenums (See PMG Listing No. PMG-1278 at [www.icc-es-pmg.org](http://www.icc-es-pmg.org)). Spears® CTS CPVC products are ideally suited for hot and cold water distribution systems in residential and commercial structures, as well as recreational vehicles, modular homes and mobile homes.

\*Check state and local codes.

## Full Line of CTS CPVC Solvent Cement, Fittings, Pipe, Supply Stops & Ball Valves 1/2" Through 2" Plus Supplemental IPS CPVC in 2-1/2" & Up

EverTUFF® CPVC pipe and fittings are available for most any size project using Copper-Tube-Size (CTS) CPVC in sizes 1/2" through 2". Plus, can be used with supplemental Schedule 40 and Schedule 80 CPVC Iron Pipe Size (IPS) for sizes 2-1/2" and larger. Available for use in multi-story installations where adequate design and installation practices have been utilized.

### Exceptional Corrosion Resistance

Unlike metal systems, CPVC CTS products never rust, scale, or pit, and will provide many years of maintenance-free service and extended system life.

### Energy Savings

Low heat conductivity minimizes heat loss in hot water systems.

### Higher Flow Capacity

Smooth interior walls result in lower pressure loss and higher volume than conventional metal systems.

### Lower System Costs

Lower material costs than metallic systems, combined with lighter weight and ease of installation, can substantially reduce installation cost.

### Suitable for Commercial Hot Water

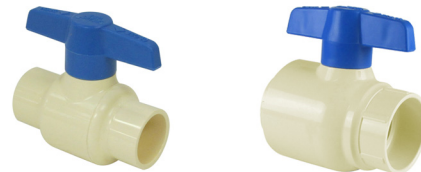
CTS CPVC products can handle fluids at service temperatures up to 180°F (82°C).

### CTS CPVC 1/4-Turn Angle Supply Stop



Used with plumbing fixtures to terminate and control hot and cold water supply, Angle Supply Stops NSF® Certified to ASTM F 1970 for use in ASTM D 2846 Hot & Cold Water Distribution Systems. All Supply Stops are rated to 100 psi @ 180°F. Available in 1/2" CTS Socket, Spears® patented Special Reinforced (SR) and 1/2" FIPT female thread inlets. Choose 1/2" and 3/8" NPT male thread outlets or 1/2" and 3/8" Compression male thread outlets for connection to conventional Female NPT or Female Compression faucet or toilet supply lines with captive seals.

### CTS CPVC Ball Valves



**Residential**

**Commercial**

Spears® EverTUFF® Copper-Tube-Size Ball Valves feature a one-piece design that never requires adjustment. EPDM O-ring seal and PTFE Seats enable bubble-tight shut off. Choose Heavy Commercial design manufactured to ASTM F1970 for use in ASTM D 2846 Hot & Cold Water Distribution Systems or Economical Residential design. Rated to 100 psi maximum internal pressure at 180°F and NSF® Certified Lead-Free for use in potable water systems.

***Progressive Products From Spears® Innovation & Technology***



## CTS CPVC Technical CTS Fittings & Valves Overview

**Spears® EverTUFF® Exclusive Specialty Fittings - All Lead-Free...**

### CTS CPVC Caps & Couplings



- Uses **NO Solvent Cement**
- Permanent Connection
- Excellent for Repairs & Transition to Copper Systems
- NSF® Certified Lead-Free

### Patented Special Reinforced (SR) Plastic Threaded Transition Fittings



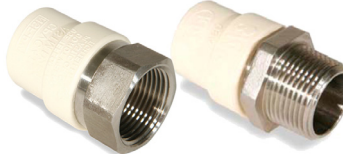
- Eliminates Split Threads
- Eliminates Leaks Associated with Over Tightening
- Eliminates MIC, Electrolytic & Soil Chemistry Corrosion
- NSF® Certified Lead-Free

### Gasket Sealed Brass-Threaded Transition Fittings



- Eliminates Radial Stress
- Requires NO Thread Sealants
- Eliminates Sealant Incompatibility
- NSF® Certified Lead-Free

### Stainless Steel Threaded Transition Fittings



- Excellent for Transitions to Metal Systems
- NSF® Certified Lead-Free

### Lead-Free Brass Compression Unions



- NSF® Certified Lead-Free
- Transitions to Copper Tubing and Other Metal Systems

## Spears® EverTUFF®, The Full-Service CTS CPVC Product Line...

### Application

Spears® EverTUFF® Copper-Tube-Size (CTS) products are manufactured from chlorinated polyvinyl chloride (CPVC) for use with SDR-11 piping systems of CTS outside diameter in hot and cold water distribution systems in nominal pipe sizes 1/2" through 2". CTS CPVC products can be used in conjunction with Spears® supplemental Schedule 40 and Schedule 80 CPVC Iron-Pipe-Size (IPS) pipe and fittings for sizes 2-1/2" through 12" in commercial multi-story installations. Check state and local codes for application and restrictions.

### Working Pressure

Spears® EverTUFF® CTS CPVC fittings, pipe and valves have a continuous working pressure rating of 100 psi at 180°F, unless designated for cold water use only.

### Conformance Standards

Spears® EverTUFF® CTS CPVC fittings, pipe, valves and solvent cement conforms to ASTM D 2846 Specification for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Hot and Cold Water Distribution Systems. Solvent Cement meets ASTM F 493.

### Product Certification

Spears® EverTUFF® CTS CPVC piping systems are certified by NSF® International (NSF®) to ASTM D 2846 for use in Hot and Cold Water Distribution Systems, to the Uniform Plumbing Code (NSF® U.P.Code) and for use in potable water service. All Spears® EverTUFF® CTS CPVC products are NSF® certified lead-free in accordance with ANSI/NSF® Standard 61 and 372 for compliance with all State & Federal regulation. All Spears® EverTUFF® CTS CPVC pipe and fittings are Listed by ICC to ASTM E84 for flame spread/smoke development of less than 25/50.

### Sample Engineering Specifications

All fittings, pipe, supply stops and valves shall be EverTUFF® Copper-Tube- Size (CTS) constructed from CPVC 4120 with minimum Cell Classification of 23447. All CTS CPVC products shall be produced to applicable requirements of ASTM D 2846 and rated to 100 psi at 180°F, unless specifically designated for cold water service only. Solvent cement shall be produced to applicable requirements of ASTM D 2846 and ASTM F 493. All supply stops shall be 1/4 turn angle or straight pattern CTS CPVC with NPT or Compression male thread outlets. All ball valves shall be CTS CPVC sealed unit type with EPDM O-ring and double stop Polypropylene handle in either Commercial or Residential design. All CTS CPVC products shall be certified lead-free for potable water use by NSF® International in accordance with NSF® 61 and NSF® 372. All pipe and fittings shall be Listed by ICC for compliance with ASTM E84 Surface Burning Characteristic with flame spread/smoke development of less than 25/50 for use in return air plenums, as manufactured by Spears® Manufacturing Company.