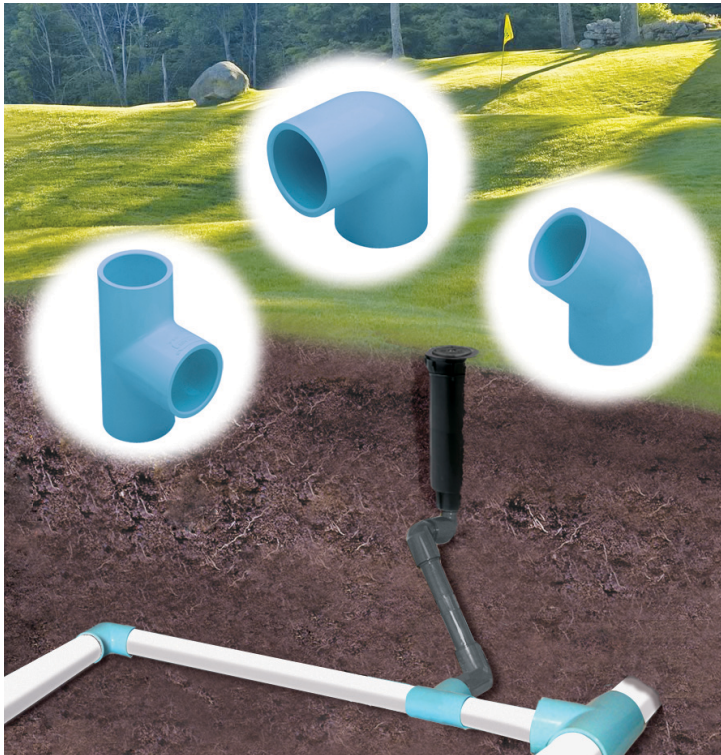




***Fittings Engineered for Golf Course & Turf Applications  
Patented Design – Proven Performance  
Lifetime Warranty***



Spears® EverTUFF® TURF™ Fittings are specifically engineered to meet the demanding system requirements of today's golf course and turf irrigation applications. This patented design provides greater surge resistance than Schedule 80 fittings for the most reliable turf fittings on the market. Produced in a distinct Blue color injection molded from specially balanced PVC materials or optional CPVC Gray, these performance fittings are Class 315 rated (315 psi) and available in IPS sizes 1" through 4".

**Design Tested**

EverTUFF® TURF™ Fittings have been computer engineered through Finite Element Analysis (FEA) studies for optimum material placement, strength and performance. Spears® Research & Development testing has shown the resulting design to best handle proper solvent cementing and correctly applied cyclic conditions of modern turf irrigation systems.

**Full Class 315 Pressure Rating**

Unlike the varying pressure ratings assigned to PVC Schedule piping, the EverTUFF® TURF™ Class 315 designation maintains a uniform 315 psi pressure rating for all fitting sizes.

**Produced in Standard Configurations**

EverTUFF® TURF™ Fittings are produced in the basic configurations including Tees, Reducing Tees, 90° Elbows and 45° Elbows in sizes 1" through 4".

**Optional CPVC for Higher Temperatures**

Where heat and excess temperature can be a major concern, EverTUFF® TURF™ Fittings are available in higher temperature CPVC gray material.

**NSF Certified**

EverTUFF® TURF™ Fittings are NSF Certified for use in potable water systems and are naturally lead-free.

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

## The Performance Difference

Spears® EverTUFF® TURF™ Fittings form a class of their own by merging different design parameters for conventional fittings with special PVC material selection. Combined with engineered variable wall thickness, minimum Schedule 80 socket lengths and availability in both PVC and optional CPVC material construction, this has collectively produced a unique, highly surge resistant line of fittings.

Over the years, conventional fitting material development has moved toward easier processing PVC compounds. Resulting compounds yield excellent performance with broader processing windows. However, this ease in processing comes with a general increase in the effects of solvents found in cements. At the same time, commercial solvent cements have been made more aggressive. The result is an increased material softening during initial installation. Spears® Research & Development activities have developed the use of balanced PVC compounds to better meet the specific needs of the commercial turf irrigation industry.

Combined with Spears® unparalleled processing capability, EverTUFF® TURF™ Fittings provides a true difference in performance that is surpassed by none. In fact, independent testing has shown Spears® EverTUFF® TURF™ fittings to have over 50% greater cyclic resistance than any other solvent cement weld fitting in the industry! We are so confident in this fitting that it carries a Lifetime Warranty!

## Selection Guide for Choosing PVC or High Temperature CPVC Materials

Heat can play a significant part in performance of any piping system. As with all thermoplastic products, pressure rating reduction is required as temperatures increase. This can apply to primary and secondary heat sources, such as basic ambient temperature and absorbed temperature from solar exposure or solar heated water supply sources. The following table shows applicable Class 315 (315 psi) pressure de-rating as temperatures elevate.

PVC & CPVC Class 315 Pressure Ratings at Elevated Temperatures, PSI												
Application Temperature	73° F (23° C)	90° F (32° C)	100° F (38° C)	110° F (43° C)	120° F (49° C)	130° F (54° C)	140° F (60° C)	150° F (66° C)	160° F (71° C)	170° F (77° C)	180° F (82° C)	200° F (99° C)
PVC	315	236	195	161	126	98	69	--	--	--	--	--
CPVC	315	287	258	227	205	180	158	132	126	91	79	62

**Maximum Service Temperature: PVC = 140° F; CPVC = 200° F**

### NOT FOR USE WITH COMPRESSED AIR OR GAS

See Spears® Limited Lifetime Warranty for additional warranty details.

Plastic piping systems should be engineered, installed, operated and maintained in accordance with accepted standards and procedures for plastic piping systems. It is absolutely necessary that all design, installation, operation and maintenance personnel be trained in proper handling, installation requirements and precautions for installation and use of plastic piping systems before starting.



**SPEARS® MANUFACTURING COMPANY • CORPORATE OFFICE**

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