

## Sample Engineering Specification EverTUFF<sub>®</sub> CPVC Marine Schedule 40 & 80 Pipe & Fittings

Spears® EverTUFF® CPVC Schedule 40/80 pipe and Schedule 80 fittings shall be manufactured by Spears® Manufacturing Company in the U.S.A. from a Type IV, Grade I Chlorinated Polyvinyl Chloride (CPVC) compound with a Cell Classification of 23447 per ASTM D1784 in sizes 1/2" through 12". NOTE: Spears® EverTUFF® marine schedule 80 pipe & fittings in sizes ½" through 1-1/4" is suitable for use is vacuum flush sanitary piping, black & gray water systems, drains, sanitary and vent applications. The pipe shall be manufactured in strict compliance to ASTM F441, consistently meeting the quality assurance test requirements of this standard. All Spears® EverTUFF® pipe shall be manufactured and immediately wrapped for protection. The pipe shall be provided with plain ends in 20-foot cut lengths. Fittings shall be manufactured in strict compliance to ASTM F439, consistently meeting the quality assurance test requirements of this standard. All Spears® EverTUFF® fittings shall be provided in suitable labeled cartons for protection.

All Spears® EverTUFF® CPVC marine schedule 40/80 pipe & schedule 80 fittings shall be certified by NSF International for potable water applications and marked accordingly.

All EverTUFF® CPVC Schedule 40/80 pipe and Schedule 80 fittings shall be approved by the United States Coast Guard, meet the low flame spread requirements and smoke and toxicity requirements of the IMO 2010 FTP Code Annex 1. Parts 2 and 5, and may be installed in accommodation, service and control spaces without meeting the additional requirements of Title 46 CFR 56.60-25(a) (2) as manufactured by Spears® Manufacturing Company.

All EverTUFF® CPVC Schedule 40/80 pipe and Schedule 80 fittings in sizes ½" through 12" shall be approved by the American Bureau of Shipping (ABS) for use in non-essential applications including fresh water, sea water, potable water and brine in services requiring no fire endurance testing or electrical conductivity testing. Piping shall be used in non-hazardous areas only. All EverTUFF® CPVC Schedule 40/80 pipe and Schedule 80 fittings shall meet IMO 2010 FTP Code Annex 1. Parts 2 and 5.

Joining method for pipe and fittings shall be a two-step solvent cement and primer. Solvent cement shall be specially formulated and manufactured in accordance with ASTM F493. Primer shall meet ASTM F656. All pipe, fittings, and cement shall be supplied together as a complete system with a Limited Lifetime Warranty, as EverTUFF® CPVC Marine Pressure System manufactured by Spears® Manufacturing Company.

All EverTUFF® CPVC Schedule 40/80 pipe and Schedule 80 fittings in sizes ½" through 12" shall meet the Transport Canada Vessel Fire Safety Regulations. Products meet the requirements of Annex I of the IMO 2010 FTP Code (Part 2 Smoke And Toxicity, and Part 5 Surface Flammability) required by the Vessel Fire Safety Regulations, Section 114 (Smoke Generation Potential and Toxicity) and Section 226 (Plastic Piping).

All EverTUFF® CPVC Schedule 40/80 pipe and solvent cement (Marine-24) shall be GREENGUARD GOLD certified to UL 2818 by Underwriters Laboratories.