



Confirmation of Product Type Approval

Company Name: SPEARS MANUFACTURING COMPANY

Address: 15853 OLDEN STREET, SYLMAR, CA, United States, 91342

Product: Thermoplastic Pipe, Fittings and Joints

Model(s): OceanTUFF™ (aka LabWaste®) Pipe and Fittings

Endorsements:

Certificate Type	Certificate Number	Issue Date	Expiry Date
Product Design Assessment (PDA)	20-2053063-PDA	16-NOV-2020	15-NOV-2025
Manufacturing Assessment (MA)	21-4588822	08-JAN-2021	09-FEB-2026
Product Quality Assurance (PQA)	NA	NA	NA

Tier

3 - Type Approved, unit certification not required

Intended Service

Marine & Offshore applications for non-essential systems including black water, gray water, vacuum flush sanitary piping, vents and drains in services requiring no fire endurance testing or electrical conductivity. Piping to be used in non-hazardous areas only. Note: Spears® EverTUFF® Marine schedule 80 pipe & fittings in sizes 1/2" through 1-1/4" are suitable for use in combination with Spears® OceanTUFF™ CPVC Drainage System in sizes 1-1/2" through 12" if required, for vacuum flush sanitary piping, Black & Gray water systems, drains, sanitary and vent applications.

Description

OceanTUFF™ CPVC SCH40 Pipe and Drainage Fittings

Sizes: 1-1/2" through 12"

Ratings

See "pdf" attachment for a Pressure Rating Table and the de-rating factors for higher temperatures.

Service Restrictions

1. Unit Certification is not required for this product. If the manufacturer or purchaser request an ABS Certificate for compliance with a specification or standard, the specification or standard, including inspection standards and tolerances, must be clearly defined.
2. Not to be used in fire main or areas classified as "hazardous" in accordance with 4-8-4/27 of the Marine Vessels Rules and 4.3.6 of the Mobile Offshore Units Rules.
3. This material has not been tested for fire endurance and therefore can only be used in services/locations indicated as 0, no fire endurance testing required, in accordance with Marine Vessels Rules 4-6-3/Table 1 and Mobile Offshore Units Rules 4-2-2/Table 2.

4. This material is not considered electrically conductive, and therefore cannot be used in hazardous areas or with nonconductive fluids in accordance with Marine Vessels Rules 4-6-3/5.15 and Mobile Offshore Units Rules 4-2-2/7.5.8.
5. Where plastic pipes are to be utilized for any installation within tanks or other locations which may be subject to a vacuum condition inside the pipe or a head of liquid on the outside of the pipe, external pressure is to be considered. The pipe is to be designed for an external pressure of not less than the sum of the pressure imposed by the maximum potential head of liquid outside the pipe plus full vacuum of 14.5 psi (1 bar) inside the pipe. The maximum external pressure for a pipe is to be determined by dividing the collapse test pressure by a safety factor of 3. This collapse pressure may be verified experimentally or determined by a combination of testing and calculation methods. These details are to be submitted to ABS before installation of the pipe, for ABS approval on a case by case basis.
6. The collapse testing has been done for 6" and below (See attached). Sizes above 6" were not collapse tested; therefore, for sizes above 6" details for the collapse pressure such as experimental test or calculations are to be submitted before installation of the pipe.
7. Not to be used for compressed air or gas.
8. Installers are to be ASME B31.3 marine qualified.
9. To be used with OceanTUFF™ one-step cement.
10. Detailed drawings of piping system for each application on board are to be submitted for review.

Comments

1. The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product.
2. Additional Guidance on Hanger Spacing, Pressure De-rating as Temperature Increases and other Data available on additional information link.
3. Fittings with Metal Inserts or added Fiber Reinforcement may have other limitations.
4. Piping made from this marine compound has passed IMO FTP Code Annex 1, Part 2 and Part 5, 2012 Ed.
5. Please confirm flame spread test acceptability with the flag administration.
6. This product has a USCG Approval No. 164.141/45/0 Dated 12 September 2016 and Expires 12 September 2021.
7. All pipes and fittings are to be permanently marked with identification including pressure rating, design standard to which the pipe or fitting is manufactured, and the material with which the pipe or fitting is made.

Notes, Drawings and Documentation

Drawing No. SWRI Test Report 201392, SWRI Test Report 201392, Revision: -, Pages: 1

Term of Validity

This Product Design Assessment (PDA) Certificate remains valid until 15/Nov/2025 or until the Rules and/or Standards used in the assessment are revised or until there is a design modification warranting design reassessment (whichever occurs first).

Acceptance of product is limited to the "Intended Service" details prescribed in the certificate and as per applicable Rules and Standards.

This Certificate is valid for installation of the listed product on ABS units which exist or are under contract for construction on or previous to the effective date of the ABS Rules and standards applied at the time of PDA issuance. Use of the Product for non-ABS units is subject to agreement between the manufacturer and intended client.

ABS Rules

The Rules for Conditions of Classification, 2020 Marine Vessels Rules:1-1-4/7.7, 1-1-A3, 1-1-A4, which covers the followings;

2020 Rules for Building and Classing Marine Vessels: 4-6-3/Table 1, 4-6-3/5.1, 4-6-3/5.3, 4-6-3/5.7, 4-6-3/5.9, 4-6-3/5.13.1, 4-6-3/7.3, 4-6-3/11.3.1, 4-6-3/9

The Rules for Conditions of Classification - Offshore Units and Structures, 2020 Mobile Offshore Units Rules: 1-1-4/9.7, 1-1-A2, 1-1-A3 which covers the following:

2020 Rules for Building and Classing Mobile Offshore Units: 4-2-2/7.5.1, 4-2-2/7.5.2, 4-2-2/7.5.4, 4-2-2/7.5.5, 4-2-2/7.5.7(a), 4-6-3/7.9

International Standards

IMO International Code for Application of Fire Test Procedures (FTP Code), Annex 1, Part 2 and Part 5, 2012 Ed.

EU-MED Standards

NA

National Standards

ASTM D1784 - 2020, Standard Classification System and Basis for Specification for Rigid Poly(Vinyl Chloride) (PVC) Compounds and Chlorinated Poly(Vinyl Chloride) (CPVC) Compounds;

ASTM F2618- 2019 for LabWaste, Standard Specification for Chlorinated Poly (Vinyl Chloride) (CPVC) Pipe and Fittings for Chemical Waste Drainage Systems;

Government Standards

USCG Approval Number: 164.141/45/0 Dated 12 September 2016 and Expires 12 September 2021;

Transport Canada, Vessel Fire Safety Regulations. Products meet the requirements of Annex I of the 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).

Other Standards

NA



A handwritten signature in black ink, appearing to read 'James J. White'.

Corporate ABS Programs
American Bureau of Shipping
Print Date and Time: 08-Feb-2021 8:38

ABS has used due diligence in the preparation of this certificate, and it represents the information on the product in the ABS Records as of the date and time the certificate is printed.

If the Rules and/or standards used in the PDA evaluation are revised or if there is a design modification (whichever occurs first), a PDA revalidation may be necessary.

The continued validity of the MA is dependent on completion of satisfactory audits as required by the ABS Rules. The validity of both PDA and MA entitles the product to receive a **Confirmation of Product Type Approval**.

Acceptance of product is limited to the "Intended Service" details prescribed in the certificate and as per applicable Rules and Standards.

This Certificate is valid for installation of the listed product on ABS units which exist or are under contract for construction on or prior to the effective date of the ABS Rules and standards applied at the time of PDA issuance. ABS makes no representations regarding Type Approval of the Product for use on vessels, MODUs or facilities built after the date of the ABS Rules used for this evaluation.

Type Approval requires Drawing Assessment, Prototype Testing and assessment of the manufacturer's quality assurance and quality control arrangements. The manufacturer is responsible to maintain compliance with all specifications applicable to the product design assessment. Unless specifically indicated in the description of the product, certification under type approval does not waive requirements for witnessed inspection or additional survey for product use on a vessel, MODU or facility intended to be ABS classed or that is presently in class with ABS.

Due to wide variety of specifications used in the products ABS has evaluated for Type Approval, it is part of our contract that; whether the standard is an ABS Rule or a non-ABS Rule, the Client has full responsibility for continued compliance with the standard.

Questions regarding the validity of ABS Rules or the need for supplemental testing or inspection of such products should, in all cases, be addressed to ABS.