



Confirmation of Product Type Approval

Company Name: GEORG FISCHER HARVEL

Address: 7777 SLOANE DRIVE, LITTLE ROCK, AR, United States, 72206

Product: Thermoplastic Pipe, Fittings and Joints

Model(s): SeaCor

Endorsements:

Certificate Type	Certificate Number	Issue Date	Expiry Date
Product Design Assessment (PDA)	21-2079720-PDA	15-JAN-2021	14-JAN-2026
Manufacturing Assessment (MA)	17-NO3322526	27-APR-2017	18-MAY-2022
Product Quality Assurance (PQA)	NA	NA	NA

Tier

3 - Type Approved, unit certification not required

Intended Service

Marine & Offshore Application - Non-essential systems including fresh water, seawater, potable water, gray water, black water, vacuum flush sanitary piping, vents, drains, and brine services where no fire endurance testing or electrical conductivity is required.

Description

SeaCor CPVC Schedule 80 pipe and fittings diameters ½" to 12"

Ratings

Temperature range 32°F (0°C) to 210°F (99°C)

Max pressure rating for Schedule 80 CPVC Pipe at 73°F (23°C):

1/2" - 680 psi (46.9 bar);

3/4" - 550 psi (37.9 bar);

1" - 505 psi (34.8 bar);

1 1/4" - 415 psi (28.6 bar);

1 1/2" - 378 psi (26.0 bar);

2" - 323 psi (22.3 bar);

2 1/2" - 340 psi (23.4 bar);

3" - 300 psi (20.6 bar);

- 4" - 260 psi (17.9 bar);
- 6" – 223 psi (15.3 bar).
- 8" – 198 psi (13.6 bar);
- 10" – 188 psi (13.0 bar);
- 12" – 183 psi (12.6 bar).

Please refer to attached table for derated pressures.

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. 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 IACS P4 Table 1.
3. This material is not considered electrically conductive and therefore cannot be used in hazardous areas, or with non-conductive fluids in accordance with IACS P4 4.6.5.2
4. Joining techniques are to be in accordance with the manufacturer's installation guidelines as per EU MR TR - Plastic Piping Systems (Components) 1.d (a).
5. Pipes are to be permanently marked with manufacturer's name, type designation, size, pressure ratings, design standards, date of fabrication, and serial number as per EU MR TR - Plastic Piping Systems (Components) section 4.
6. 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 three (3). The collapse test pressure for 6" and below is 349 psi (24 bar). Sizes above 6" were not collapse tested; therefore, for sizes above 6" details for collapse pressure such as experimental tests or calculations are to be submitted before installation of the pipe as per EU MR TR - Plastic Piping Systems (Components) 2.a.i.2(b) and 2.b.i(c).
7. Piping made from this marine compound has passed IMO Res. A.753 (18) and IMO FTP Code Annex 1, Part 2 for Low Smoke and Toxicity and Part 5 test for surface flammability meeting the flame spread testing requirements and may therefore be used in spaces other than open decks and within tanks, voids, cofferdams, pipe tunnels, and ducts that are subject to fire endurance and electrical conductivity restrictions.
8. Installers are required to be ASME B31.3 qualified.
9. To be used with SeaCor Marine Cement and Primer.

Comments

The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product.

See EU Mutual Recognition Certificate, 21-2079720-PDA-EUMR-DE

This product has a USCG Approval certificate 164.141/36/0.

Notes, Drawings and Documentation

Identifying Data: SwRI Test Report Project Nos. 01.16052.01.647c (10 sheets) and 01.16052.01.647d (11 sheets) dated 26 October 2011 and 28 December 2011;

Follow-up Procedure Document No. 01.025000.02.198 Rev. 1 dated January 2012;

USCG Certificates 16714/164.141/36 & 37 dated 26 February 2020 (Expires: 12 November 2024);

Test Reports: SwRI Product No. 01.19579.02.038a Dated 13 June 2014 and SwRI Product No. 01.19579.02.038b Dated 13 June 2014 – Fire Performance evaluation in accordance with part 5, test for surface flammability, test for surface materials, and primary deck coverings, of Annex 1 of the 2010 IMO FTP Code;

SwRI Product No. 01.17791.04.030a Dated 11 Sep 2013 – ASTM D635 Standard Test Method for Rate of Burning and/or Extent and Time of Burning of Plastics in a Horizontal Position;

Georg Fischer Harvel Lab Report No. TR1505 dated 23 Nov 2015.

Term of Validity

This Product Design Assessment (PDA) Certificate remains valid until 14/Jan/2026 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, 2021 Marine Vessel Rules:1-1-4/7.7, 1-1-A3, 1-1-A4, which covers the followings;

2021 Rules for Building and Classing Marine Vessel: 4-6-3/Table 1, 4-6-3/1, 3, 5.1, 5.3, 5.7, 5.9, 5.13.1, 7.3, 9, 11.3;

The Rules for Conditions of Classification - Offshore Units and Structures, 2021 Mobile Offshore Units Rules: 1-1-4/9.7, 1-1-A2, 1-1-A3 which covers the following:

2021 Rules for Building and Classing Mobile Offshore Units: 4-2-2/7.1, 7.3, 7.5.1, 7.5.2, 7.5.4, 7.5.5, 7.5.7, 7.5.9, 7.9, 7.11, 7.17, 7.19;

International Standards

IMO Resolution A.753(18) as amended by Resolution MSC.313(88) and as amended by Resolution MSC.399(95) adopted on 5 June 2015;

IMO Resolution A.653(16);

2010 FTP Code - 2012 Edition (Includes 2015 Corrigenda) Annex 1, Parts 2 and 5;

EU-MED Standards

NA

National Standards

46CFR Subchapter F; ASTM D635-2018; NSF/ANSI 14-2019; NSF/ANSI/CAN 61-2020; ASTM F441-2020; ASTM D1784-2020; ASTM D2855-2020; ASTM F1970-2019; ASTM F437-2015; ASTM F439- 2019;

Government Standards

Transport Canada, Vessel Fire Safety Regulations. Products meet the requirements of Annex 1 of the 2010 FTP Code - 2012 Edition (Includes 2015 Corrigenda) (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

EU Mutual Recognition Technical Requirements (TR) for Plastic Piping Systems (Components) Version 0.3 dated 01 April 2016;

IACS UR P4 (Rev. 5) dated December 2018



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

Corporate ABS Programs
American Bureau of Shipping
Print Date and Time: 25-Mar-2021 8:28

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.