



## Confirmation of Product Type Approval

**Company Name:** GEORG FISCHER HARVEL

**Address:** 7777 SLOANE DRIVE AR 72206 United States

**Product:** Thermoplastic Pipe, Fittings and Joints

**Model(s):** SeaDrain® White

<b>Certificate Type</b>	<b>Certificate Number</b>	<b>Issue Date</b>	<b>Expiry Date</b>
Product Design Assessment (PDA)	20-HS1949469-PDA	28-JAN-2020	22-JAN-2025
Manufacturing Assessment (MA)	17-NO3322526	27-APR-2017	18-MAY-2022
Product Quality Assurance (PQA)	NA	NA	NA

### **Tier**

3

### **Intended Service**

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

### **Description**

SeaDrain® White Schedule 40 pipe and fittings diameters 1 1/2" to 6"

### **Ratings**

Max pressure rating for Schedule 40 PPFR Pipe at 73°F (23°C): 14.5 psi (1.0 bar).

For no pressure applications, maximum temperature 212°F (100°C).

### **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. This product has been flame spread tested in accordance with ASTM D635; accordingly, it should be verified that this test is acceptable to the vessel's flag state prior to installation.
5. 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)

6. 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.

7. 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 4" Sch. 40 and below is 630 psi (43.4 bar). Sizes above 4" were not collapse tested, therefore, for sizes above 4" 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).

### Comments

1. The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product.
2. See EU Mutual Recognition Certificate 20-HS1949469-EUMR-TAC attached.

### Notes, Drawings and Documentation

SWRI Test Report 01.24921.01.105 Fire Performance Evaluation conducted in accordance with ASTM D635-18 Standard Test Method for rate of burning and or extent and time of burning of plastics in a horizontal position, dated 04 December 2019;

NSF International Letter dated 04 October 2019, confirmation that PM12165 represents both Fuseal and GSR or GF Seadrain;

DCC PM12165 NSF ANSI Standard 14 - Plastics Piping System Components and Related Materials - Added Seadrain and Washington Material to PM1265-W0524826, dated 14 Feb 2019;

3352 Product Specification Datasheet, Revision 2 (8/19/2019);

+GF+ Preliminary SeaDrain 2020 Product Guide;

George Fischer SEADRAIN WHITE IACS - Compliance Statement dated 9 January 2020;

NSF/ANSI Standard 14 Product and Service Listings;

Documents from 15-HS1456205-1-PDA

Supporting Data: Manufacturers Catalog - Corrosive Waste Piping Systems;

SwRI Test Reports Project No. 01.16052.01.647c, 01.16052.01.647d dated 26 October 2011 and 28 December 2011;

Follow-up Procedure Document No. 01.025000.02.198 Rev. 01 dated January 2012;

Previous Approval: 05-HS118095A-4-PDA dated 17 January 2014;

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

### Term of Validity

This Product Design Assessment (PDA) Certificate remains valid until 22/Jan/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**

Rules for Conditions of Classification, Part 1 - 2019, 1-1-4/7.7, 1-1-A3, 1-1-A4, which covers the following:

Marine Vessels Rules (2019): 4-6-3/Table 1, 4-6-3/1, 4-6-3/3, 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, 4-6-3/9, 4-6-3/11.3;

Offshore Support Vessels (2019): 4-6-3/1, 4-6-3/3, 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, 4-6-3/5.17, 4-6-3/9, 4-6-3/11, 4-6-3/17, 4-6-3/19;

International Naval Ships (2019): 4-6-3/1, 4-6-3/3, 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, 4-6-3/5.17, 4-6-3/9, 4-6-3/11, 4-6-3/17, 4-6-3/19;

Vessels for Service on Rivers and Intracoastal Waterways (2019): 4-3-2/7.1, 4-3-2/7.3, 4-3-2/7.5.1, 4-3-2/7.5.2, 4-3-2/7.5.4, 4-3-2/7.5.5, 4-3-2/7.5.7, 4-3-2/7.5.9, 4-3-2/7.9, 4-3-2/7.11, 4-3-2/7.17, 4-3-2/7.19;

Rules for Conditions of Classification, Part 1 - 2019, Offshore Units and Structures 1-1-4/7.7, 1-1-A3, 1-1-A4, which covers the following:

Mobile Offshore Drilling Units (2019): 4-2-2/7.1, 4-2-2/7.3, 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, 4-2-2/7.5.9, 4-2-2/7.9, 4-2-2/7.11, 4-2-2/7.17, 4-2-2/7.19;

Mobile Offshore Units (2019): 4-2-2/7.1, 4-2-2/7.3, 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, 4-2-2/7.5.9, 4-2-2/7.9, 4-2-2/7.11, 4-2-2/7.17, 4-2-2/7.19;

Accommodation Barges, 2014 (Updated November 2016): 8/7;

Floating Production Installations (2019): 5A-1-6/1.1, 5B-1-4/1, 5B-2-6/1, 5B-3-6/1;

Liftboats (2019): 4-5-2/7.1, 4-5-2/7.3, 4-5-2/7.5.1, 4-5-2/7.5.2, 4-5-2/7.5.4, 4-5-2/7.5.5, 4-5-2/7.5.7, 4-5-2/7.5.9, 4-5-2/7.11, 4-5-2/7.17, 4-5-2/7.19;

Portable Accommodation Modules (2019): 2/17;

Rules for Conditions of Classification, Part 1 - 2019, High-Speed Crafts 1-1-4/7.7, 1-1-A3, 1-1-A4, which covers the following:

High Speed Craft (2019): 4-4-2/7.1, 4-4-2/7.3, 4-4-2/7.5.1, 4-4-2/7.5.2, 4-4-2/7.5.4, 4-4-2/7.5.5, 4-4-2/7.5.7, 4-4-2/7.5.9, 4-4-2/7.9, 4-4-2/7.11, 4-4-2/7.17, 4-4-2/7.19;

High Speed Naval Crafts (2019): 4-6-3/1, 4-6-3/3, 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, 4-6-3/9, 4-6-3/11, 4-6-3/17, 4-6-3/19;

### **International Standards**

NA

### **EU-MED Standards**

NA

### **National Standards**

ASTM D635, 2018 (Flame Spread),

ASTM F1412 - 2016,

ASTM D3311-2017,

ASTM D4101-2017e1

### **Government Standards**

NA

### **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 blue ink, appearing to read "James J. White".

Corporate ABS Programs  
American Bureau of Shipping  
Print Date and Time: 03-Feb-2020 7:38

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.