



Confirmation of Product Type Approval

Company Name: DANFOSS POWER SOLUTIONS II, LLC

Address: 1225 WEST MAIN STREET VAN WERT OH 45891 United States

Product: Non-Metallic Flexible Hose

Model(s): 2651

Endorsements:

Certificate Type	Certificate Number	Issue Date	Expiry Date
Product Design Assessment (PDA)	23-2463652-PDA	02-NOV-2023	01-NOV-2028
Manufacturing Assessment (MA)	23-6055863	23-OCT-2023	22-OCT-2028
Product Quality Assurance (PQA)	NA	NA	NA

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3 - Type Approved, unit certification not required

Intended Service

Marine and Offshore Application: Fuel Oil, Lubricating Oil, Hydraulic Fluid, Water & Air.

Description

Nitrile Rubber inner tube, Polyester inner braid, single wire braid reinforcement and chloroprene rubber cover.

Ratings

Maximum Working Pressure range: 24 Bar (350 psi) to 207 Bar (3000 psi)

Sizes for Aeroquip model 2651 - 4 to 40

Design Temperature range: -40 deg C to 100 deg C

For Air not to exceed 71 deg 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. Flexible hose are not acceptable in high pressure fuel oil injection systems.
3. Flexible hose assemblies are not applicable to hoses intended to be used in fixed fire extinguishing system.

Comments

1. The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product.
2. For installation details, please refer to Marine Vessel Rules 4-6-2/5.7.4.
3. Flexible hose assemblies are to be complete with factory assembled end fittings or factory supplied ends installed in accordance with manufacturer's procedures in accordance with Marine Vessel Rules 4-6-2/5.7.3(b).
4. Flexible hoses are to be permanently marked by the manufacturer with the following details as per Marine Vessel Rules 4-6-2/5.7.6:
 - a) Hose manufacturer's name or trademark.
 - b) Date of manufacture (month/year)
 - c) Designation type reference
 - d) Nominal diameter
 - e) Pressure rating
 - f) Temperature rating

Notes, Drawings and Documentation

Drawing No. 2651, Aeroquip Hose, Revision: BR, Pages: 1

Drawing No. 4411, Fitting Assembly, Revision: AZ, Pages: 1

Previous PDA drawing list

2651 - AEROQUIP HOSE RUBBER COVERED ONE BRAID MEDIUM PRESSURE HYDRAULIC HOSE, Rev-BN;

2651- Hose Performance Validation for ABS, Dated 5/1/2018;

4411 - Fitting Assembly SAE 37 deg Swivel, 1503 Hose, Rev AY;

624 - Sleeve Fire Resistant, Rev-B;

IHA TEST CERTIFICATE 010-18_AQP 2651-4 - Fire Resistance of hose assemblies, dated 29/03/2018;

IHA TEST CERTIFICATE 013-18_AQP 2651-12 - Fire Resistance of hose assemblies, dated 29/03/2018;

IHA TEST CERTIFICATE 015-18_AQP 2651-40 - Fire Resistance of hose assemblies, dated 29/03/2018;

EATON TR-007914A dated 26 June 2012;

EATON TR-008211A dated 16 Aug 2012;

Term of Validity

This Product Design Assessment (PDA) Certificate remains valid until 01/Nov/2028 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

2023 Rules for Conditions of Classification: 1-1-4/7.7, 1-1-A3, 1-1-A4, which covers the following:

2023 Rules for Building and Classing Marine Vessels: 4-6-2/5.7

2023 Rules for Conditions of Classification - Offshore Units and Structures: 1-1-4/9.7, 1-1-A2, 1-1-A3, which covers the following:

2023 Rules for Building and Classing Mobile Offshore Units: 4-2-1/11.29

International Standards

ISO 15540:2016

EU-MED Standards

NA

National Standards

SAE J517 100R5 (2020)

Government Standards

NA

Other Standards

NA



A handwritten signature in dark ink, appearing to read "James W. Wilson".

Corporate ABS Programs
American Bureau of Shipping
Print Date and Time: 01-Jul-2025 5:51

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.