



Type Approval Certificate

[Flexible Cargo Hose]

Initial Approval 18 September 2008
Manufacturer Gutteling BV
Pelsertstraat 9, 3044 CH Rotterdam, Holland

Product Description Flexible Composite Hoses
Type : Multi-Oil Blue, Multi-Chem Black, Multi-Chem Green,
Multi-Chem Red, Multi-LPG White, Multi-LNG White,
Multi-Vapor Yellow

" See Appendix 1 "

Approval Condition Individual Product Certification is required.

" See Appendix 1 "

THIS IS TO CERTIFY that the above-mentioned product has been approved in accordance with the relevant requirement of this Society's Rules and / or of the recognized standards as follows.

Pt. 7, Ch. 5, Art. 511 & Ch. 6, Art. 507 of the Rules for the Classification of Steel Ships and IGC Code 5.11/ IBC Code 5.7.

This Certificate is valid until 17 September 2028

Issued at Busan, Korea on 25 September 2023



This certificate is signed electronically in accordance with IMO FAL.5/Circ.39/Rev.2. Validation and authentication of the certificate can be confirmed from "<http://e-cert.krs.co.kr>" by using the tracking No(ME23042468393) and certificate No.(RTD22716-HS001).



KOREAN REGISTER

*General Manager of
Marine & Ocean Equipment Team*

- Note :**
1. This certificate will be valid subject to complying with the approval conditions described on the certificate and/or on the Rules of this Society.
 2. This certificate will be invalid from the expiry date aforementioned unless the extension or renewal has been granted to the applicant or the manufacturer.
 3. Any significant modifications or changes in design or construction to the above product without approval from this Society will render this certificate invalid.
 4. Should the specified rules, regulations or standards be amended during the validity of this certificate, the product is to be re-approved by this Society in accordance with the requirements as amended.

Product Description and/or Approval Condition

Date of Issue : 25 September 2023

1. Product Descriptions :

Type	Nominal Size (mm)	Range of service Temp. (°C)	Max. Working Press. (bar)
Multi-Oil Blue	28 ~ 300	-20 ~ 100	7/10.5/14
Multi-Chem Black	28 ~ 300	-20 ~ 100	7/10.5/14
Multi-Chem Green	28 ~ 300	-20 ~ 100	7/10.5/14
Multi-Chem Red	28 ~ 300	-20 ~ 100	7/10.5/14
Multi-LPG White	28 ~ 250	-50 ~ 50	14/21
Multi-LNG White	28 ~ 250	-196 ~ 50	10.5
Multi-Vapor Yellow	28 ~ 300	-20 ~ 100	7

* Application : Oil, Chemical, LPG and LNG Systems

2. Approval Condition :

- 1) Before being placed in service, each new length of cargo hose produced is to be hydrostatically tested at ambient temperature to a pressure not less than 1.5 times its specified maximum working pressure but not more than two fifths(2/5) of its bursting pressure.
- 2) Hoses used for cargo transfer is to be compatible with the cargo and suitable for the cargo temperature.
- 3) Hoses should be mounted in accordance with the manufacturer's instructions.
- 4) Hoses should be marked with the following items.
 - Name of Manufacturer, Date of Manufacture and Type of Product
 - Maximum Working Pressure
 - Maximum and Minimum Service Temperature
 - Date of Hydraustatic Test
- 5) The manufacturer is to inform this Society of all kinds of alterations of the approved documents including drawings.

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