



Type Approval Certificate

This is to certify that the undernoted product(s) has/have been tested in accordance with the relevant requirements of the GL Type Approval System.

Certificate No. 86 069 - 96 HH

Company aquatherm GmbH
Kunststoff-Extrusions -und Spritzgießtechnik
Biggen 5
57439 Attendorn, GERMANY

Product Description POLYPROPYLENE PP-R PIPES and FITTINGS

Type AQUATHERM GREEN (FUSIOTHERM)
AQUATHERM BLUE (CLIMATHERM)

Environmental Category None

Technical Data /
Range of Application TECHNICAL DATA
PRODUCT DESCRIPTION
aquatherm green pipe SDR11 S (Fusiotherm SDR 11), PN10
aquatherm green pipe SDR7,4 S (Fusiotherm SDR 7,4), PN16
aquatherm green pipe SDR6 S (Fusiotherm SDR 6), PN20
aquatherm green pipe SDR7,4 MS (Fusiotherm - stabi composite SDR 7,4), PN 20
aquatherm green pipe SDR7,4 MF (Fusiotherm - faser composite SDR 7,4), PN 20

aquatherm blue pipe SDR11 S (Climatherm - SDR 11), PN10
aquatherm blue pipe SDR7,4 MF (Climatherm - faser composite SDR 7,4), PN 20
aquatherm blue pipe SDR11 MF (Climatherm - faser composite SDR 11), PN 10

Fittings
aquatherm green pipe fittings/ Fusiotherm Fittings

TECHNICAL DATA continuous on page 2.

Test Standard IMO Resolution A.753 (18) except fire endurance, toxicity and smoke generation
test: DIN 8077, 8078. ISO 15874. Flame spread test according to ASTM 635.

Documents

- Test Reports of pressure tests on pipe spools and pipes,
- Impact resistance tests on pipes carried out in 1996 and August 2008
- RINA test reports of flame spread tests
- Product catalogue E 10101, Edition 09/09


Remarks For application on passenger vessels regulations of flag state authority may have to be observed.

Valid until 2015-08-05

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File No. II.C.04

Hamburg, 2012-07-31

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Germanischer Lloyd

Hanspeter Raschle
Hanspeter Raschle

Sven Dudzus
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TECHNICAL DATA

aquatherm green pipe SDR11 S (Fusiotherm SDR 11), PN10 - 20 up to 355 mm, DN 15 to DN 300

aquatherm green pipe SDR7,4 S (Fusiotherm SDR 7,4), PN16 - 16 to 110 mm, DN 12 to DN 80

aquatherm green pipe SDR6 S (Fusiotherm SDR 6), PN20 - 16 to 125 mm, DN 10 to DN 65

aquatherm green pipe SDR7,4 MS (Fusiotherm - stabi composite SDR 7,4), PN 20 - 16mm to 110mm, DN 12 to DN 80

aquatherm green pipe SDR7,4 MF (Fusiotherm - faser composite SDR 7,4), PN 20 - 20mm to 250mm, DN 15 to DN 175

aquatherm blue pipe SDR11 S (Climatherm - SDR 11), PN10 - 20 to 125 mm, DN 15 to 100

aquatherm blue pipe SDR7,4 MF (Climatherm - faser composite SDR 7,4), PN 20 - 20mm to 32mm, DN 15 to DN 25

aquatherm blue pipe SDR11 MF (Climatherm - faser composite SDR 11), PN 10 - 32mm to 315mm, DN 25 to DN 300

The permissible working pressure subject to media temperature and service life according to product catalogue E10101.

RANGE OF APPLICATION

The aquatherm plastic piping systems of type aquatherm green pipe (FUSIOTHERM) and aquatherm blue pipe (CLIMATHERM) are type approved for piping systems of pipe class III as follows:

Potable water-, grey and black water-, hot water heating, sanitary drains (internal), sounding air pipes of water tanks or dry spaces and ballast water systems.

Approved installation locations

Within tanks, cofferdams, void spaces, pipe tunnels, ducts and further locations where fire endurance tests according to IMO Res.753(18) is not required. Refer to Rules I -1- 2 Machinery Installations, Sec. 11 B, Table 11.1 a.

Within accommodation-, service- and control spaces the pipes are to be installed behind B-class or fully closed C classed ceilings and linings.

REMARKS

The installation of the piping system is to be carried out in accordance with the instructions of the manufacturer and installation requirements of the IMO Res.753(18) respectively.

Through watertight bulkheads and fire divisions GL type approved pipe penetrations are to be used.

The application of the Fusiotherm and Climatherm piping system outside of the approved range of application is subject to special approval by Germanischer Lloyd in each individual case.

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