



Lloyd's
Register

Type Approval Certificate

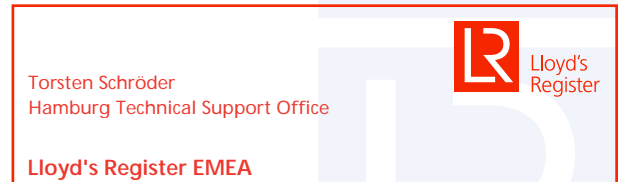
This is to certify that the undernoted product(s) has/have been tested with satisfactory results in accordance with the relevant requirements of the Lloyd's Register Type Approval System.

This certificate is issued to:

PRODUCER	GEORG FISCHER HAKAN PLASTIK BORU VE PROFIL SAN. TIC. A.S. Cerkezköy Organize sanayi Bölgesi, 3. Cadde No: 11-13 59500 Cerkezköy / Tekirdağ Turkey
DESCRIPTION	Polypropylene low noise multilayer drainage system, comprising tubes and fittings assembled with socked, spigot and rubber gasket joining.
TYPE	GF HAKAN SILENTA 3A PP
APPLICATION	For use in non-essential inboard drain piping systems, like for grey and black water. The use for penetration of watertight or fire class divisions is excluded from this Type Approval.
STANDARD	EN 1451-Plastics piping systems for soil and waste discharge (low and high temperature) within the building structure – Polypropylene (PP) Part 1: Specifications for pipes, fittings and the system.
ADDITIONAL TEST	Fire behaviour test according to DIN 4102, part 1. Pipes and fittings with a minimum wall thickness of 3,7 mm are classed as B2 normal inflammable.
RATINGS	Outside diameters [mm]: 40 to 200 Temperature Range [°C]: 0 to 95 Vacuum Pressure: up to -0,4 barg continuous

Certificate No.	15/20048
Issue Date	08 June 2015
Expiry Date	07 June 2020
Sheet	1 of 2

Lloyd's Register EMEA
71 Fenchurch Street, London EC3M 4BS



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OTHER CONDITIONS


Pipes and fittings are to be selected and installed in accordance with the manufacturer's recommendations.
The use of plastic pipes may be restricted by statutory requirements of the National Authority of the country in which the ship is registered.

"This Certificate is not valid for equipment, the design, ratings or operating parameters of which have been varied from the specimen tested. The manufacturer should notify Lloyd's Register EMEA of any modification or changes to the equipment in order to obtain a valid certificate."

The Design Appraisal Document No. HTS/ENS 32757-15 and its supplementary Type Approval Terms and Conditions form part of this Certificate.

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