



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.

Manufacturer	Georg Fischer Hakan Plastik Boru ve Profil San. Tic. A.Ş
Address	Organize Sanayi Bölgesi 3. Cad. No:11-13, 59500 Çerkezköy / Tekirdağ, Türkiye
Type	Plastic Pipes
Description	Polypropylene low noise multilayer drainage system, comprising tubes and fittings assembled with socked, spigot and rubber gasket joining. TYPE: GF SILENTA 3A PP
Trade Name	GF SILENTA 3A PP
Application	In marine and offshore installations for use in non-essential piping systems, non-essential hot and cold water services, domestic heating and air conditioning systems on open decks, within tanks, cofferdams, void spaces, pipe tunnels and ducts.
Specified Standard	EN 1451—1 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.

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Engineering - Piping/ Decarbonisation -
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Ratings	Outside diameters [mm]:	32 to 200
	Temperature Range [°C]:	0 to 95
	Vacuum Pressure:	up to -0,4 barg

Other Conditions	Pipes and fittings are to be selected and installed in accordance with the manufacture'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. Additional means are required for penetration of watertight bulkheads or fire class divisions.
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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.

Previous Version: LR2124618TA, (previous 15/20048)

The Design Appraisal Document TSO/25-030889, (previous HTS/ENS 32757-15; Issue 1) and its supplementary Type Approval Terms and Conditions form part of this Certificate.

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