

TECHNICAL DATA SHEET

VALSIR® WASTE SYSTEMS

WHITEMARINE
UV RESISTANT



White Marine® is a push-fit system that includes triple-layer pipes, fittings and accessories, industrialized, produced and patented by Valsir. The White Marine® pipes are made up of three layers of material, which, when joined, provide excellent mechanical characteristics even at low temperatures and exceptional soundproofing performance.

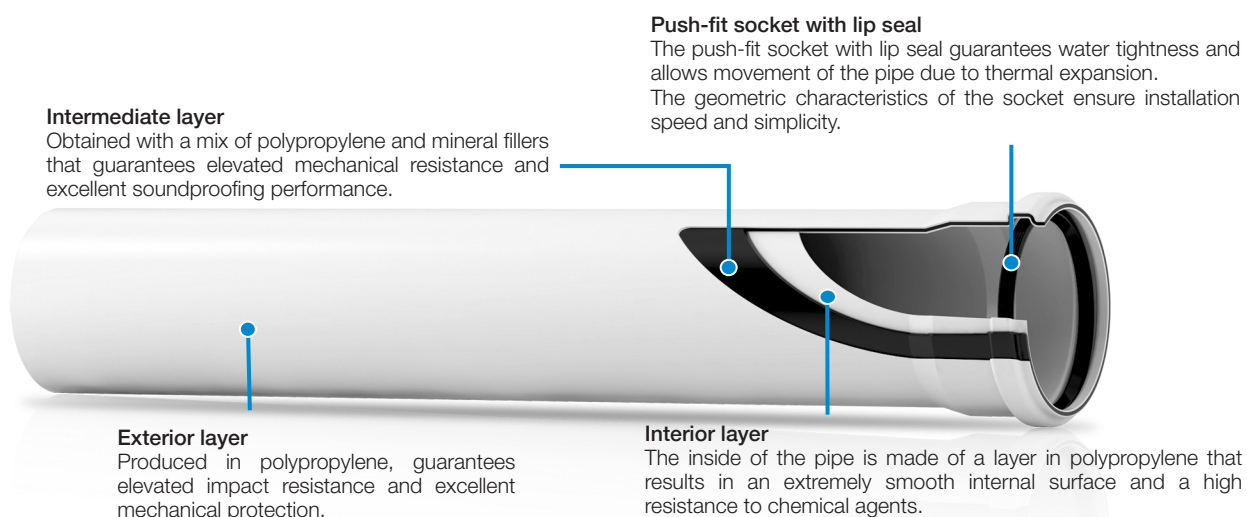
White Marine® is manufactured in compliance with EN 1451 and can be employed for sanitary drainage gravity and vacuum plants inside marine installations. Due to the wide range of pipes, fittings and accessories, the entire waste system can be constructed, from the branches, to the stacks and waste collector.



Characteristics

- UV Resistance that allows the installation in contact to the UV rays without changing the mechanical characteristics.
- Resistant to saltiness in comparison to the metal systems (Stainless Steel and Galvanized Steel).
- Excellent sound insulation performance; the system reduces noise to just 12 dB(A) with a flow of 2 l/s.
- Absolute guarantee of watertight joints, thanks to the elastomeric seal factory fitted (from 1.5 to -800 mbar).
- Extremely fast and easy to install, the installation do not require the use of any special tools, glues or solvents.
- Lightweight of the products. White Marine® is 3 times lighter than Stainless Steel and 4 times lighter than Galvanized Steel.
- Wide range of diameters from OD 50 mm to OD 160 mm.
- Availability of transition accessories for connection to existing waste systems in different materials.
- Excellent impact resistance even at low temperatures (from -25°C to + 95°C).
- An high abrasion resistance and extremely smooth internal surfaces guarantee minimal pressure losses and no deposit formation.
- High resistance to a wide range of chemical compounds also at high temperatures; not affected by stray currents.

Figure Layering of the pipe.



Technical details

Table Typical technical details.

Property	Value	Test method
Pipe material	Homopolymer polypropylene for the internal and external layers, mix of polypropylene and mineral loads for the intermediate layer	-
Fitting material	Homopolymer polypropylene + mineral charges	-
Seal material	SBR rubber	-
Colour	Fittings: white RAL 9003. Pipes: white RAL 9003 for the internal and external layers, black for the intermediate layer.	-
Sizes	50÷160 mm	-
Application	Marine application	-
Connections	Push-fit socket connection with rubber seal.	-
Minimum temperature of use	-25°C	-
Maximum temperature of waste water	+95°C (intermittent) +80°C (continuous)	-
Minimum pressure	-800 mbar	-
Maximum pressure	+1,5 bar	-
Composition of waste water	pH 2÷12	-
Density at 23°C	pipes: > 1200 kg/m ³ (medium thickness) > 1800 kg/m ³ (intermediate layer) fittings: > 1400 kg/m ³	UNI EN ISO 1183-2
Tensile strength	≥ 18 MPa	ISO 527-2
Elastic Module	1500 MPa	ISO 527-2
Ultimate elongation	≥ 600%	ISO 6259-3
Crystalline melting temperature	≥ 160°C	ISO 11357-3
Linear heat expansion coefficient	0,08 mm/m·K	-
UV resistance	Suitable for use outdoors UV resistance ≥ 800 klys	ISO 4892-2
Production standard	EN 1451-1	-
Packaging	Pipes in wooden frames with strapping for large diameters, in bundles tied with plastic elements for other diameters, in cardboard boxes for small diameters and reduced lengths. Fittings in cardboard boxes	-

Application field

The Valsir White Marine® pipes and fittings meet the requirements of the EN 1451 Standard and can be used on the Cruise and commercial Vessels, in particular for the following applications:

- a) Vacuum waste systems (wc's), including stacks and main collectors.
- b) Gravity waste systems (showers, basins etc.), including stacks and main collectors.
- c) Rain water systems of decks scuppers net, including stacks and main collectors.

Dimensions

The diameters, the wall thickness and the relative tolerances of the Valsir White Marine® pipes are indicated in the following table.

Table Pipe dimensional characteristics.

Nominal diameter DN [mm]	External diameter OD [mm]	Thickness s [mm]
50	50 $^{+0,3}_0$	1,8 $^{+0,4}_0$
70	75 $^{+0,4}_0$	2,6 $^{+0,5}_0$
90	90 $^{+0,4}_0$	3,1 $^{+0,6}_0$
100	110 $^{+0,4}_0$	3,4 $^{+0,6}_0$
125	125 $^{+0,4}_0$	3,9 $^{+0,6}_0$
150	160 $^{+0,5}_0$	4,9 $^{+0,7}_0$

Note: the tolerances indicated are specified in the reference standard EN 1451.

Connection systems

Different methods can be used for connecting the pipes and/or fittings:

- Connection with push-fit socket.
- Connection with sliding sleeve.

Approvals:

The approvals of Valsir® White Marine are available on the website: www.valsir.com

Marking

Figure Pipe marking.

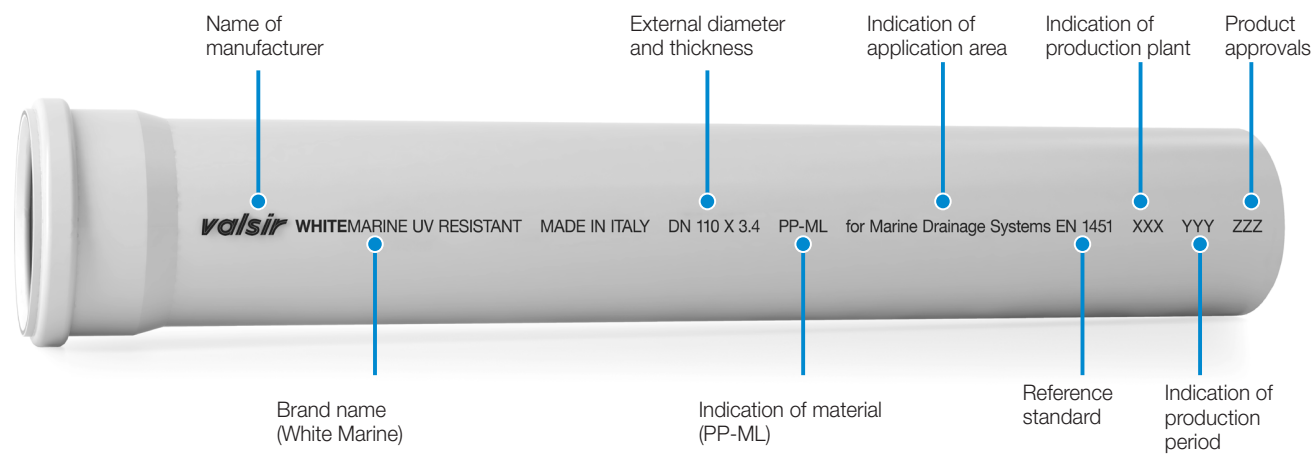
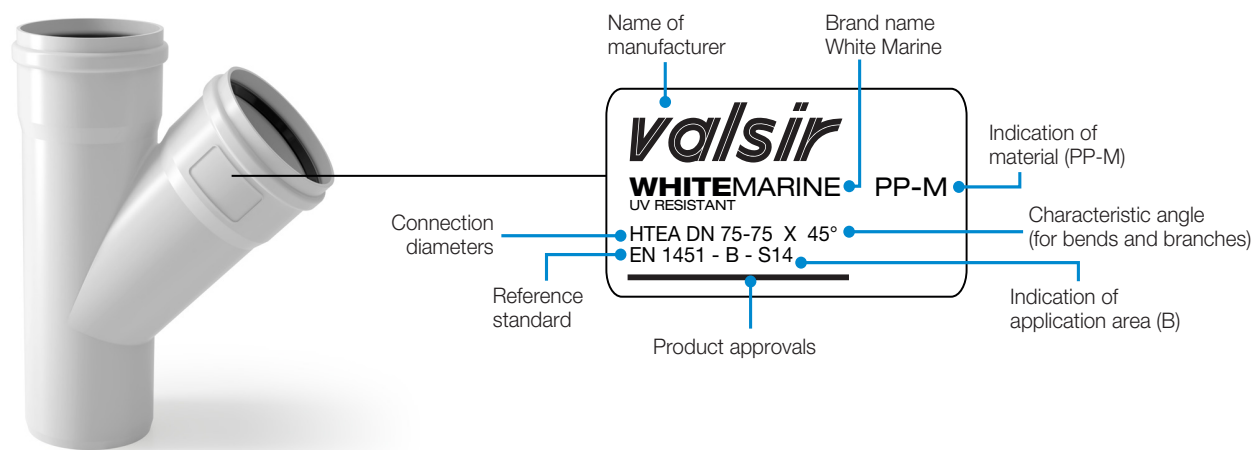


Figure Fitting marking.



PLUMBING

WASTE SYSTEMS



SUPPLY SYSTEMS



GAS SYSTEMS



FLUSH SYSTEMS



BATHROOM SYSTEMS



TRAPS



RADIANT SYSTEMS



DRAINAGE SYSTEMS



HRV SYSTEM



ACADEMY



SEWER SYSTEMS



WATER TREATMENT



BUILDING

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QUALITY FOR PLUMBING

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