



EUROPEAN UNION RECOGNISED ORGANISATION (EU RO) MUTUAL RECOGNITION TYPE APPROVAL CERTIFICATE

Certificate No:
MRP0000007

In accordance with Article 10.1 of EU Regulation 391/2009

This Certificate is issued to

Geberit International AG
Jona, SG, Switzerland

for

Plastic Piping Systems (Components)

with type designation(s)

Geberit Mepla

The product is found to comply with

EU RO Mutual Recognition Technical Requirements for Plastic Piping Systems (Components)

Intended service

Non-essential services, piping systems belonging to class III. External pressure resistance of 5bar

Temperature range Refer to certificate

Max. working press. **10bar**

Sizes **16mm up to 75mm**

This is to certify:

that the Product referred to herein has been inspected for the Manufacturer, pursuant to the relevant requirements of the European Union Recognised Organisation Mutual Recognition procedure, required by Article 10.1 of EU Regulation 391/2009, and has been found in accordance with those requirements.

This Certificate is valid until **2026-12-15**.

Issued at **Hamburg** on **2021-12-16**

DNV local station: **Augsburg**

for **DNV**

Approval Engineer: **Hagen Markus**

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Olaf Drews
Head of Section

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid. The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.



Form code: MRTA 201

Revision: 2021-03

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Product description

The Geberit Mepla piping system consist of multi layered pipes made of polyethylene inner and outer liner (PE-RT) and aluminium core pipe. Joining of pipes by press fittings made of PVDF, Brass and Red-Brass.

Reference “ Geberit Mepla Product Guide” and “Geberit Industry” brochure.

Pipes

Piping system	Mepla (black)								Meplatherm (white)		
Pipe material	PE-RT Type II/Al(ENAW3003)/PE-RT Type II										
System pipe ML	bars d26 up to d75, coils d16 up to d26								bars and coils		
Outer diameter d in mm	16	20	26	32	40	50	63	75	16	20	26
Wall thickness (s) mm	2.25	2.5	3.0	3.0	3.5	4.0	4.5	4.7	2.25	2.5	3.0

Nominal pressure PN ¹	10bar
External pressure rating ²	5bar

Note

¹ Safety factor 4 (PN is defined as service pressure at 20°C), ² Safety factor of 3

Fittings

Fitting material	PVDF, Brass and Red-Brass
Fitting types	Couplings, Reducers, Bends, T-pieces, Connectors Adapter permanent and detachable, Pipe end plugs
Tools	According to “Installation Guide Geberit Mepla 958.360.00.1“
	Deburring and calibration tool

Permissible service pressure at elevated temperature

According to standard ISO 21003-5 – Multilayer piping systems for hot and cold-water installations.

Class ¹	Class 1	Class 2	Class 4	Class 5
PE-RT Type II/Al/PE-RT Type II	10bar	10bar	10bar	10bar

Notes

¹ Class 1 hot water supply 60°C - Class 2 hot water supply 70°C - Class 4 low temperature heating up to 60°C - Class 5 high temperature heating up to 80°C.

Manufacturing places

Responsibility

The company Geberit International AG, Jona Switzerland takes the responsibility that both design and production are in compliance with Rules, Standards and Regulations listed on page 1 of this Certificate.

Application/Limitation

Range of piping systems ²	Piping system ¹
Sea water systems ¹	Non-essential systems
Freshwater	Non-essential systems
	Potable water generating and treatment systems Potable hot and cold water, wash water systems (internal) Hot water heating systems
	Sanitary drains (internal)
Sanitary and drains and scuppers	Sanitary drains (internal)
Miscellaneous	Service air (non-essential) Air conditioning systems with media condensed water and ethylene glycol

Notes

¹ In case of connection to ship side a remotely controlled valves to be provided at the ships side (valve shall be controlled from outside the space).

² Refer to GEBERIT MEPLA PRODUCT GUIDE - Application overview - Geberit Mepla

Plastic piping systems shall be installed in accordance with the manufacturer's guidelines.
In addition, the "Application Overview – Section 5" in the "Geberit Mepla Product Guide" is to be observed.

The requirements relevant to the applicable items listed below shall be in compliance with the Rules of the EU RO classifying the ship¹.

- I. Supports
- II. Expansion
- III. External loads
- IV. Strength of connections
- VII. Penetration of fire divisions and watertight bulkheads or decks
- VIII. Systems connected to the hull.

Note

¹ Reference EU RO MR TR Plastic Piping Systems (Components), Vers. 0.3.

Testing activities after installation on board shall follow the Rules of the EU RO classifying the ship.

Other conditions

Extent of Type Tests applicable to piping system dependent on application

Fire endurance Level

The Geberit Mepla piping system is not tested with respect to Fire Endurance characteristics.

Flame spread

Surface flame spread characteristic is confirmed by ASTM D635-06, class HB.

Smoke and toxicity

The Geberit Mepla piping system is tested with respect to smoke and toxicity characteristics according to FTP Code, Annex 1: Part 2.

Electrical conductivity

Not applicable.

Passenger vessels

For application on passenger vessels additional requirements specified in the Rules and Regulations of the appropriate flag state authority may have to be observed.

Installation

For installation of the piping system the instructions and list of released pressing tools specified in the Geberit "Baustellenanweisung GEBERIT MEPLA" is to be observed.



Job Id: **262.1-035174-1**
Certificate No: **MRP0000007**

Type Approval documentation

Tests carried out¹

Internal Pressure Short-Term, Vacuum test, Internal Pressure Long-Term (ISO 21003-2, ISO 9080), External pressure test acc. to ASTM D 2924, Figure 1 (includes load deformation capability), Impact resistance acc. to ASTM D 2444, Fatigue, Ageing (EN ISO 21003 series), Flame spread (ASTM D635), Smoke generation and Toxicity (FTP Code).

Notes

¹ Vicat softening temperature testing is considered not applicable to composite pipes (intermediate layer of aluminium)

Maximum service temperature and pressure class is confirmed by type testing acc. to ISO 21003-2 and 5

² Erosion resistance not applicable for the approved range of application

³ Material compatibility confirmed by GEBERIT Application overview

Marking of product¹

Component	Scope	Example
Pipes	- Manufacturer name and or trademark - Outside diameter and all thickness - Composition - Application class with design pressure - Outer liner colour	- Geberit - 16x2.25 - PE-RT/Al/PE-RT - Class1,2,4,5 / 10bar - Mepla: black, Meplatherm: white
Fittings	- Manufacturer name - Nominal outside diameter	- Geberit - 16

Note

¹ Additional marking according to Geberit Marking instruction.

Periodical assessment

For retention of the EU MR TA Certificate a DNV Surveyor shall perform annual assessments¹.

The purpose of surveillance is to make sure that the manufacturer duly fulfils the obligations arising out of the approved Production Quality Assurance scheme.

The manufacturer must allow the EU RO access for inspection purposes to the locations of manufacture, inspection and testing and storage and must provide it with all necessary information, in particular:

- a) the Production Quality Assurance scheme documentation and the design evaluation documentation,
- b) the quality records, such as inspection reports and test data, calibration data, damage and claims records, qualification reports of the personnel concerned, etc.;
- c) additional testing as per the Technical Requirements may be required by the EU RO.

¹ EU RO Framework Document for the Mutual Recognition of Type Approval, Appendix VI

Generic Statement for EU RO MR Type Approval Certificate

When a product is presented with this EU RO MR Type Approval Certificate for given application, its acceptability with regards to the limitations stated in the certificate conditions defined in 1b, 1c and 1d of the applied Technical Requirement will be evaluated by the EU RO in charge of classing the ship or being in charge of the unit/system certification.

In accordance with Article 10 of Regulation (EC) No 391/2009 of the European Parliament and of the Council of 23 April 2009 "on common rules and standards for ship inspection and survey organizations", the following organizations, recognized by the EU on this date, have agreed on the technical and procedural conditions under which they will mutually recognize this certificate:

- American Bureau of Shipping (ABS);
- Bureau Veritas (BV);
- China Classification Society (CCS);
- Croatian Register of Shipping (CRS);
- DNV;
- Indian Register of Shipping (IRS);
- Korean Register (KR);
- Lloyd's Register Group Ltd. (LR);
- Nippon Kaiji Kyokai General Incorporated Foundation (ClassNK);
- Polish Register of Shipping (PRS);
- RINA Services S.p.A. (RINA);
- Russian Maritime Register of Shipping (RS).

The scheme for the mutual recognition of class certificates for materials, equipment and components laid down by Article 10(1) of Regulation (EC) No 391/2009 is only enforceable within the Union in respect of ships flying the flag of a Member State. As far as foreign vessels are concerned, the acceptance of relevant certificates remains at the discretion of relevant non-EU flag States in the exercise of their exclusive jurisdiction, notably under the United Nations Convention on the Law of the Sea (UNCLOS). (In accordance with COMMISSION IMPLEMENTING REGULATION (EU) No 1355/2014 amending Regulation (EC) No 391/2009 - recital (25)).