



DET NORSKE VERITAS TYPE APPROVAL CERTIFICATE

CERTIFICATE NO. K-1955

This Certificate consists of 3 pages

This is to certify that the

Plastic Pipes, Thermoplastic

332.31

with type designation(s)

**Geberit Mepla pipe;
Geberit MeplaTherm pipe;
Geberit MeplaFlex pipe**

Manufactured by

**Geberit International AG
(at Fluid Air Energy SA, Givisiez, Switzerl.)**

Jona, Switzerland

is found to comply with

Det Norske Veritas' Rules for Classification of Ships
Det Norske Veritas' Type Approval Program for Thermoplastic Piping, preliminary

Application

Non-essential systems for fresh and sea water up to 10 bar and 70°C. The piping system is not tested with respect to Fire Endurance and Flame Spread performance.

Place and date
Høvik, 2000-11-07
for Det Norske Veritas AS

This Certificate is valid until
2004-06-30

John Olav Nøkleby
Head of Section

Local Office
DNV Essen

Gisle Hersvik
Surveyor

Product description

Multi-layered pipe: Crosslinked polyethylene inner liner, Aluminium core pipe, and high density polyethylene outer liner, in the following diameters:

Geberit Mepla pipe: 16, 20, 26, 32, 40, 50, 63 mm.

Geberit MeplaTherm pipe: 16, 20 mm

Geberit MeplaFlex pipe: 16, 20 mm

Pipe to be joined with:

Geberit MEPLA Compression joint, ref. separate Type Approval Certificate issued to Geberit International AG (at Gbr. Beul GmbH & Co. KG, Attendorn), or Geberit PVDF fittings, ref. separate Type Approval Certificate issued to Geberit International AG.

Application/Limitation

Non-essential systems for fresh and sea water up to 10 bar and 70°C. The Geberit MeplaTherm is approved up to 6 bar and 70°C.

The piping system is not tested with respect to Fire Endurance and Flame Spread performance.

Pipe and fittings not to be installed in submerged condition.

Type Approval documentation

Tests carried out

Type Testing as per **Type Approval documentation**.

Marking of product

Piping will be marked with:

"Geberit Mepla (dimensions) 10 bar PE-Xb/Al/PE-HD IMO 70°".

"Geberit MeplaFlex (dimensions) 10 bar PE-Xb/Al/PE-HD".

"Geberit MeplaTherm (dimensions) 6 bar PE-Xb/Al/PE-HD".

Certificate Retention Survey

The scope of the Retention/Renewal Survey is to verify that the conditions stipulated for the Type Approval is complied with and that no alterations are made to the product design or choice of materials.

Survey to be performed after two (2) years (Certificate Retention Survey) and at renewal after four (4) years (Certificate Renewal Survey).

The main elements of the survey are:

- Ensure that **Type Approval documentation** is available.
- Review: design, materials, production process, and performance with respect to possible changes, in order to ensure compliance with **Type Approval documentation** and/or referenced material specifications.
- Ensure traceability between manufacturer's product marking and the DNV Type Approval Certificate.

END OF CERTIFICATE

Notice: This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid.

If any person suffers loss or damage which is proved to have been caused by any negligent act or omission of Det Norske Veritas, then Det Norske Veritas shall pay compensation to such person for his proved direct loss or damage. However, the compensation shall not exceed an amount equal to ten times the fee charged for the service in question, provided that the maximum compensation shall never exceed USD 2 million. In this provision "Det Norske Veritas" shall mean the Foundation Det Norske Veritas as well as all its subsidiaries, directors, officers, employees, agents and any other acting on behalf of Det Norske Veritas.