



DET NORSKE VERITAS TYPE APPROVAL CERTIFICATE

CERTIFICATE NO. K-1952

This Certificate consists of 3 pages

This is to certify that the

Plastic Pipes, Thermoplastic

332.31

with type designation(s)

Geberit PVDF fittings

Manufactured by

Geberit International AG

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

Polyvinylidenfluorid (PVDF) fittings to join:

Geberit Mepla pipe (16, 20, 26, 32, 40, 50, 63 mm),

Geberit MeplaTherm pipe (16, 20 mm), and

Geberit MeplaFlex pipe (16, 20 mm),

ref. separate Type Approval Certificate issued to Geberit International AG (at Fluid Air Energy SA, Givisiez, Switzerland).

List of approved fittings:

- Adapters
- Elbows, 45°, 90°
- Tees, reduced, equal
- Couplings
- Reducers

Application/Limitation

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

Fittings will be marked with:

"Geberit (dimensions) (production date)".

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
