

DNV

DET NORSKE VERITAS

TYPE APPROVAL CERTIFICATE

CERTIFICATE NO. K-5370

This is to certify that the
Plastic Pipes, Thermoplastic

with type designation(s)

Crosslinked Polyethylene Pipes: UPONOR-PEX, including UPONOR-evalPEX and UPONOR-pePEX

Manufactured by

Uponor AB
Virsbo, Sweden

is found to comply with


DIN 16892 Crosslinked Polyethylene (VPE) Pipes
Det Norske Veritas' Rules for Classification of Ships

Application

For non-essential systems, for heating and cooling systems, hot and cold water up to 10 bar. Service temperature 0°C to 95°C. For installation according to DNV Rules and Manufacturer's Specification. The piping system is not tested to Low Flame Spread and Fire Endurance characteristics. UPONOR-PEX also complies with DIN 16893.

Høvik, 2013-01-22
for Det Norske Veritas AS

This Certificate is valid until
2016-12-31


for Rikard Törnqvist
Head of Section



DNV local office:
Stockholm


Helene Bjerke
Surveyor

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.

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.



Certificate No.: K-5370
File No.: 332.31
Job Id.: 262.1-006452-2

Product description

Crosslinked Polyethylene Pipes, PN 10 bar: **UPONOR-PEX, UPONOR-evalPEX and UPONOR-pePEX.**

Nominal diameters ND (mm) x wall thickness (mm):

UPONOR-PEX

12x2,0 15x2,5 16x2,2 18x2,5 20x2,8 22x3,0 25x3,5 28x4,0
32x4,4 40x5,5 50x6,9 63x8,7 75x6,8 75x10,3 90x8,2 90x12,3 110x10,0 110x15,1

UPONOR-evalPEX

12x2,0 14x2,0 15x2,5 16x2,0 20x2,0 22x3,0 25x2,3 28x4,0
32x2,9 40x3,7 50x4,6 63x5,8 75x6,8 90x8,2 110x10,0

UPONOR-pePEX

20x2,0

Nominal internal pressure (PN) and service temperature limits:

Type of pipes	ND [mm]	PN [bar]	Service temperature [°C]
UPONOR-PEX	12 - 63	10	95
	75 - 110	6	95
	75 - 110	10	70
UPONOR-evalPEX	12 - 110	6	95
	15x2,5 22x3,0 28x4,0	10	95
UPONOR-pePEX	20x2,0	6	95

Application/Limitation

The Type Approval covers pipes only, not couplings and fittings.
Only coupling and fitting types recommended by Uponor are to be used.
The pipes are to be installed and used according to Uponor's recommendations.

Type Approval documentation

1. Previous Type Approval Certificate No. K-3562.
2. Email from DNV Stockholm of 2013-01-17, including Asbestos Declaration.
3. Survey Report from DNV Stockholm of 2012-11-14.
4. Email from DNV Stockholm of 2012-10-29, including letter from Uponor of 2012-10-29 and Material Documentation of October 2012.
5. Letter from Uponor AB via DNV Stockholm received 2008-12-04, including Report on control testing of 2007-11-14.

Tests carried out

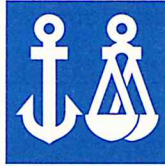
Type Testing carried out according to **Type Approval documentation.**

Marking of product

Product shall be marked with *manufacturer's name*; **Uponor AB, Sweden** and *type designation*; **UPONOR-PEX, UPONOR-evalPEX and UPONOR-pePEX.**

Certificate Retention/Renewal 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.



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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

