

# 1 System information

## 1.1 Intended Use

Akatherm HDPE is a durable and tough soil & waste drainage system, designed to be installed in accordance with EN12056 'Gravity drainage systems inside buildings'. The excellent characteristics of high density polyethylene makes it suitable for a wide range of applications. Akatherm HDPE is available in nominal diameters d40 to d315 mm with a full range of pipes, a comprehensive range of fittings including connection fittings, sanitary fittings, traps and tools.

## 1.2 Applications

Akatherm HDPE is designed to be installed in accordance with EN12056 and thereby meets the requirements for use in residential, commercial and public buildings.

Akatherm HDPE is a non-pressure drainage system, not intended for pressure applications.

Akatherm HDPE has a high temperature and chemical resistance which makes it ideal for drainage in:

- Residential housing
- Commercial kitchens
- Laundries

It is flexible and tough for installation:

- Underground
- Embedded in concrete
- In bridges and roads

Its closed system is perfect for applications where system integrity connections are critical like in:

- Storm water drainage
- Trade waste
- Industrial applications and laboratories
- Ceiling voids and hard to reach places

Furthermore Akatherm HDPE is a light weight plastic system, highly suited for prefabrication. It allows you to aim higher and answering all challenges of modern building design.

### Application parameters

The pipes, fittings and seals can be used up to 80°C continuously. Exposure to temperatures up to 100°C is only allowed for a duration of 1 minute up to 400 times a year.

For a complete overview refer to the lifetime expectancy chapter. Akatherm HDPE is suitable for the drainage of chemically aggressive waste water with a pH value of 2 (acidic) to 12 (basic) by default. For installations in applications not listed in this manual or with chemicals not listed in the chemical resistance list of this manual, please contact your local Aliaxis for further advice. More information at [www.akatherm.com](http://www.akatherm.com).

Behavior in fire corresponds to B2 normal combustibility according to DIN 4102. When an HDPE pipe system passes through fire-rated building elements, it is mandatory to install fire protection collars that will not reduce the fire-rating of these building elements.

## 1.3 HDPE pipe, fittings and tools

### Pipe

The Akatherm HDPE tempered pipes are produced according to the standard EN 1519. Akatherm HDPE pipe specifications ensure that pipe has minimal shrinkage when cooled down from high operational temperatures. This gives less stress on joints resulting in a longer life of the pipe systems.

The Akatherm HDPE pipes are suited for applications where the temperature of the pipe can get relatively high or vary considerably. Both can be caused by ambient temperature or temperature of the medium.

Akatherm HDPE pipe has a standard length of 5 m and is produced according to high quality standards with many international approvals.

### Fittings

Akatherm HDPE fittings are high quality injection moulded products produced by Akatherm BV in The Netherlands under ISO9001 quality management. Prefabricated product exceptions are clearly listed in the product tables.

Akatherm offers a complete wide range of fittings including:

- Reducers
- Bends
- Elbows
- Branches
- End caps
- Electrofusion couplers
- Mechanical connection fittings
- Sanitary Fittings
- Traps
- Spare parts

All required fixing material for wall and ceiling construction is available from Aliaxis Nederland B.V. as well.

All Akatherm HDPE fittings are electrofusible, exceptions are clearly listed in the product tables.

In some situations, it is necessary to shorten fittings. Fittings with the dimension "k" included in the product table can be maximally shortened by the "k" dimension in order to still allow for butt-welding using a standard butt-welding machine. The k-dimension of the relevant spigot of most fittings is listed in the product tables.

The fittings are dimensionally standardized to improve prefabrication repetition work and to facilitate welding alignment. Each fittings contains a graduated arc at 15° intervals.

### Marking

Akatherm Pipe and fittings are marked with:

- Akatherm brand
- Material type
- Nominal diameter
- Area of application
- Conformity of dimensions
- Information on approvals
- Information on recycling
- Production information
- Wall thickness (pipe only)
- EAN barcode (fittings only)
- Angle indication (fittings only)

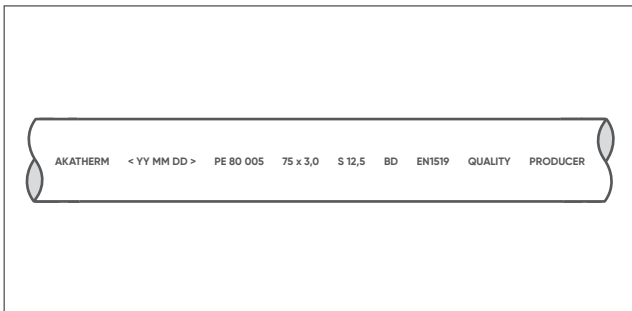


Illustration 1.1 marking on pipe

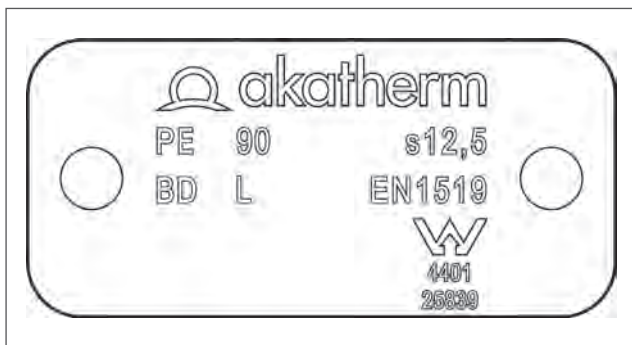


Illustration 1.2

### Tools

Akatherm offers a full range of tools to be used for installation of HDPE:

- Electrofusion control boxes
- Butt-welding machines
- Manual butt-welding plates
- Pipe cutters
- Pipe and fittings scrapers
- PE cleaner and marking pencils

Refer to the chapter 'Tools' in the product tables.