Technical Product Information

PE Protection Hose — Article no. 17105

PE Pipe Insulation 18/13 mm — Article no. 17102

PE Pipe Insulation 18/26 mm — Article no. 17103

PO Insulating Sleeve — Article no. 17106

Ill. 1:
Protection Hose

Ill. 2:
Pipe Insulation 18/13

Ill. 3:
Pipe Insulation 18/26

Ill. 4:
Insulating Sleeve

Ill. 1: **PE Protection Hose (Art. 17105):**

Scope of application

Intended for the protection of connecting pipes. This protection hose is the ideal solution where the protection of pipes and the installation in confined spaces are concerned. Thanks to the special interior film you can easily pull the hose over the pipe. The hose obtains its cylindrical shape in a special production process.

Ill.1

The insulating layer thickness of 4 mm is suitable for confined spaces and the wear-resistant, seamless outer skin ensures maximum protection of the pipes. The protection hose prevents effectively condensation and reduces the transmission of structure-borne sound. The durable, seamless polymer sheathing of the pipes guarantees maximum protection against aggressive building materials.

Technical Data
Protection Hose

Nominal size (mm):	18 mm
Designation:	18 / 4
Material:	Closed-cell soft polyethylene foam
Length:	20 m
Interior ply:	Interior sliding film for easy fitting
Colour:	Grey/blue
Structure-borne noise reduction:	20 dB(A)
Fire behaviour as per DIN 4102:	Class B2, normally flammable
Temperature range:	-45 °C to +100 °C

Ill. 2: **PE Pipe Insulation 18/13 mm (article no. 17102)**

Scope of application

Insulation of 50 % for pipes in wall and ceiling penetrations, in pipe crossing areas, at pipe connecting points, on central pipe manifolds, pipes in structural components that separate heated rooms of different occupants.

Ill. 2

Properties

Circular, pre-slit pipe insulation made of flexible PE insulating foam. The easy-to-use product protects pipes against aggressive construction materials and prevents condensation on cold water pipes. The available insulating layer thicknesses provide for compliance with the statutory provisions of the German Energy Saving Ordinance EnEV.

Technical data

Pipe insulation 18/13	Nominal size (mm):	18 mm
	Insulation thickness:	13[1)]
	Material:	Closed-cell soft polyethylene foam
	Length:	2 m
	Thermal conductivity coefficient λ as per DIN 52613:	0.04 W/m·K at 40 °C
	Vapour diffusion resistance (μ):	> 3 500 as per DIN 52615
	Bulk density:	30 to 40 kg/m³
	Fire behaviour as per DIN 4102:	E_L, normally flammable
	Temperature range:	-80 °C to +95 °C
	Colour:	Grey

[1)] 50 % as per EnEV

Ill. 3: **PE Pipe Insulation 18/26 mm (article no. 17103)**


Ill. 3

Scope of application

Insulation of 100 % for pipes running through unheated spaces.

Properties

Circular, pre-slit pipe insulation made of flexible PE insulating foam. The easy-to-use product protects pipes against aggressive construction materials and prevents condensation on cold water pipes. The available insulating layer thicknesses provide for compliance with the statutory provisions of the German Energy Saving Ordinance EnEV.

Technical data

Pipe insulation 18/16	Nominal size (mm):	18 mm
	Insulation thickness:	26[1)]
	Material:	Closed-cell soft polyethylene foam
	Length:	2 m
	Thermal conductivity coefficient λ as per DIN 52613:	0.04 W/m·K at 40 °C
	Vapour diffusion resistance (μ):	> 3 500 as per DIN 52615
	Bulk density:	30 to 40 kg/m³
	Fire behaviour as per DIN 4102:	E_L, normally flammable
	Temperature range:	-80 °C to +95 °C
	Colour:	Grey

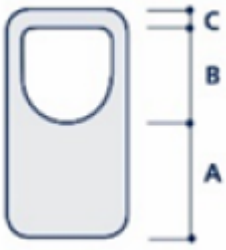
[1)] 100 % as per EnEV

Ill. 4: **PO Insulating Sleeve (article no. 17106)**

Scope of application

Insulation of 100 % for pipes in floor structures. It reduces heat loss and protects the pipe against damages

Ill. 4



Ill. 5

Properties

Insulating sleeve made of polyolefin foam that was developed for heat distribution pipes in floor structures. The special shape reduces energy losses to the earth/basement floor underneath while permitting heat transmission to the floor structure above i. e. in the direction of the space to be heated. The flattened base surface provides for perfect stability of the insulating sleeve. The insulation of polyolefin foam is fitted with a durable outer polyolefin skin, which ensures high resistance to mechanical stress during the construction phase (Ill. 4)

Technical data

Insulating sleeve	Nominal outer pipe diameter (mm):	18 mm
	Insulation thickness[1)] dimensions (Ill. 5):	A: 25.1 mm ±1 mm B: 20 mm ±1 mm C: 7 mm ±1 mm
	Insulating sleeve dimensions (±2 mm):	Height: 49.5 mm Width: 33 mm
	Material:	Closed-cell polyolefin foam
	Length:	1.5 m
	Thermal conductivity coefficient λ as per DIN 52613:	0.04 W/m·K at 40°C
	Fire behaviour :	E_L, normally flammable
	Bulk density:	25 to 35 kg/m³
	Harmful substances:	Manufactured without CFC/HCFC
	Temperature range:	-80 °C to +95 °C
	Colour:	Outer skin: yellow Foam: anthracite

[1)] 100 % as per EnEV

Insulation of pipes in accordance with the German Energy Saving Ordinance (EnEV 2009)

Table: Explanations/examples for heating pipes

Heating Pipes	Multi-storey block / non-residential building Multiple occupants	Single-family house / non-residential building Single occupant
Pipes in unheated rooms and basement spaces	100 %	100 %
Pipes in exterior walls, in exterior structural components separating heated and unheated spaces, in shafts and ducts	100 %	100 %
Manifold pipes for the supply of multiple different occupants	100 %	-
Pipes laid in floor structures, also heating circuit connection pipes adjacent to the soil/unoccupied spaces[1)]	100 %	100 %
Pipes and valves in wall and ceiling penetrations, in pipe crossing areas, at pipe connection points, on central pipe manifolds	50 %	50 %
Pipes in structural components separating heated and unheated spaces of different occupants.	50 %	-
Pipes laid in floor structures that separate heated spaces of different occupants.	See EnEV, Table 1, Annex 5, Line 7[3)]	-
Heating pipes in heated spaces or in structural components separating heating spaces of a single occupant or fitted with shut-off device	-	No requirements[2)]
Heat distribution systems in contact with outside air[4)]	200 %	200 %

[1)] Eccentrical/asymmetrical tube hoses may be used to limit heat emission. The nominal thickness shall be oriented to the cold side. Details can be taken from the General Approval by the Building Authorities (ABZ) of the respective manufacturer.

[2)] Even though no legal requirements must be complied with, insulation should be used for the following reasons: corrosion protection, avoidance of cracking and flowing noises, reduction of structure-borne noise and of the thermal load.

[3)] Pipes of any size that are laid in floor structures (independent of their position there) separating heated spaces of different occupants shall be fitted with insulation of the following thicknesses:

Minimum thickness of insulation layer referenced to the thermal conductivity at 40 °C		
0.035 W/m·K for concentric insulation	0.040 W/m·K for concentric insulation:	0,04 W/m·K for eccentrical/asymmetrical insulation
≥ 6 mm	≥ 9 mm	See the General Approval by the Building Authorities (ABZ) of the respective manufacturer.

[4)] If the pipes are installed in frost-prone areas, insulation cannot provide protection against freezing during longer downtimes. You must drain the pipes or protect them by other means. For further information, refer to the guidelines VDI 2055 and/or VDI 2069.