



ECOALUPEX System

DESCRIPTION

Thanks to its unique structure, ECOALUPEX is a flexible pre-insulated piping system perfectly suited for branch lines in district heating piping systems.

Pre-insulated **ECOALUPEX** is a bonded piping system. The pipe consists of a multi-layer pex-alupex carrier pipe and a LLDPE jacket pipe. A flexible layer of polyurethane foam bonds them together into a fixed sandwich structure.

The flexible insulation and the LLDPE jacket pipe

provide maximum flexibility, while the multi-layer pipe is dimensionally stable during installation.

The pipe is therefore easily adaptable during installation of branch lines, making installation fast and efficient.

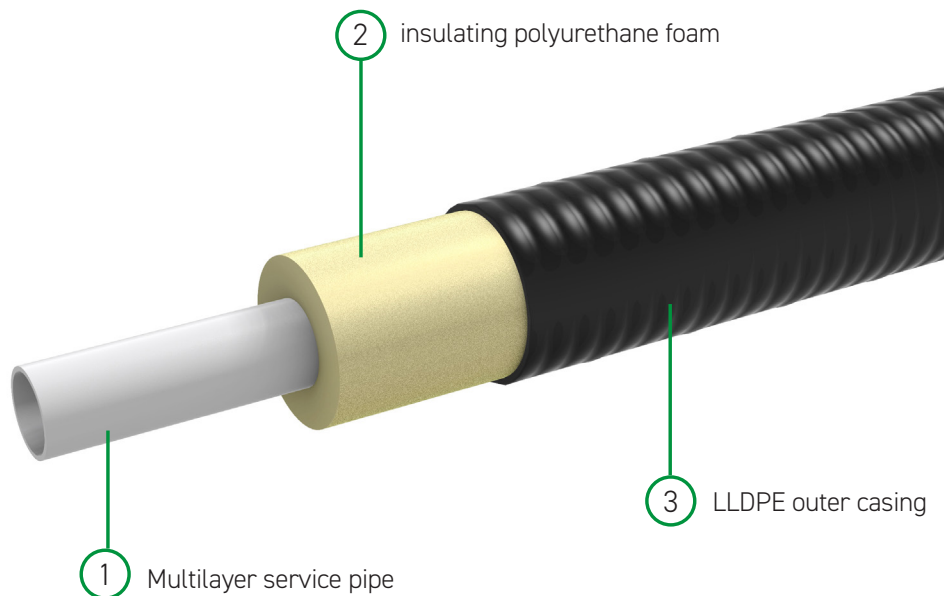
The carrier pipe is protected against oxygen and water diffusion. The integrated aluminium diffusion barrier between jacket pipe and polyurethane foam ensures optimal insulation and low heat loss throughout the service life of the system with lambda values 0.0225 W/m°C.



TECHNICAL SPECIFICATIONS

Carrier pipe material: Multilayer PEX/aluminium / PEX
The material complies with the requirements in EN ISO 21003-2.
Jacket pipe material: Bimodal – LLDPE
Insulation: Polyurethane foam, blown with cyclopentane

Peak load: 110 °C
Max. continuous operating temperature: 95 °C
Max. operating pressure: 10 bar
Dimensions: 20-25-32 (16 mm on request)



TECHNICAL SPECIFICATIONS



PIPE SYSTEM

ECOTECH pre-insulated ECOALUPEX pipes are complete piping systems. The pipes consist of an alupex carrier pipe and a LLDPE jacket pipe bonded to form a complete unit with insulating polyurethane foam. The flexible insulation and LLDPE jacket pipe ensure maximum flexibility.

MULTILAYER

The alupex pipe is designed as a sandwich construction, consisting of an aluminium pipe encased on both inside and outside by pex pipe EN / ISO 21003-2.

Max. operating pressure: 10 bar

Peak load: 110 °C

Max. continuous operating temperature: 95 °C

INSULATION

The pipes are insulated with polyurethane, foamed using the blowing agent cyclopentane, thus ensuring optimum insulation values.

Compressive strength: ≥ 0.2 MPa

Closed cells: $\geq 88\%$

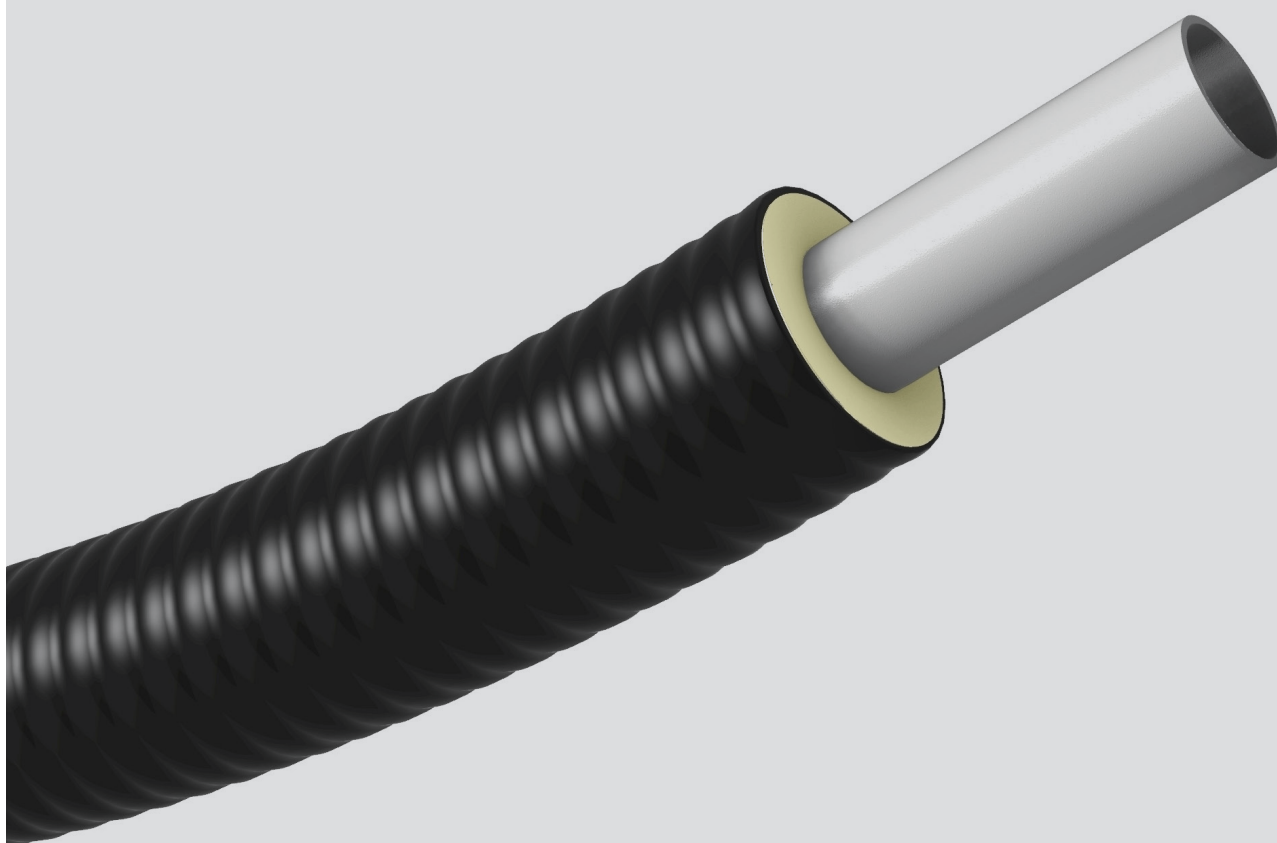
JACKET PIPE

Material: Bimodal - LLDPE

Density: approx. 924 kg/m³

Melt index: 0.3 g/10 min. 5 kg

ECOALUPEX SINGLE HEATING 10 BAR



ECOALUPEX PN 10 - SINGLE

ECOALUPEX SINGLE - HEATING PN 10 - STANDARD INSULATION

Type [mm]	Multilayer Pipe			PE Casing		Minimum bend radius [m]	Pipe weight [kg/m]	Fluid content [l/m]	Maximum roll length (*) [m]
	d_{int} [mm]	s [mm]	d_{ext} [mm]	D_e [mm]	s_p [mm]				
20/90	16	2,0	20	90	3,0	0,80	0,9	0,20	-
25/90	20	2,3	25	90	3,0	0,80	1,0	0,31	-
32/90	26	3,0	32	90	3,0	0,80	1,2	0,53	-

* On request.

HEAT LOSS OF THE ECOALUPEX SINGLE PIPELINES - HEATING PN 10 - STANDARD INSULATION

Type [mm]	U [W/(mK)]	AVERAGE OPERATING TEMPERATURE [°C]				
		40	50	60	70	80
20/90	0,089	2,67	3,56	4,45	5,34	6,23
25/90	0,104	3,11	4,14	5,18	6,21	7,25
32/90	0,138	4,13	5,51	6,89	8,26	9,64

ECOALUPEX PN 10 - SINGLE

ECOALUPEX SINGLE - HEATING PN 10 - EXTRA INSULATION

Type [mm]	Multilayer Pipe			PE Casing		Minimum bend radius [m]	Pipe weight [kg/m]	Fluid content [l/m]	Maximum roll length (*) [m]
	d_{int} [mm]	s [mm]	d_{ext} [mm]	D_e [mm]	s_p [mm]				
20/110	16	2,0	20	110	3,0	0,85	1,0	0,20	-
25/110	20	2,3	25	110	3,0	0,85	1,1	0,31	-
32/110	26	3,0	32	110	3,0	0,85	1,4	0,53	-

* On request.

HEAT LOSS OF THE ECOALUPEX SINGLE PIPELINES - HEATING PN 10 - EXTRA INSULATION

Type [mm]	U [W/(mK)]	AVERAGE OPERATING TEMPERATURE [°C]				
		40	50	60	70	80
20/110	0,079	2,36	3,15	3,94	4,73	5,51
25/110	0,090	2,70	3,60	4,50	5,40	6,30
32/110	0,115	3,44	4,59	5,73	6,88	8,03

ECOALUPEX PN 10 - SINGLE

ECOALUPEX SINGLE - HEATING PN 10 - 2x EXTRA INSULATION

Type [mm]	Multilayer Pipe			PE Casing		Minimum bend radius [m]	Pipe weight [kg/m]	Fluid content [l/m]	Maximum roll length (*) [m]
	d_{int} [mm]	s [mm]	d_{ext} [mm]	D_e [mm]	s_p [mm]				
20/125	16	2,0	20	125	3,0	0,20	1,1	0,20	-
25/125	20	2,3	25	125	3,0	0,20	1,2	0,31	-
32/125	26	3,0	32	125	3,0	0,20	1,6	0,53	-

* On request.

HEAT LOSS OF THE ECOALUPEX SINGLE PIPELINES - HEATING PN 10 - 2x EXTRA INSULATION

Type [mm]	U [W/(mK)]	AVERAGE OPERATING TEMPERATURE [°C]				
		40	50	60	70	80
20/125	0,073	2,20	2,94	3,67	4,41	5,14
25/125	0,083	2,49	3,32	4,15	4,98	5,81
32/125	0,104	3,11	4,15	5,18	6,22	7,26

ECOALUPEX HEATING TWIN 10 BAR



ECOALUPEX PN 10 - TWIN

ECOALUPEX TWIN - HEATING PN 10 - STANDARD INSULATION

Type [mm]	Multilayer Pipe			PE Casing		Minimum bend radius [m]	Pipe weight [kg/m]	Fluid content [l/m]	Maximum roll length (*) [m]
	d _{int} [mm]	s [mm]	d _{ext} [mm]	D _e [mm]	s _p [mm]				
20+20/110	16	2,0	20	110	3,0	0,85	1,4	0,40	-
25+25/110	20	2,3	25	110	3,0	0,85	1,6	0,63	-
32+32/110	26	3,0	32	110	3,0	0,85	2,0	1,06	-

* On request.

HEAT LOSS OF THE ECOALUPEX TWIN PIPELINES - HEATING PN 10 - STANDARD INSULATION

Type [mm]	U [W/(mK)]	AVERAGE OPERATING TEMPERATURE [°C]				
		40	50	60	70	80
20+20/110	0,118	3,53	4,71	5,89	7,07	8,25
25+25/110	0,145	4,34	5,79	7,24	8,68	10,13
32+32/110	0,195	5,86	7,82	9,77	11,73	13,68

ECOALUPEX PN 10 - TWIN

ECOALUPEX TWIN - HEATING PN 10 - EXTRA INSULATION

Type [mm]	Multilayer Pipe			PE Casing		Minimum bend radius [m]	Pipe weight [kg/m]	Fluid content [l/m]	Maximum roll length (*) [m]
	d_{int} [mm]	s [mm]	d_{ext} [mm]	D_e [mm]	s_p [mm]				
20+20/125	16	2,0	20	125	3,0	0,90	1,6	0,40	-
25+25/125	20	2,3	25	125	3,0	0,90	1,8	0,63	-
32+32/125	26	3,0	32	125	3,0	0,90	2,2	1,06	-

* On request.

HEAT LOSS OF THE ECOALUPEX TWIN PIPELINES - HEATING PN 10 - EXTRA INSULATION

Type [mm]	U [W/(mK)]	AVERAGE OPERATING TEMPERATURE [°C]				
		40	50	60	70	80
20+20/125	0,106	3,18	4,23	5,29	6,35	7,41
25+25/125	0,127	3,81	5,08	6,35	7,61	8,88
32+32/125	0,164	4,91	6,54	8,18	9,81	11,45

ECOALUPEX PN 10 - TWIN

ECOALUPEX TWIN - HEATING PN 10 - 2x EXTRA INSULATION

Type [mm]	Multilayer Pipe			PE Casing		Minimum bend radius [m]	Pipe weight [kg/m]	Fluid content [l/m]	Maximum roll length (*) [m]
	d_{int} [mm]	s [mm]	d_{ext} [mm]	D_e [mm]	s_p [mm]				
20+20/140	16	2,0	20	140	3,0	0,90	1,8	0,40	-
25+25/140	20	2,3	25	140	3,0	0,90	2,0	0,63	-
32+32/140	26	3,0	32	140	3,0	0,90	2,4	1,06	-

* On request.

HEAT LOSS OF THE ECOALUPEX TWIN PIPELINES - HEATING PN 10 - 2x EXTRA INSULATION

Type [mm]	U [W/(mK)]	AVERAGE OPERATING TEMPERATURE [°C]				
		40	50	60	70	80
20+20/140	0,097	2,92	3,89	4,86	5,83	6,80
25+25/140	0,115	3,44	4,58	5,73	6,88	8,02
32+32/140	0,143	4,30	5,73	7,17	8,60	10,03



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