PROPERTIES

HAKAthen pre-insulated MMP PE-RT II / AL / PE-RT II

HakaGerodur

Properties pipe

Outer pipe diameter [mm]	16.0	20.0	25.0	26.0	32.0
Pipe wall thickness [mm]	2.0	2.0	2.5	3.0	3.0
Inner pipe diameter [mm]	12.0	16.0	20.0	20.0	26.0
Thickness of aluminium layer [mm]	0.20	0.25	0.35	0.35	0.50
Smallest bending radius [mm] without bending device (T = 20°C)	80	100	250	260	–
Smallest bending radius [mm] with bending device (T = 20°C)	48	60	100	104	128
Weight per meter [g/m]	105	140	220	260	350
Water content [liter/m]	0.113	0.201	0.314	0.314	0.531
Linear expansion coefficient [mm/m K]	0.023	0.023	0.023	0.023	0.023
Thermal resistance [m²K/W]	0.0045	0.0044	0.0054	0.0066	0.0063
Thermal conductivity [W/m K]	0.44	0.46	0.46	0.45	0.48
Maximum operating temperature, over 50 years [°C]	70	70	70	70	70
Maximum operating temperature, max. 1 year [°C]	95	95	95	95	95
Emercency operating temperature, max. 100 hrs [°C]	110	110	110	110	110
Maximum operating pressure, over 50 years [bar]	10	10	10	10	10
Maximum operating pressure, max. 1 year [bar]	12	12	12	12	12
Surface roughness [mm]	0.007	0.007	0.007	0.007	0.007
Oxygen permeability [g/m³ d]	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1

Properties insulation foam

	Standard insulating foam 6/9–10/13 mm	GEG insulating foam 10/15/20 mm
Thermal conductivity at 40°C	0.040 W/m K	0.035 W/m K
Fire behaviour EN 13501-1	E	E
Temperature resistance	up to 95°C	up to 95°C
Water vapour diffusion resistance μ DIN 52615	≥ 6000	≥ 6000
Raw density	30 Kg/m³	30 Kg/m³
REACH compliant	yes, free of CFC	yes, free of CFC