

PROPERTIES

HAKAflex MMP



Outer pipe diameter [mm]	10	11.6	12	14	16	16	16	16	16	16	17	18	20	20	20	20	20	20	25	25	26	26	32	32	40	40	50
Pipe wall thickness [mm]	1.3	1.5	1.8	2.0	2.0	2.0	2.0	2.25	2.0	2.25	2.0	2.0	2.0	2.0	2.25	2.25	2.5	2.5	2.5	2.5	3.0	3.0	3.0	3.0	3.5	4.0	4.0
Inner pipe diameter [mm]	7.4	8.6	8.4	10.0	12.0	12.0	12.0	11.5	12.0	11.5	13.0	14.0	16.0	16.0	15.5	15.5	15.0	15.0	20.0	20.0	20.0	20.0	26.0	26.0	33.0	32.0	42.0
thickness of aluminium layer [mm]	0.20	0.20	0.20	0.18	0.15	0.18	0.20	0.20	0.40	0.40	0.20	0.25	0.25	0.40	0.25	0.40	0.25	0.40	0.35	0.50	0.35	0.50	0.40	0.50	0.50	0.50	0.60
Smallest bending radius [mm] without bending device (T = 20 °C)	50	58	60	70	80	80	80	80	80	80	85	90	100	100	100	100	100	100	250	250	260	260	—	—	—	—	—
Smallest bending radius [mm] with bending device (T = 20 °C)	30	35	36	42	48	48	48	48	48	48	51	54	60	60	60	60	60	60	100	100	104	104	128	128	160	160	200
Weight per meter [g / m]	44	60	70	87	100	103	105	113	120	144	110	125	140	155	150	165	160	175	220	240	260	280	330	350	500	550	700
Water content [liter /m]	0.043	0.058	0.055	0.079	0.113	0.113	0.113	0.104	0.113	0.104	0.133	0.154	0.201	0.201	0.189	0.189	0.177	0.177	0.314	0.311	0.314	0.314	0.531	0.531	0.855	0.804	1.385
Linear expansion coefficient [mm / m K]	0.023	0.023	0.023	0.023	0.023	0.023	0.023	0.023	0.023	0.023	0.023	0.023	0.023	0.023	0.023	0.023	0.023	0.023	0.023	0.023	0.023	0.023	0.023	0.023	0.023	0.023	0.026
Thermal resistance [m ² K / W]	0.0021	0.0033	0.0041	0.0046	0.0046	0.0046	0.0045	0.0050	0.0040	0.0046	0.0045	0.0044	0.0041	0.0040	0.0051	0.0046	0.0051	0.0053	0.0051	0.0051	0.0066	0.0061	0.0065	0.0061	0.0075	0.0081	0.0085
Thermal conductivity [W / m K]	0.47	0.46	0.45	0.44	0.43	0.44	0.44	0.45	0.50	0.49	0.44	0.46	0.46	0.50	0.45	0.49	0.44	0.48	0.46	0.50	0.45	0.48	0.46	0.48	0.47	0.46	0.47
Maximum operating temperature, over 50 years [°C]	70	70	70	70	60	60	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70
Maximum operating temperature, max. 1 year [°C]	95	95	95	95	80	80	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95
Emergency operating temperature, max. 100 hrs [°C]	110	110	110	110	95	95	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110
Maximum operating pressure, over 50 years [bar]	10	10	10	10	6	6	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	8	10	10	10	10
maximum operating pressure, max. 1 year [bar]	12	12	12	12	8	8	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	10	12	12	12	12
Surface roughness [mm]	0.007	0.007	0.007	0.007	0.007	0.007	0.007	0.007	0.007	0.007	0.007	0.007	0.007	0.007	0.007	0.007	0.007	0.007	0.007	0.007	0.007	0.007	0.007	0.007	0.007	0.007	
Oxygen permeability [g/m ³ d]	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	