



METAL COMPOSITE PIPE MMP **HAKAthen PE-RT II and PE-Xc**

The combination of plastic and aluminium forms a unique synergy with outstanding properties and application possibilities for building technology. Plastic stands for flexibility, maximum tightness and chemical resistance. Aluminium impresses with low linear expansion as well as pressure and temperature resistance – the perfect combination for long-lasting and durable technology.

Also available as an OEM/private label product in all standard dimensions, coil lengths and as bar stock.

APPLICATION AREAS

- drinking water installation
- heating installation
- surface heating
- cooling system
- gas interior installation
- radiator connection
- compressed air

ADVANTAGES

- aluminium inner pipe longitudinally butt-welded using laser welding technology, no oxygen diffusion
- high temperature and pressure resistance for all heating and plumbing applications
- resistant to numerous chemicals
- high flexibility and yet dimensionally stable laying
- no incrustation thanks to the smooth inner pipe surface

LAYER COMPOSITION

- 1 Outer layer of PE-RT Typ II (or PE-Xc)
- 2 Adhesion promotor
- 3 Aluminium-inner pipe, longitudinally butt-welded with laser
- 4 Adhesion promotor
- 5 Inner layer of PE-RT Typ II (or PE-Xc)



PROPERTIES MMP PE-RT II (MMP PE-Xc can be found on our website)

Outer pipe diameter [mm]	10	12	12	14	16	16	16	16	16	17	18	20	20	20	20	20	20	25	25	26	26	32	32	40	40	50	63		
Pipe wall thickness [mm]	1.3	1.4	1.8	2	2	2	2.2	2.25	2	2.25	2	2	2	2.25	2.25	2.5	2.5	2.8	2.5	2.5	3	3	3	3	3.5	4	4	4.5	
Inner pipe diameter [mm]	7.4	9.2	8.4	10	12	12	11.6	11.5	12	11.5	13	14	16	16	15.5	15.5	15	15	14.4	20	20	20	26	26	33	32	42	54	
thickness of aluminium layer [mm]	0.15	0.15	0.15	0.18	0.15	0.2	0.2	0.2	0.4	0.4	0.2	0.25	0.25	0.4	0.25	0.4	0.25	0.4	0.25	0.35	0.5	0.35	0.5	0.4	0.5	0.5	0.6	0.8	
Smallest bending radius [mm] without bending device (T = 20 °C)	50	60	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	36	36	42	48	48	48	48	48	48	51	54	60	60	60	60	60	60	88	88	88	88	128	128	160	160	200	252	
Weight per meter [g / m]	41	55	67	87	100	105	112	113	120	144	110	125	140	155	150	165	160	175	176	220	240	260	280	330	350	500	550	700	1100
Water content [liter / m]	0.043	0.066	0.055	0.079	0.113	0.113	0.106	0.104	0.113	0.104	0.133	0.154	0.201	0.201	0.189	0.189	0.177	0.177	0.163	0.314	0.314	0.314	0.314	0.531	0.531	0.855	0.804	1.385	2.29
Maximum operating temperature, over 50 years [°C]	70	70	70	70	60	70	70	70	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	95	95	95	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	110	110	110	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	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	8	10	10	10	10	10
maximum operating pressure, max. 1 year [bar]	12	12	12	12	8	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	10	12	12	12	12	12

Version 31.07.24 / Errors and changes reserved.

You can find further product properties on our website. Other dimensions on request.

Approvals / Certifications

Our portfolio is constantly being extended.

You can find the current status on our website.

