



AS/NZS
4020



Mandals Aquaman M is designed for the effective rehabilitation of drinking water mains in medium pressure systems. The liner is drinking water approved and is designed to have a lifespan of more than 50 years.

With Mandals Aquaman M we offer a more sustainable solution for the rehabilitation of old pipelines with minimal disruption to traffic, pedestrians, and the environment in general, with an improved CO₂ footprint and HSE performance. The liner is tested and approved for use with potable water, and it is flexible in terms of the diameter variation of the original pipe, effortlessly passing bends even at long section lengths. Aquaman M has a lower pressure series in Aquaman L.

Installation

Mandals supplies the liner leak-proof tested, and tape wrapped in a "U"-shape. Prior to installation a regular cleaning procedure is required of the host pipe and condition controlled by CCTV inspection.

The liner is pulled through the host pipe by using a winch and can be installed in pipes having bends up to 45° (R/D ≥ 5)¹. No steaming is needed to cure the liner, only a small amount of pressure is required to break the tape. Thereafter the liner is re-coupled and connected again to the existing infrastructure and the system is ready to be put back into operation.

Features

- Resistant to a wide range of chemicals.
- Full diameter recovery after pressure release.
- Excellent hydrolysis and fungus resistance.
- Outstanding wear and tear properties.
- Accelerated aging tests performed at a chlorine dosage up to 4ppm indicate a Service Lifetime of more than 50 years².

Construction

- Mandals Aquaman M is a loose-fit, non-interactive liner which will absorb all internal pressure while in operation.
- The reinforcement is made of a seamless fabric with aramid as load-carrying fibers.
- The "extrusion through the weave" production technology gives excellent bonding between thermoplastic polyether-based polyurethane cover and lining as well as firmly encapsulating the circular woven aramid reinforcement
- The liner complies with ISO11295:2022 Lining with inserted hoses and ASTM F3708-25.

Properties

- Length up to 400m.
- Color options: Blue (standard).
- Max. recommended operational temperature is +23° (+73°F) at a 4-9 pH range.
- NSF/ANSI/CAN61 and AS/NZS 4020 certifications for potable water.

Aquaman M

Article Number	-	AQM150	AQM200	AQM250	AQM300	AQM350
Nominal Pipe size DN	mm Inch	150 6	200 8	250 10	300 12	350 14
Inner Diameter	mm Inch	123 4.84	154 6.57	212 8.35	258 10.16	297 11.70
Wall Thickness	mm Inch	4.6 0.18	4.6 0.18	4.8 0.19	4.8 0.19	5.0 0.20
Nominal Weight	kg/m lbs/ft	2.10 1.40	2.9 1.93	3.8 2.51	4.5 3.00	5.3 3.56
Burst Pressure (BP)	bar psi	140 2030	100 1450	75 1088	64 928	50 725
MOP⁴	bar psi	56 812	40 580	30 435	26 377	20 290
Actual Total Tensile Strength	x1000 kg x1000 lbs	45 100	62 137	77 172	95 211	109 242
Length Extension	%	<1	<1	<1	<1	<1
Outer Diameter at 10% of BP³	mm Inch	137 5.39	181 7.13	231 9.09	283 11.14	329 12.95
Outer Diameter at MOP³	mm Inch	140 5.51	184 7.24	234 9.21	290 11.42	335 13.19

Note: ¹The sharpest bend angle and corresponding R/D ratio of the pipeline system will impact and set the Maximum Operating Pressure (MOP). A 45° bend (R/D = 5.5) will entail a 45% reduction of MOP of the rehabilitated pipeline system. ²Service Lifetime will depend on important factors such as proper and correct installation, condition of the existing pipe, dosage of and type of disinfectants used. ³Tolerances according to ASTM F3708-25. For questions about chemical resistance please check [mandals.com/support](https://www.mandals.com/support).