**lilac** was developed exclusively for the field of water recycling and is officially called **aquatherm lilac pipe**. In countries that are highly committed to the environment, like Australia and California, it is already standard to reduce daily water consumption by using recycled water when possible. Now lilac is also regarded in other countries as a standard colour for greywater pipes, giving us both the colour and name for our reclaimed water service lines.

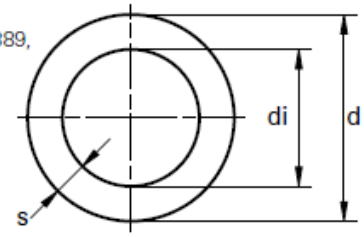
# aquatherm lilac pipe

**Pipe system made of polypropylene**
for reclaimed water

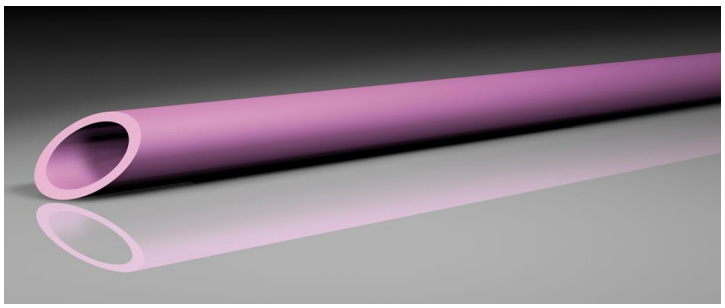
| article-no. | old brand name | new branding structure | | | | |
|---|---|---|---|---|---|---|
| | | new brand name | | Standard Dimension Ratio | structure of pipe | material |
| | | company | system | | | |
| 9010808 . . . 9010226 | aquatherm lilac | aquatherm | lilac pipe | SDR 7,4/ SDR 11 | S | PP-R |

## aquatherm lilac pipe - SDR 11 S

Structure of pipe: S (single)
Material: fusiolen PP-R
Pipe series: SDR 7,4/S3,5 & SDR 11/S 5
Standards: DIN 8077/78, DIN EN ISO 15874, ASTM F 2389, CSA B 137.11, NSF 14
Colour: violet
Form supplied: 4 m straight lengths, also* in coils
Packing Unit: PU in meter
Application:




| SDR | Art.-No. | Dimension d [mm] | Wall thickness s [mm] | Internal diameter di [mm] | Water content [l/m] | Weight [kg] | DN | PU [m] | Price € m/pc |
|---|---|---|---|---|---|---|---|---|---|
| 7,4 | 9010808 | 20 | 2,8 | 14,4 | 0,163 | 0,152 | 15 | 100 | |
| | 9010810 | 25 | 3,5 | 18,0 | 0,254 | 0,226 | 20 | 100 | |
| 11 | 9010212 | 32 | 2,9 | 26,2 | 0,539 | 0,265 | 25 | 40 | |
| | 9010214 | 40 | 3,7 | 32,6 | 0,834 | 0,415 | 32 | 40 | |
| | 9010216 | 50 | 4,6 | 40,8 | 1,307 | 0,645 | 40 | 20 | |
| | 9010218 | 63 | 5,8 | 51,4 | 2,074 | 1,015 | 50 | 20 | |
| | 9010220 | 75 | 6,8 | 61,4 | 2,959 | 1,415 | 65 | 20 | |
| | 9010222 | 90 | 8,2 | 73,6 | 4,252 | 2,045 | 80 | 12 | |
| | 9010224 | 110 | 10,0 | 90,0 | 6,359 | 3,136 | - | 8 | |
| | 9010226 | 125 | 11,4 | 102,2 | 8,199 | 3,927 | 100 | 4 | |



## aquatherm green pipe, blue pipe & lilac pipe SDR 11 S

Table to determine support intervals in conjunction with temperature and outside diameter.

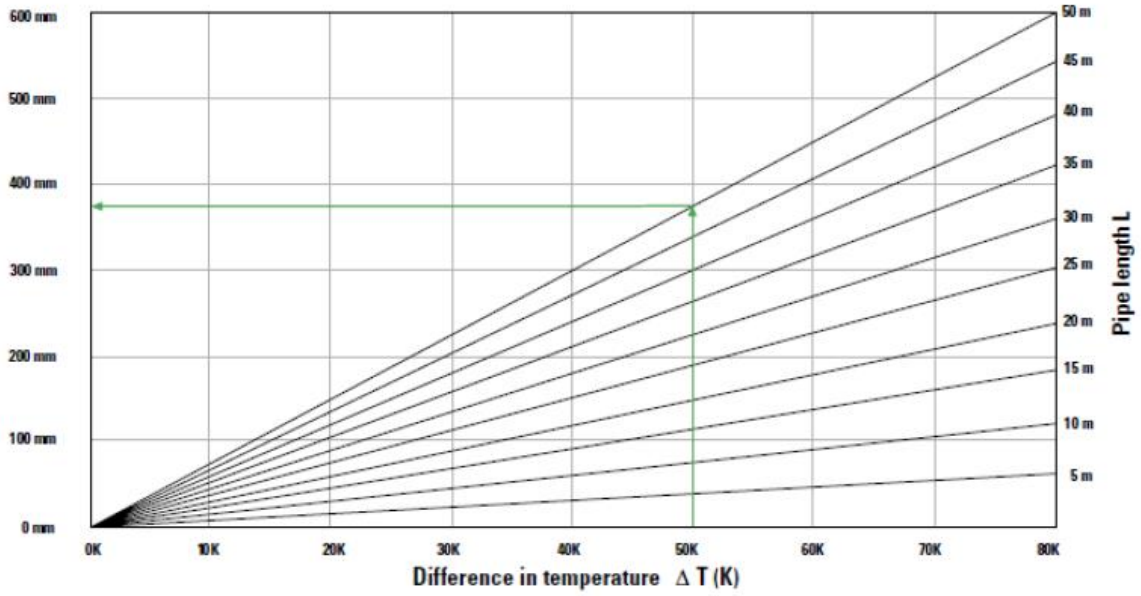
| Pipe diameter d (mm) | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 20 | 25 | 32 | 40 | 50 | 63 | 75 | 90 | 110 | 125 | 160 | 200 | 250 | 315 | 355 |
| Support intervals in cm | | | | | | | | | | | | | | |
| 60 | 75 | 90 | 100 | 120 | 140 | 150 | 160 | 180 | 200 | 260 | 265 | 275 | 280 | 285 |

## aquatherm green pipe & aquatherm blue pipe
**(without faser)**

The linear expansion, described on the preceding pages, can be taken from the following tables and graphs.

**Linear expansion** $\Delta L$ in [mm]: green- and blue pipe - $\alpha$ = 0,150 mm/mK

| Pipe length | Difference in temperature $\Delta T = T_{operating\ temperature} - T_{installation\ temperature}$ | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 10 K | 20 K | 30 K | 40 K | 50 K | 60 K | 70 K | 80 K |
| | Linear expansion $\Delta L$ (mm) | | | | | | | |
| 5 m | 8 | 15 | 23 | 30 | 38 | 45 | 53 | 60 |
| 10 m | 15 | 30 | 45 | 60 | 75 | 90 | 105 | 120 |
| 15 m | 23 | 45 | 68 | 90 | 113 | 135 | 158 | 180 |
| 20 m | 30 | 60 | 90 | 120 | 150 | 180 | 210 | 240 |
| 25 m | 38 | 75 | 113 | 150 | 188 | 225 | 263 | 300 |
| 30 m | 45 | 90 | 135 | 180 | 225 | 270 | 315 | 360 |
| 35 m | 53 | 105 | 158 | 210 | 263 | 315 | 368 | 420 |
| 40 m | 60 | 120 | 180 | 240 | 300 | 360 | 420 | 480 |
| 45 m | 68 | 135 | 203 | 270 | 338 | 405 | 473 | 540 |
| 50 m | 75 | 150 | 225 | 300 | 375 | 450 | 525 | 600 |



## PERMISSIBLE WORKING PRESSURE - POTABLE WATER

Fluid transported: water acc. to DIN 2000

| Temperature | Service life | aquatherm green pipe SDR 11 S / aquatherm lilac pipe SDR 11 S | | aquatherm green pipe SDR 7,4 S | | aquatherm green pipe SDR 6 S / aquatherm green pipe SDR 7,4 MS | | aquatherm green pipe SDR 7,4 MF | | aquatherm green pipe SDR 9 MF RP | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Permissible working pressure in bar and (psi) | | | | | | | | | |
| | | bar | (psi) | bar | (psi) | bar | (psi) | bar | (psi) | bar | (psi) |
| 20 °C 68 °F | 1 | 15,0 | (218) | 23,8 | (345) | 30,0 | (435) | 28,6 | (415) | 25,0 | (363) |
| | 5 | 14,1 | (205) | 22,3 | (323) | 28,1 | (408) | 26,8 | (389) | 24,2 | (351) |
| | 10 | 13,7 | (199) | 21,7 | (315) | 27,3 | (396) | 26,1 | (379) | 23,9 | (347) |
| | 25 | 13,3 | (193) | 21,1 | (306) | 26,5 | (384) | 25,3 | (367) | 23,5 | (341) |
| | 50 | 12,9 | (187) | 20,4 | (296) | 25,7 | (373) | 24,5 | (355) | 23,1 | (335) |
| 30 °C 86 °F | 1 | 12,8 | (186) | 20,2 | (293) | 25,5 | (370) | 24,3 | (352) | 21,7 | (315) |
| | 5 | 12,0 | (174) | 19,0 | (276) | 23,9 | (347) | 22,8 | (331) | 21,0 | (305) |
| | 10 | 11,6 | (168) | 18,3 | (265) | 23,1 | (335) | 22,0 | (319) | 20,6 | (299) |
| | 25 | 11,2 | (162) | 17,7 | (257) | 22,3 | (323) | 21,3 | (309) | 20,2 | (293) |
| | 50 | 10,9 | (158) | 17,3 | (251) | 21,8 | (316) | 20,7 | (300) | 20,0 | (290) |
| 40 °C 104 °F | 1 | 17,1 | (248) | 21,5 | (312) | 20,5 | (297) | 18,7 | (271) | | |
| | 5 | 16,0 | (232) | 20,2 | (293) | 19,2 | (278) | 18,0 | (261) | | |
| | 10 | 15,6 | (226) | 19,6 | (284) | 18,7 | (271) | 17,7 | (257) | | |
| | 25 | 15,0 | (218) | 18,8 | (273) | 18,0 | (261) | 17,4 | (252) | | |
| | 50 | 14,5 | (210) | 18,3 | (265) | 17,5 | (254) | 17,0 | (247) | | |
| 50 °C 122 °F | 1 | 14,5 | (210) | 18,3 | (265) | 17,5 | (254) | 15,9 | (231) | | |
| | 5 | 13,5 | (196) | 17,0 | (247) | 16,2 | (235) | 15,3 | (222) | | |
| | 10 | 13,1 | (190) | 16,5 | (239) | 15,7 | (228) | 15,1 | (219) | | |
| | 25 | 12,6 | (183) | 15,9 | (231) | 15,2 | (220) | 14,8 | (215) | | |
| | 50 | 12,2 | (177) | 15,4 | (223) | 14,7 | (213) | 14,5 | (210) | | |
| 60 °C 140 °F | 1 | 12,2 | (177) | 15,4 | (223) | 14,7 | (213) | 13,5 | (196) | | |
| | 5 | 11,4 | (165) | 14,3 | (207) | 13,7 | (199) | 13,0 | (189) | | |
| | 10 | 11,0 | (160) | 13,8 | (200) | 13,2 | (191) | 12,8 | (186) | | |
| | 25 | 10,5 | (152) | 13,3 | (193) | 12,6 | (183) | 12,5 | (181) | | |
| | 50 | 10,1 | (146) | 12,7 | (184) | 12,1 | (175) | 12,3 | (178) | | |
| 65 °C 149 °F | 1 | 11,6 | (168) | 14,6 | (212) | 13,9 | (202) | 12,4 | (180) | | |
| | 5 | 10,8 | (157) | 13,6 | (197) | 12,9 | (187) | 11,9 | (173) | | |
| | 10 | 10,4 | (151) | 13,1 | (190) | 12,5 | (181) | 11,7 | (170) | | |
| | 25 | 10,0 | (145) | 12,6 | (183) | 12,0 | (174) | 11,4 | (165) | | |
| | 50 | 8,8 | (128) | 11,1 | (161) | 10,6 | (154) | 11,2 | (162) | | |
| 70 °C 158 °F | 1 | 10,3 | (149) | 13,0 | (189) | 12,4 | (180) | 11,4 | (165) | | |
| | 5 | 9,5 | (138) | 11,9 | (173) | 11,4 | (165) | 10,9 | (158) | | |
| | 10 | 9,3 | (135) | 11,7 | (170) | 11,1 | (161) | 10,7 | (155) | | |
| | 25 | 8,0 | (116) | 10,1 | (146) | 9,6 | (139) | 10,5 | (152) | | |
| | 30 | 7,0 | (102) | 8,8 | (128) | 9,3 | (135) | 10,3 | (149) | | |
| | 50 | 6,7 | (97) | 8,5 | (123) | 8,1 | (117) | 10,2 | (148) | | |

Potable water (cold) / Potable water (warm)

**Faser and Stabi composite pipe: high working stress at lower wall thickness and higher flow rate**

**SDR –** Standard Dimension Ratio (diameter/wall thickness ratio)
**S –** single layer
**MS –** multilayer stabi - integrated aluminium-layer
**MF –** multilayer faser
**MF RP –** multilayer faser - raised pressure (resistance)

The determination of the allowable pressures resulted from the specific conditions to which pipe system components in the drinking water domestic installation are exposed to. Limiting factors such as increased flow rates, the use of disinfectants, increased content of oxygen, etc. were considered by the use of the appropriate safety factors.
For fittings of butt-welded pipe segments a reduction factor of 0.75 (reduction of the table values by 25%) is effective.