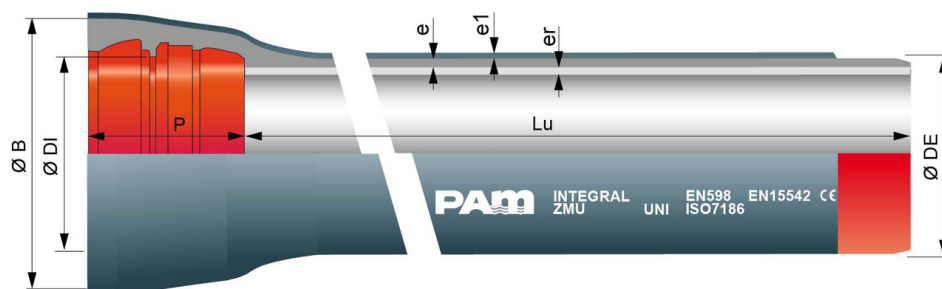


## INTEGRAL ZMU pipes DN150 to 600 with UNIVERSAL STANDARD socket

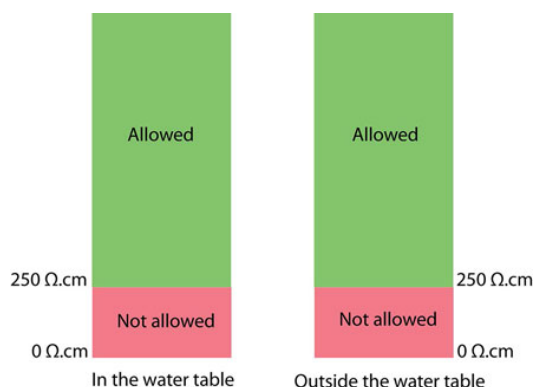


| DN  | Lu (m) | e (mm) | er (mm) | e1 (mm) | ØDE (mm) | ØDI (mm) | P (mm) | ØB (mm) | Mass (kg/m) | PFA    | References |
|-----|--------|--------|---------|---------|----------|----------|--------|---------|-------------|--------|------------|
| 150 | 5.97   | 6.2    | 4       | 5       | 170      | 173.4    | 148    | 230     | 34.40       | 48 bar | 246036     |
| 200 | 5.97   | 6.5    | 4       | 5       | 222      | 225.2    | 155    | 290     | 47.10       | 43 bar | 227018     |
| 250 | 5.97   | 6.8    | 4       | 5       | 274      | 276.8    | 166    | 350     | 60.90       | 39 bar | 246041     |
| 300 | 5.97   | 7.4    | 4       | 5       | 326      | 328.8    | 180    | 408     | 77.70       | 34 bar | 234903     |
| 400 | 5.97   | 8.1    | 5       | 5       | 429      | 431.9    | 176    | 510     | 109.70      | 20 bar | 274165     |
| 500 | 5.97   | 9.3    | 5       | 5       | 532      | 535      | 200    | 625     | 155.90      | 16 bar | 230157     |
| 600 | 5.97   | 10.9   | 5       | 5       | 635      | 638.2    | 209    | 740     | 208.20      | 16 bar | 246044     |

### Legend:

- DN: nominal diameter
- Lu: laying length, in m
- e: thickness according to EN598 + A1 – August 2009, in mm
- er: thickness of the cement mortar, in mm
- e1: external thickness of ZMU coating, in mm (cement mortar with acrylic fibers and resin)
- ØDE: external nominal diameter of the barrel according to EN598 + A1 – August 2009, in mm
- ØDI: internal nominal diameter of the socket, in mm
- P: nominal depth of the socket, in mm
- ØB: nominal diameter of the socket, in mm
- Mass: total mass per meter (including cement coating and socket), determined with the nominal thickness, in kg/m
- Reference: commercial reference Saint-Gobain PAM

## Field of use:

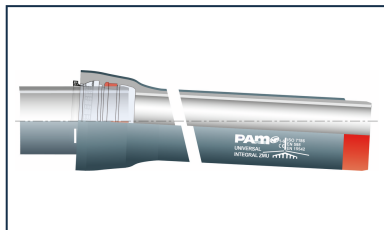


- Separate sewer system and combined sewer system
- Application: gravity flow and rising main sewerage systems
- Type of effluent: domestic wastewater and rainwater
- Perfectly watertight
- For effluents between pH4 and pH12
- For most of the soils, including rocky soils, those pipes can be laid with the native soils backfill.
- Resistivity of the soils:

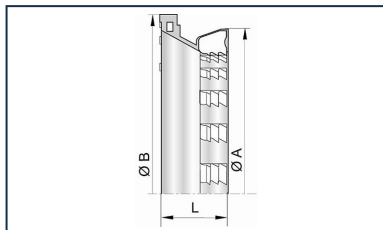
## Main characteristics:

- External coating: a layer of zinc-aluminium alloy enriched with copper Zn85Al15 (Cu), with surface density of 400 g/m<sup>2</sup> covered with a protective red (RAL 3011) layer AQUACOAT 80 µm (mini average), without VOC and without BPA + grey cement mortar ZMU with polymeric additiv and reinforced with PE fibers
- Internal lining: aluminous cement mortar CAL
- Socket coating: zinc rich paint 40 µm or zinc-aluminium 200 g/m<sup>2</sup> + red AQUACOAT 160 µm (mini average)
- Spigot coating: zinc-aluminium (Cu) 400 g/m<sup>2</sup> + red AQUACOAT 160 µm (mini average)
- Standard Gasket in Nitrile, EN 681-1, WG type
- EN 598 / CE Marking
- Declaration of performances [DoP-INTEGRAL005EN](#)
- Designed in accordance with applicable regulations:
  - NF EN 476: general stipulations regarding components used in systems
  - NF EN 752: design of sewerage projects
  - NF EN 1610: acceptance of structures

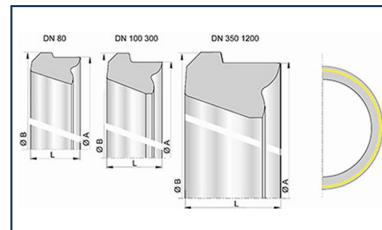
## Linked products



Kit Universal Standard  
Pipe INTEGRAL ZMU +  
Universal Standard Vi  
Joint



UNI Vi Locked Ring  
DN80-700



Nitrile STD Gasket  
DN80-2000



Lubricating paste -  
BLUPAM



Lubricating paste -  
NATURAL, INTEGRAL,  
and PLUVIAL ranges

*The information on this sketch is, to the best of our knowledge correct at the time of printing. However Saint-Gobain are constantly looking at ways of improving their products and services therefore reserve the right to change without prior notice, any of the data shown. Any orders placed will be subject to our Standard Conditions of Sale, available on request.*