MOLECOR

Smart water

SANECOR

Maximum efficiency for sewage networks

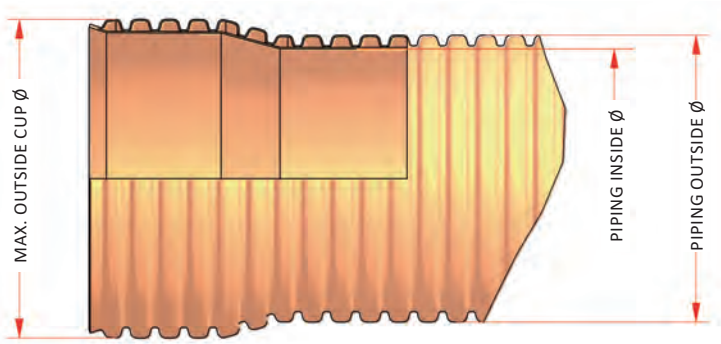




Piping range dimensions

SANECOR® piping was made up of two layers, he outer being corrugated and the inner smooth. Right from the beginning, this piping was designed to be a highly sustainable product intended to fully satisfy sewage network requirements.

ND (mm)	Piping outside Ø	Piping inside Ø	Maximum outside cup Ø	Code
160	160	146	182	1111818
200	200	182	228	1111819
250	250	228	284	1111820
315	315	285	358	1001998
400	400	364	448	1111822
500	500	452	563	2130991
630	649	590	734	1002147
800	856	775	954	1002148
1.000	1.072	970	1.222	1002149
1.200	1.220	1.103	1.379	1127518



* The pipe is available in both 6 and 3 m, and is supplied in tile color (RAL 8023).

SANECOR®, a global and versatile system for sewage systems

SANECOR® PVC pipes with structured double layer wall, smooth inside and corrugated outside: nominal diameters (in mm) ND 160 – ND 1200, in 6 and 3 m lengths. Nominal rigidity SN8 (≥ 8 kN/m²).

The system is completed with:

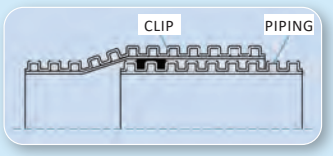
- Special PVC parts for the entire range of diameters: sleeves, elbows, branches, extensions and covers.
- SN8 corrugated parts in 630 ND to 1.200 ND.
- Connections using elastomer clips for the entire range of diameters, mechanical clips with elastic seal and junctions stuck at 45º and 90º.
- Prefabricated inspection manholes with ready-installed rungs in diameters 800, 1.000 and 1.200, and depths of up to 9 meters. Connectivity to the manifold can be made by direct connections to the body of the manhole, by means of a base that can be fitted to the key of the manifold, either straight or with a change of direction, and by means of connecting pieces with full bore. Manholes and inspection wells in 600 y 800 diameters are also included.
- Waste box connection, check or siphonic.
- It is also possible to manufacture a wide range of customized traps and manholes for multiple applications: sample connections, grease separators, siphon traps, manholes, etc.

Características de la tubería SANECOR®

- **Short and long term rigidity**
  SANECOR® pipe, with SN8 nominal stiffness, achieves very high actual values of specific circumferential stiffness (**SCR**) of around 10 kN/m². This allows to withstand significant earth loads (great depths) and traffic loads without deformation. Moreover, the stiffness remains high in the long term, due to the low creep coefficient of PVC, unlike other plastics which, having high creep coefficients, suffer significant deformations over time, as their stiffness values drop too much, as shown in the graph below.

  The creep coefficient indicates the evolution of the elastic modulus (E_c) dof plastic materials over time, and this evolution directly conditions the value of the stiffness over time, as shown in the formula above, where "I" is the moment of inertia, which is a function of the pipe wall thickness, and "D_m", the mean diameter.

- **Chemical resistance**
  SANECOR® pipe has very high resistance to most products present in wastewater. PVC is especially resistant to the attack of grease, mineral oils and fuels, which are so frequent in urban runoff water. Furthermore, this pipe is inert and cannot rust due to aerobic corrosion or suffer anaerobic corrosion caused by the components and microorganisms of the circulating water and the surrounding soil.



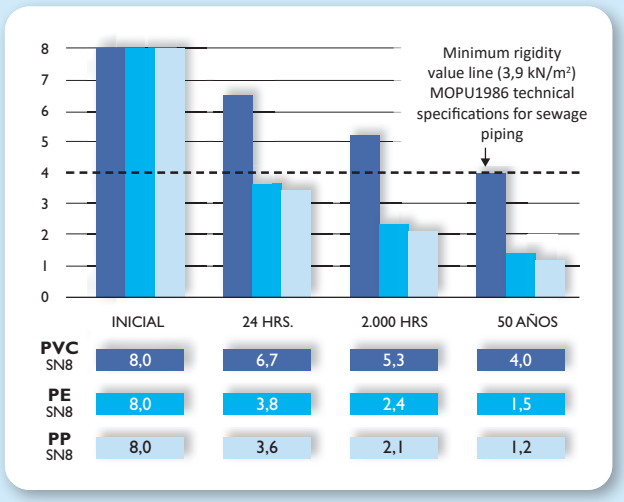
PIPING PRESSURE FITTING JOINT


SINGLE ANCHOR JOINT (DN630-1200)


DOUBLE ANCHOR JOINT (DN160-500)

- **Abrasion resistance**
  The low roughness coefficient of this pipe greatly favours its abrasion behaviour. In addition, the lack of porosity of the internal surface prevents incrustation of materials contained in the wastewater and rainwater.

- **Joint sealing**
  SANECOR® system uses a socket joint, in which the socket, integrated into the pipe, maintains the sealing properties of the pipe.

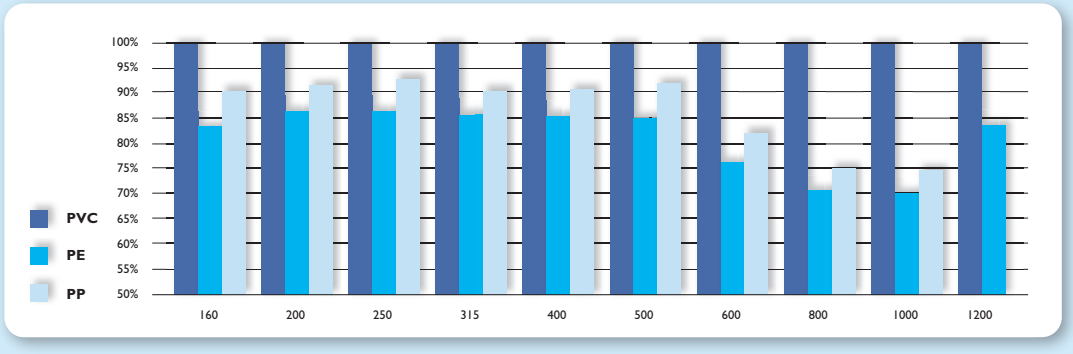


DEVELOPMENT OF RIGIDITY RCE = (EXL)DM3 OVER TIME ACCORDING TO DIN 16961.

- **Hydraulic capacity**
  In addition to the low friction of the water with the conduction that plastic materials have, SANECOR® pipe has external diameters greater than the nominal value in DN > 500 mm, and it also has profiles of low thickness compared to other similar pipes. This is due to the fact that, in the mentioned stiffness formula, the moment of inertia does not require a high value, as PVC has a high elastic modulus. The hydraulic capacity of SANECOR® pipe is the highest of SN8 structured pipes, as can be seen in the graph below.

- **Performance, cost and installation safety**
  This pipe is lightweight and results in very low handling and assembly costs, as there are significant savings in both machinery and personnel required during installation. For the same reason, the execution performance is very high, which results in a reduction of the time and therefore of the fixed costs of the work. Another advantage of the low weight of these pipes is the greater safety of the personnel carrying out the installation.

  For deep pipelines where the shoring of the trench walls is necessary, the dwell time of the operators is critical for site safety.



AVERAGE FLOW RATE DIFFERENCES IN PERCENTAGE OF SN8 CORRUGATED PIPE (100% BASIS FOR SANECOR® PIPE)

SANECOR® piping technical sheet

PHYSICAL AND CHEMICAL FEATURES	
Density:	1.350 - 1.520 kg/m^3
Linear dilation coefficient:	8 x 10^{-5} m/m °C
Thermal conductivity:	0,13 kcal/m.h. °C
Specific heat:	0,2 – 0,3 cal/g. °C
Vicat softening temperature:	≥ 79 °C, according to UNE-EN 727
pH limits:	Between 3 and 9, at 20 °C
Dichloromethane resistance:	At 15°C, during 30 min, according to UNE-EN 580
Oven test:	According to ISO 12091

MECHANICAL FEATURES	
Annular Rigidity (also called SCR = Specific Circumferential Rigidity):	RCE ≥ 8kN/m^2, according to UNE-EN ISO 9969
Creep coefficient at 2 years:	≤ 2,5, according to UNE-EN ISO 9967. The actual value varies between 1.6 and 1.8
Impact strength According to UNE-EN 744:	(Clock sphere method)
Annular flexibility:	30% deformation in DN160 to D315 and 20% in DN400 à DN1200, according to UNE-EN ISO 13968

HYDRAULIC FEATURES	
Sealing with internally pressurised elastomer joint:	Tests at 0.05 MPa with angular deviation and diametral deflection, according to UNE-EN 1277
Sealing with joint in internal depression:	Tests at-0.03 MPa with angular deviation and diametral deflection, according to UNE-EN 1277
Equivalent rugosity (Prandtl-Colebrook):	K= 0.01 mm (for clean water). K= 0.10 ÷ 0,25 mm (for waste water)

Product sustainability

Regarding corrugated piping, the highest energy saving is that of SANECOR® SN8 corrugated piping because despite its weight is greater than PE and PP piping, it optimises the diameter required in relation to the latter two and it has lower manufacturing consumption both in raw materials and the piping. For the same reason, it is the most ecological piping from the CO_2 atmospheric emission point of view.

Standards and certification

The product standard for SANECOR® corrugated PVC piping is UNE-EN 13476: “Channelling systems in plastic materials for buried non-pressurised evacuation and sewage”. SANECOR® piping bears AENOR marking according to Certificate No 001/005573. Furthermore, the production centre holds AENOR Management Quality Certificate UNE-EN ISO 9001, No ER-0440/1996, and Environmental Management UNE-EN ISO 14001, No GA-2001/0255.

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