

PVC 4 PIPES



PVC PIPES

PVC PIPES FOR A RESILIENT EUROPE



Climate change requires smart water management to cope with water stress, droughts and increasing rainfall. At the same time, a rapid transition to renewable energy is necessary if Europe is to achieve its climate objectives. We also need to grow more food for more people on farmland that is turned into cities at rapid speed. PVC pipes have a key role to play in addressing major sustainability challenges.

Clean water and sanitation

Clean water is one of Earth's most precious resources. PVC water pipes preserve drinking water quality and prevent unnecessary water waste from source to consumer. Studies demonstrate PVC water pipes have no detectable migration or microbial growth. Surveys demonstrate that PVC water mains have typically lower break rates than other pipe materials. PVC soil and sewer pipes ensure the greywater is transported safely to the treatment plan. Comparative studies from several countries document PVC water and sewer pipes have the lowest Total Cost of Ownership compared to non-plastic materials.

Rainwater

With climate change comes increasing rainfall in many regions. Durable PVC gutters and downpipes lead the water away from buildings and channel it into a rainwater tank for several uses, while PVC stormwater pipes ensure it is kept out of the general sewer system.





Green energy

PVC pipes have long been used to transport natural gas, and studies supported by PVC4Pipes confirm that both the existing PVC gas grid and new PVC pipe technologies are suitable for the distribution of green hydrogen, a crucial element in Europe's energy transition. PVC pipes also support the production of biogas, and PVC power ducts play a vital role in delivering green energy.

Irrigation and water reuse

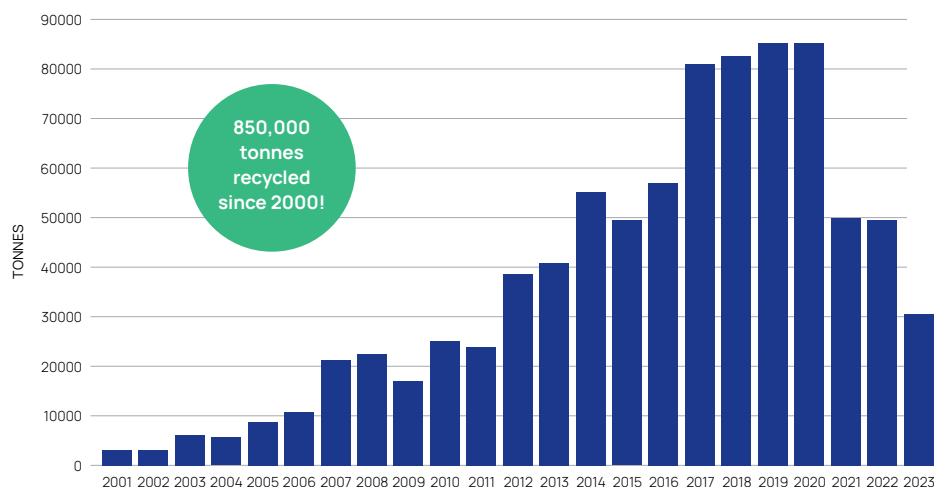
Many parts of the world are experiencing drought conditions due to climate change. PVC pipes help turn arid soil into fertile farmland and aid in reuse of reclaimed wastewater.

Urban farming

PVC pipes make local food production possible for the growing cities. Safe and durable pipes and gutters are chosen by professional urban farmers, while creative DIY'ers reuse off-cuts as sustainable plant containers. The European PVC industry has supported several projects that reuse pipes for urban gardens.



PVC Pipes and Fittings Recycled Through VinylPlus Since 2000



Note: The decrease since 2021 is mainly explained by new definitions of pre-consumer waste and, secondly, by challenging market conditions for recycled plastics.

PVC PIPES IN A CIRCULAR ECONOMY

PVC is an easily recyclable material, and pipes and fittings are no exception. Several studies confirm PVC pipes can be physically (mechanically) recycled several times without loss of functional properties.

Since 2000, the European PVC industry, through VinylPlus®, has made a targeted effort to increase collection and recycling of PVC pipes. As a result, 850,000 tonnes have been recycled. PVC pipes are also a major uptake for recycled PVC. In 2023, nearly 30,500 tonnes of recycled rigid PVC were safely used in new pipes, primarily as a middle layer in three-layer sewer pipes.

Low carbon today, zero carbon tomorrow

PVC is intrinsically a low carbon plastic, as 57% of its molecular weight is chlorine derived from common salt. Thanks to innovation and investments, bio-attributed and bio-circular PVC resin and non-fossil additives are available on the market and are already being used in pipes.

Through VinylPlus, the European PVC industry is committed to advancing towards carbon neutrality, which is one of the targets in the VinylPlus 2030 Commitment.

ABOUT PVC4PIPES

PVC4Pipes is the ECVM value chain platform to communicate about the use of PVC in pipe systems in the global market. Our partners come from all parts of the industry's value chain. PVC4Pipes welcomes companies which produce raw materials – PVC resin and additives – and those which manufacture the wide array of PVC pipes and fittings available in today's market, as well as scientific and testing institutes and promotional associations.

ECVM (the European Council of Vinyl Manufacturers) is the organisation representing 7 leading European PVC resin manufacturers, accounting for about 85% of the PVC resin produced in Europe. As founding member of VinylPlus, ECVM is committed to sustainable development, and to address and promote health, safety, and environmental best practices over the PVC lifecycle.


pvc.org


vinylplus.eu

10 KEY REASONS TO CHOOSE PVC PIPES



SAFE

- 1 SAFE FOR DRINKING WATER**
with no detectable migration or microbial growth
- 2 SAFE USE OF POST-CONSUMER PVC RECYCLATE**
as middle layer in three-layer sewer pipes



DURABLE

- 3 100+ YEARS OF SERVICE LIFE**
for underground pipes
- 4 LOWEST BREAK RATES**
for water mains compared to non-plastic materials



COST-EFFICIENT

- 5 LOWEST TOTAL COST OF OWNERSHIP**
for water and sewer networks compared to non-plastic materials

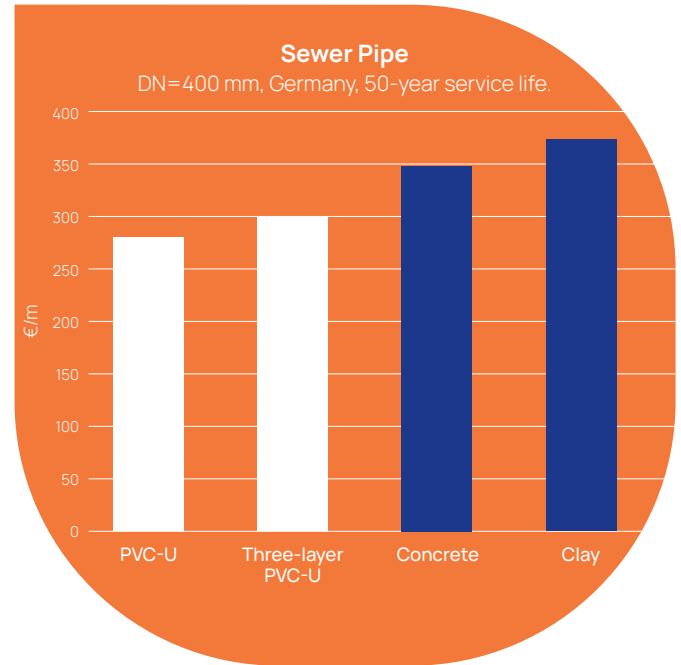
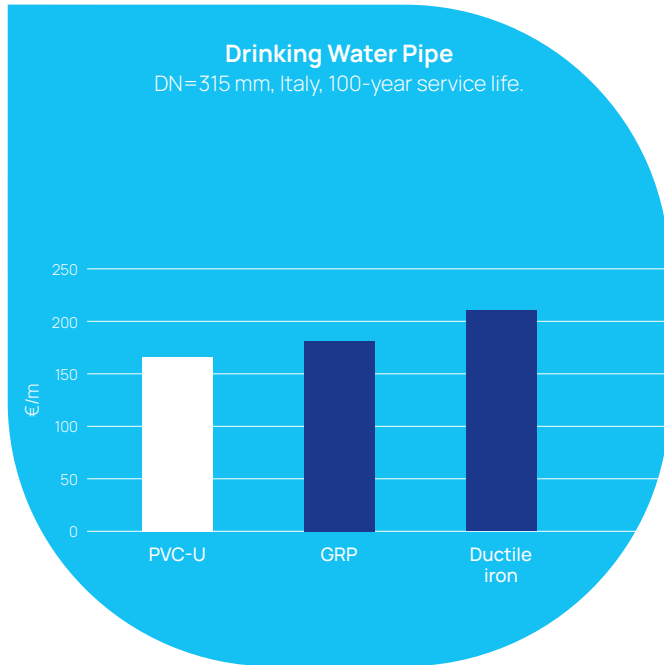


ECO-EFFICIENT

- 6 RECYCLABLE SEVERAL TIMES**
without loss of functional properties
- 7 REUSABLE**
for plant containers and other creative purposes
- 8 LOW ENVIRONMENTAL FOOTPRINT**
for key applications compared to non-plastic pipes
- 9 FAVOURABLE ENVIRONMENTAL PRODUCT DECLARATIONS**
in key applications
- 10 READY FOR HYDROGEN DISTRIBUTION**
through existing and new PVC pipelines



Total Cost Of Ownership: PVC-U vs. Other Pipe Materials



Source: A. Marangoni: Lifecycle Cost Benefits of PVC-U Pipes in Europe, PPXXI Proceedings, September 2023

OUR PARTNERS

Resin manufacturers:

- Ercros, INEOS Inovyn, Kem One, Shin-Etsu/Cires, VESTOLIT, Vynova, Westlake Vinnolit

Pipe manufacturers:

- Molecor

Additive suppliers:

- ESPA (European Stabiliser Producers Association)

Sealing solution manufacturers:

- Hultec

National plastic pipe associations:

- CPPA, KRV, Uni-Bell PVC Pipe Association

National PVC associations:

- AGPU Media, PVC Austria, VinyIPlus Italia, PVCH

Testing institutes:

- Becetel, KIWA, LKT TGM



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