
PVC
PIPES

The first PVC pipes were installed over 80 years ago, most of which are still in service today.

PVC4Pipes is the ECVM's 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.

- ✔ Safe
- ✔ Durable
- ✔ Recyclable
- ✔ Sustainable

Water applications:

- Drinking water
- Sewage and underground drainage
- Soil & waste
- Rainwater
- Hot & cold

Other applications:

- Cable protection
- Industrial
- Fire sprinklers
- Fittings

PVC FOR ALL APPLICATIONS

PVC covers all common piping and fitting applications. From transportation of drinking water to advanced fire protection systems, and the fittings needed to connect the pipes, PVC provides the solution.

PIPES FOR A CENTURY – AND BEYOND

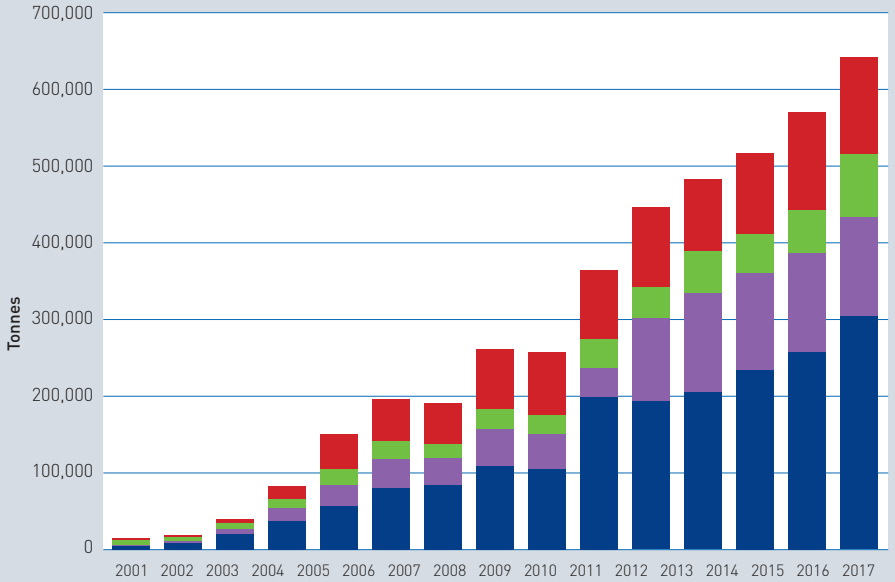
The first PVC pipes were installed over 80 years ago, most of which are still in service today. Recent studies of excavated 50-year old pipes showed no deterioration and that they were fit for at least another 50 years. The expected lifespan of underground PVC piping systems is 100 years or more.

The physical properties of PVC allow designers a high degree of freedom when designing new products and developing solutions

PVC PIPES CAN BE RECYCLED AGAIN AND AGAIN

Studies show that PVC pipes can be recycled multiple times without losing their technical properties. In 2017, more than 80,000 tonnes of PVC pipes and fittings were recycled through the VinylPlus programme. Recycled PVC's primary energy demand is up to 90% lower than virgin PVC production. For each kilo of recycled PVC, close to two kilos of CO_2 are saved.

PVC recycled within the Vinyl 2010 and VinylPlus frameworks



Since 2000, over 4.2 million tonnes of PVC have been recycled in the EU, through VinylPlus, the Voluntary Commitment to sustainable development by the European PVC industry. The target is to recycle 800,000 tonnes per year by 2020.

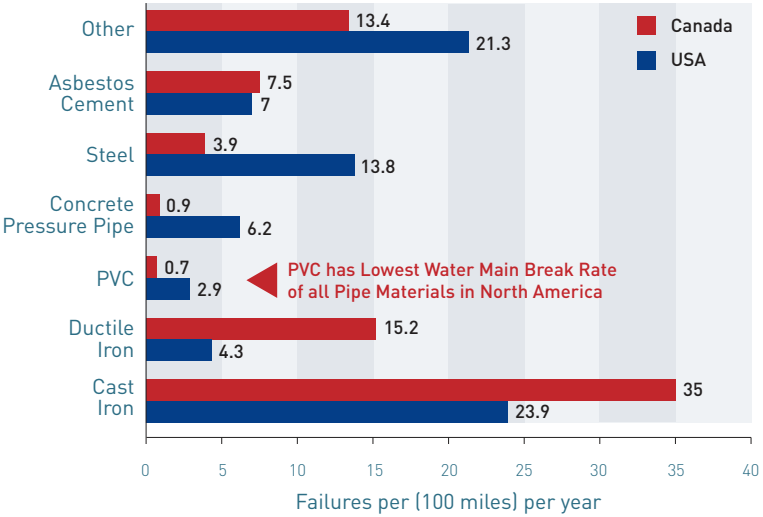
ENVIRONMENTAL PERFORMANCE

PVC pipes are made from low-carbon polymers; they are light-weight, which means less energy is used when transported; they last long with a minimum of maintenance and are easily recyclable. PVC pipes thus have clear environmental advantages over other materials. The good environmental performance of PVC pipes is confirmed by independent LCA (Life Cycle Analysis) studies: PVC pipes are at least equal to alternative products, and in many cases show better results for total energy consumption, CO_2 emissions and failures. Moreover, the PVC industry is committed to continuously reduce its greenhouse gas emissions and energy consumption.

PVC has been a popular material for construction applications for decades due to its physical and technical properties which provide excellent cost-performance advantages

PVC pipes show a much lower failure rate than other materials

Comparison of Water Pipe Failure Rates in USA & Canada



(Source: "Water Main Break Rates in the U.S and Canada: A Comprehensive Study, April 2012," Utah State University, Buried Structures Laboratory)

ECVM (The European Council of Vinyl Manufacturers - www.pvc.org) is the organisation representing the six leading European PVC resin manufacturers, accounting for about 75% of the PVC resins produced in Europe.

A founding member of VinylPlus®, ECVM is committed to sustainable development, and to address and promote health, safety and environmental best practices over the PVC life cycle.

A TODAY'S MATERIAL FOR THE FUTURE

Polyvinyl chloride, or PVC, is one of the most widely used polymers in the world. Because of its versatility, PVC is used extensively in a broad range of industrial, technical and everyday applications from pipes to blood bags. PVC is intrinsically a low carbon plastic: 57% of its molecular weight is chlorine derived from common salt, 5% is hydrogen and 38% is carbon. PVC also consumes less primary energy in the manufacturing phase than alternative materials.

Recyclability is another key characteristic of PVC and the PVC industry is committed to collect as much PVC waste as possible. Since 2000, over 4.2 million tonnes of PVC have been recycled in Europe through VinylPlus, the Voluntary Commitment to sustainable development by the European PVC industry. The Commitment also resulted in the replacement of lead-based stabilisers for PVC applications in the EU-28 by the end of 2015.

10 key reasons to choose PVC pipes

SAFE

1 PVC PIPES ARE SAFE IN USE

PVC pipes have been used for more than 80 years. They do not corrode, and bacterial growth is very low.

DURABLE

2 PVC PIPES ARE DURABLE

Studies show that underground PVC pipes can last at least 100 years.

3 PVC PIPES HAVE THE BEST FAILURE STATISTICS TRACK RECORD

See graph on the left hand page.

4 PVC PIPES OFFER THE BEST VALUE FOR MONEY THROUGH LIFE CYCLE

PVC pipes perform very well for long periods at low costs: not only 30% saving in initial cost can be achieved compared to ductile iron pipes, but PVC pipes also guarantee lower maintenance costs compared to traditional materials.

RECYCLABLE

5 RECYCLING

PVC is easily recyclable. At end-of-life, PVC pipes are being recycled into new products. Around 50,000 tonnes of PVC pipes and fittings are recycled each year in the EU-28.

6 VINYLPLUS® IS THE EUROPEAN PVC INDUSTRY'S SUSTAINABILITY PROGRAMME

VinylPlus targets five sustainability challenges for PVC, including sustainable use of additives. As a result, heavy-metal stabilisers are no longer used in PVC pipes manufactured in Europe. Furthermore, through VinylPlus, over 4.2 million tonnes of PVC have been recycled since 2000. www.vinylplus.eu.

SUSTAINABLE

7 PVC USES LESS FOSSIL FUEL AND PRIMARY ENERGY

PVC is made from 57% chlorine, 5% hydrogen and 38% carbon.
PVC thereby uses much less fossil fuel and primary energy than alternative materials.

8 PVC HAS A LOW CARBON FOOTPRINT

PVC's carbon footprint (material production) is 1.9 kg CO_2 eq / kg. Recycled PVC has a carbon footprint of only 0.3 kg CO_2 eq / kg.

9 PVC PIPES DEMONSTRATE EXCELLENT ENERGY EFFICIENCY

The smooth surface of PVC pipes ensures better flow and requires less pumping energy.

10 PVC PIPES OFFER EXCELLENT ENVIRONMENTAL DECLARATIONS

PVC pipes have significantly lower environmental impact than other materials.

OUR PARTNERS

PVC4Pipes partners come from all parts of the PVC value chain and beyond.

Resin producers
Ercros, INOVYN, Shin-Etsu/Cires, VESTOLIT, Vinnolit, Vynova

Pipe producers
Molecor

Additive suppliers
ESPA (European Stabiliser Producers Association)

Machinery producers
Hultec

Associations
CPPA, KRV, PVC Pipe Association, STR-PVC

Communication bodies
AGPU, API, PVC Forum Italia, PVCH

Institutes
Becetel, KIWA, LKT TGM

April 2018

PVC PIPES

PVC4Pipes
Avenue E. van Nieuwenhuyse 4
B-1160 Brussels, Belgium

www.pvc4pipes.com
info@pvc4pipes.com
@pvc4pipes