

PVC

PIPE ASSOCIATION ISSUE BRIEF

PVC PIPE: BEST CHOICE FOR THE ENVIRONMENT

PVC piping is one of the world's most sustainable products, making it ideal for long-term use in underground infrastructure. It requires less energy and fewer resources to manufacture than old-technology materials, and its production creates virtually no waste.

Moreover, it is produced with sustainable and abundant resources: chlorine, which is derived from salt, and domestically produced natural gas, which helps reduce consumption of imported oil.

For real sustainability, long-term performance and efficient resource management is critical...

CLEAN AND SAFE MANUFACTURING

PVC pipe manufacturing is extremely efficient, with virtually 100 percent of the PVC compound being used. It takes four times less energy to make than concrete pipe, and half that used for iron pipe.

There are no smoke stacks at PVC pipe facilities and the product is completely recyclable, making its environmental footprint far smaller than competing piping materials. Contrast this with the cement industry – the third-largest emitter of greenhouse gases in the world.

PVC pipe's ecological credentials have been demonstrated by numerous life-cycle assessments, which scientifically assess the impact of a product, from raw material extraction to end-of-life.

And since sustainability involves a social dimension, it's important to look at it in terms of human resources and worker safety. According to the United States Bureau of Labor, the plastic piping industry has an outstanding record in this area, experiencing far fewer injuries and illnesses in every phase of production, on average, than similar industries.

A SMALLER HUMAN FOOTPRINT

PVC pipe's ultra-smooth surface reduces pumping costs and its leak-free joints eliminate water loss – which can be up to 40 percent in some old-technology and corrosion-prone piping networks. The American Society of Civil Engineers estimates that 2.6 trillion gallons of potable water are lost every year through leaking pipes, or 17 percent of all water pumped in the U.S.

But PVC pipe's greatest environmental attribute is perhaps its exceptional durability and corrosion resistance – leading to better water conservation and lower replacement, maintenance and repair costs. A study by the American Water Works Association Research Foundation recently put the life expectancy of PVC pipe at more than 110 years. Its light weight and ease of installation reduce transportation and installation costs, yielding further benefits to the environment.

TWO MILLION MILES OF SUSTAINABLE PIPING

PVC leads all other piping materials in sustainability. Its durability, soundness, clean and energy efficient manufacture and transportation have made it the material of choice for water and wastewater applications. Today, more than two million miles of PVC pipe are in service throughout North America – helping build a greener tomorrow.