

Benefits of PVC over other materials

Polyvinyl chloride, or PVC, is one of the most popular plastics used in building and construction. It is used in drinking water and waste water pipes, window frames, flooring and roofing, wall coverings, cables and many other applications as it provides a modern alternative to traditional materials. These products are often lighter, more cost effective and offer many performance advantages.

As a result of its versatility and excellent performance, PVC is replacing traditional building materials such as wood, metal, concrete and clay in many applications.

Strong and lightweight:

PVC's abrasion resistance, light weight, good mechanical strength and toughness are key technical advantages for its use in building and construction applications.

Easy to install:

PVC can be cut, shaped, welded and joined easily in a variety of shapes. It is also light weight, which reduces manual handling difficulties.

Durable:

PVC is resistant to weathering, chemical rotting, corrosion, shock and abrasion. It is therefore the preferred choice for many long-life and outdoor products. In fact, medium and long-term applications account for some 85% of PVC production in the building and construction sector.

For example, it is estimated that more than 75% of PVC pipes will have a lifetime in excess of 40 years with potential in-service lives of up to 100 years. In other applications such as window profiles and cable insulation, studies indicate that over 60% of them will also have working lives of over 40 years.

Cost-effective:

PVC has been a popular material for construction applications for decades due to its physical and technical properties, which provide excellent cost-performance advantages. As a material, it is very competitive in terms of performance when compared to price; its value is also enhanced by physical properties such as its durability, lifespan and low maintenance.

Safe material:

PVC is safe, non-toxic material that has been used for more than half a century. It is also the world's most researched and thoroughly tested plastic. It meets all international standards for safety and health for both the products and applications for which it is used.

Fire resistant:

Like all other organic materials used in buildings, including other plastics, wood, textiles etc., PVC products will burn when exposed to a fire. However, PVC products are self-extinguishing, meaning that if the ignition source is withdrawn, they will stop burning.

Because of its high chlorine content, PVC products have fire safety characteristics, which are quite favorable as they are difficult to ignite, heat production is comparatively low, and they tend to char rather than generate flaming droplets.

PVC as well as some other materials also emit acids. These emissions can be smelled and are irritating.

Good insulator:

PVC does not conduct electricity and is therefore an excellent material to use for electrical applications such as insulation sheathing for cables.

Versatile:

The physical properties of PVC allow designers a high degree of freedom when designing new products and developing solutions where PVC acts as a replacement or refurbishment material.

Conclusion:

PVC has been the preferred material for construction products, interior design articles, window frames, fresh and waste water systems, cable insulation, waterproofing membranes, and many more. It performs well technically, have good environmental considerations, very good economic properties, and compare well with other materials in terms of fire safety.