

PVC Med  
ALLIANCE





## PVC IN HEALTHCARE

PVC is extensively used throughout the healthcare sector including in:

- Blood bags
- Medical tubing
- Oxygen masks
- Catheters and cannulae
- Containers for intravenous solution
- Diagnostic and treatment equipment
- Mattress covers
- Flooring, ceilings, and wall coverings
- Pharmaceutical blister packaging

## MEETING DEMANDS FOR QUALITY HEALTHCARE

Plastics-based medical devices are vital for safe and efficient patient treatment and care in hospitals around the globe. Many different polymers are used for medical equipment, with polyvinyl chloride – also known as PVC or vinyl – in the leading role. The reason for PVC's dominance is the material's unique properties such as safety, versatility, affordability, and recyclability. Besides being the most used polymer for life-saving medical equipment such as blood bags, oxygen masks, and tubing, PVC is also the main plastic for blister packaging that safeguards medicines.



## ENHANCING MEDICAL FACILITIES

Medical facilities need building materials with excellent durability, chemical resistance, low maintenance costs and affordability. PVC or vinyl meets these demands and more. In flooring, ceiling and wall coverings, PVC reduces the need for cleaning and prevents the spread of infection with its smooth hygienic surface. Not only does it last decades of intensive use, but PVC also offers the best value for money. With endless design options – including signage, zone boundaries and even art – PVC makes hospitals more comfortable, energising and welcoming for all.

## REVOLUTIONISING MEDICAL TREATMENT

PVC medical devices have given patients and healthcare professionals access to innovative medical applications for screening, diagnosis, treatment and care. In the 1960s, PVC revolutionised healthcare with single-use devices that greatly minimised dangerous cross-contamination between patients. Healthcare professionals worldwide rely on PVC because of its optimal cost-performance ratio.

## SUSTAINABLE TRANSFORMATION OF THE EUROPEAN PVC INDUSTRY

During the last two decades, the production, use, and waste management of PVC in Europe have undergone a significant transformation. Through VinylPlus®, the European PVC industry's commitment to sustainable development, problematic additives have been substituted, recycling systems have been set up, and emissions from PVC production have further been reduced below the world's most stringent emission limits. In addition, the European chlor-alkali industry, from which PVC is produced, has also successfully implemented strategic technology choices to reduce its environmental impact.





## CONTINUOUS INNOVATION

DEHP used to be the preferred plasticiser for flexible PVC medical devices. Thanks to industry's continuous innovation and investment, a range of alternative plasticisers are now available for medical applications. The alternatives have been subjected to extensive testing under REACH, comply with the EU Medical Device Regulation and are listed in the European Pharmacopeia, which sets the legal and scientific standards for medical devices in Europe and beyond. This allows healthcare professionals and patients to benefit from PVC's unique properties without using phthalates of concern. Though blood bags remain a challenge, the transition to non-DEHP blood bags is well underway with PVCMed Partners driving this change.

## FRONTRUNNER IN HEALTHCARE'S CIRCULAR ECONOMY

When it comes to PVC medical devices, single-use does not mean unrecyclable. Since PVC is an easily recyclable material it has a great deal of circular potential. VinylPlus® Med helps hospitals turn their DEHP-free PVC medical device waste into useful products for the healthcare sector, such as vinyl wall covering. A recent third-party LCA study documents significant CO2 savings from recycling PVC tubing instead of incineration. VinylPlus Med brings together hospitals, waste management companies, social partners, recyclers, and the PVC industry.



## ABOUT US

PVC Med Alliance is The European Council of Vinyl Manufacturers' (ECVM) value chain platform to raise awareness and promote informed decisions about the use of PVC in healthcare. The vision that informs PVC Med Alliance's work is of a healthcare environment that best benefits patients and healthcare professionals. Such an environment offers the finest PVC-based products and applications with the required properties and excellence needed to provide top quality health care while being environmentally sustainable.


ECVM is the organisation representing seven 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](http://pvc.org)



[vinylplus.eu](http://vinylplus.eu)



**DID YOU KNOW THAT  
AROUND 30% OF ALL  
DISPOSABLE PLASTICS-  
BASED MEDICAL DEVICES  
ARE MADE FROM PVC?**

# 10 KEY REASONS TO CHOOSE PVC IN HEALTHCARE APPLICATIONS



## PROVEN SAFETY

PVC has been safely used in disposable medical device applications for over 70 years. European Pharmacopoeia monographs apply to PVC for use in disposable applications.



## RECYCLABILITY

The VinylPlus® Med project demonstrates that disposable PVC medical devices can be turned into durable healthcare products.



## EXTENSIVE VERSATILITY

PVC is used in a wide variety of medical applications such as tubing, oxygen masks and blood bags. PVC is also used for mattress covers, rehabilitation aids, flooring, ceiling and wall coverings, pipes, windows, cables and much more in healthcare facilities.



## HIGH COMPATIBILITY

PVC is characterised by high biocompatibility, and this can be increased further by appropriate surface modification. PVC is also compatible with virtually all pharmaceutical products in healthcare facilities today.



## WIDEST RANGE OF BENEFITS

PVC's unique technical properties include biocompatibility, antikinking, excellent transparency, chemical resistance and easy sterilisation.



## DESIGN FREEDOM

Vinyl, another word for PVC, gives architects endless design options for hospital interiors, making them more welcoming for all.



## COST-EFFECTIVE

None of the alternatives to PVC in healthcare offer the same price-performance ratio. The cost of replacing PVC with alternative materials would equate a 30% price increase for medical devices.



## LOW-CARBON MATERIAL

PVC has a low carbon footprint since it is made from 57% salt, 5% hydrogen and 38% ethylene from oil or natural gas. Bio-attributed and bio-circular PVC as well as non-fossil based additives are also available on the market.



## CONTINUOUS INNOVATION

Ongoing industry research and innovation have expanded the range of safe plasticisers for medical applications.



## EASE OF PROCESSING

PVC is easy to process with all common plastic converting technologies.

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