

# PVC MED ALLIANCE

**10** key  
reasons to choose  
PVC in healthcare  
applications

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## High safety

**PVC, also known as vinyl, has been safely used in disposable medical device applications for over 60 years**

- One of the first applications of PVC dates back to the 1950's during the Korean War when PVC blood bags proved to be both safer and more reliable than glass for treating injured soldiers on the battlefield
- Stringent European Pharmacopoeia Monographs exist for PVC for use in disposable applications



## Wide diversity

**PVC is extensively used throughout the healthcare industry including in**

- Artificial skin in emergency burns treatment
- Blood and plasma transfusion sets
- Blood vessels for artificial kidneys
- Catheters and cannulae
- Blood bags
- Containers for intravenous solution giving sets
- Endotracheal tubing
- Feeding and pressure monitoring tubing
- Seamless flooring, ceiling and wall coverings



## The widest range of benefits

**PVC has made it possible for patients and healthcare professionals to access many medical applications thanks to its**

- Biocompatibility
- Inertness
- Clarity and transparency
- Sterilizability
- Flexibility, durability and dependability
- Compatibility
- Ease of processing
- Affordability
- Printability
- Anti-kink
- Non-allergenic
- Ease of cleaning and maintaining



## The best value for money in healthcare

**None of the alternatives to PVC in healthcare offer  
the same price-performance ratio**

- The cost of replacing PVC medical devices with alternative materials would equate an annual increase of €300 million per year for the European healthcare industry \*
- PVC flooring offers both the lowest initial cost and the lowest cost of ownership compared to some alternative materials over their entire lifetime \*\*

\* The Economic Benefits of Polyvinyl Chloride in the United States and Canada, Whitfield & Associates, December 2008, [link](#)

\*\* PVC products competitiveness, A total cost of ownership approach (TCO), Prof. Alessandro Marangoni, 2011, [link](#)



## Limitless design capabilities

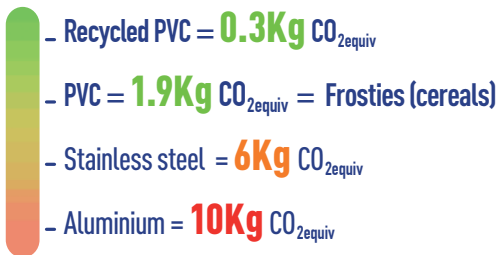
### There are almost infinite design options with PVC

- Complex medical devices made from PVC are simply not achievable in any other single polymer
- Thanks to PVC's excellent bonding and sealing properties medical equipment manufacturers can easily bond medical plastic components, thus allowing for sophisticated medical equipment
- Vinyl allows architects free rein in and around the hospital including in flooring, ceiling and wall covering



## Low carbon footprint

The magnitude of CO<sub>2</sub> emissions for PVC from extraction of raw materials to production of the finished resin is comparatively low. PVC's footprint is equivalent to that of a box of cereals and recycled PVC has an even lower carbon footprint \*



\* Value based on mass (1Kg) of product



## Continuous innovation

**Companies within the PVC value chain have invested in research and innovation and have progressively made available a wide range of plasticisers, such as:**

- DEHT
- DINCH
- DINP
- ATBC
- TOTM
- And many more...

**These are used in a variety of medical applications allowing healthcare professionals to benefit from PVC's unique properties and performances.**





## Less fossil fuel

...than all other commodity plastics

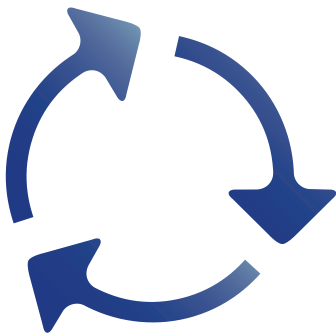
43% oil/natural gas

+

57% salt

=

**Vinyl**



## Recyclability

**Through VinylPlus, the PVC industry has developed numerous recycling schemes including in the healthcare sector**

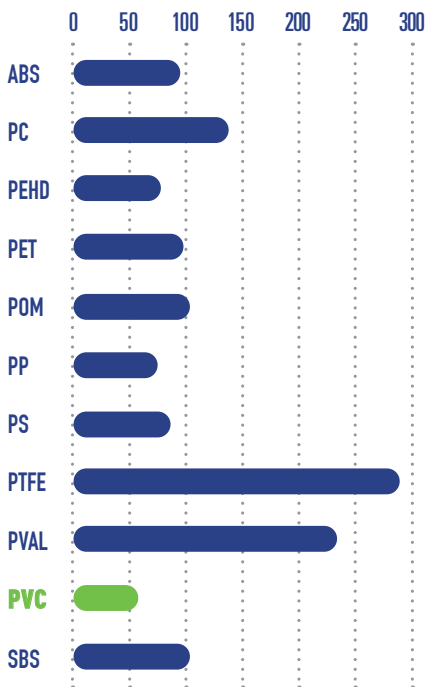
- A total of 474,411 tonnes of PVC, including flooring, was recycled across 16 European countries in 2014 \*
- Following the success of recycling certain PVC medical devices in Australia, PVC recycling schemes are now a reality in the UK \*\*

\* RecoVinyl 2014 results, May 2015, [link](#)

\*\* RECOMED Project factsheet, 2015, [link](#)

# Less primary energy

...than all other commodity plastics



Non renewable primary energy in MJ/KG polymer granulate

Source: Software GaBi 4 Database – PE Europe

# Contact us!

For more information on PVC healthcare applications or how to support the PVCMed Alliance, please contact: [info@pvcmed.org](mailto:info@pvcmed.org)



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