

## Facts provide clarity

Reports on the decision of the EU parliament have brought about uncertainty on the part of consumers. Much of the media ignores the scientific facts and is still spreading false reports about the alleged harmful effects of plasticizers.

This phenomenon is not new. Already in the 1990s, a non-objective discussion about PVC led to uncertainty and false decisions. The Hessian state government rashly banned the use of PVC products in publicly supported construction. However, it lifted this decision after examining the scientific findings. In the course of time, many similar restrictions have been revised.

## PVC is convincing

PVC has continued to strengthen its leading position since this time. Flexible plastic material has established itself as a safe and reliable partner in extremely sensitive fields such as medicine and drinking water technology. Hygienic infusion tubes, sterile operating room covers, and easy-to-clean operating room floors have provided an indispensable contribution to patient care for over 50 years now. Thanks to its compatibility in the field of medicine, PVC products have also been recommended for allergists.



Aircast-  
Air-Stirrup  
Ankle Brace

## PVC: for people and the environment

German PVC manufacturers and processors generate an annual revenue of 14 billion euros with their approx. 100,000 employees. PVC holds third place in international comparison in the production of all plastic materials. Furthermore, PVC processing has increased by more than 30 % since 1997 in contrast with the trend in the construction industry. It thereby constitutes a strong branch of economic activity.

## Europe takes on responsibility

The four major European associations in the PVC branch signed a voluntary commitment in 2000 for the sake of the sustainable development of their products. In this 10-year program, the Europeans established specific goals to reduce emissions as well as the use of raw materials and energy in producing PVC. Much has already been achieved today. The recycling possibilities for used PVC products have also been expanded. In the meantime, there are functional collecting and recycling systems in Germany for all important construction products made of PVC (windows, flooring, roofing membranes and pipes). This is also an example of how the PVC branch has taken its responsibility very seriously towards people and the environment.

## Are you interested in flexible PVC products? Our experts are there for you.

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You will find further information on the internet:

- [www.ecpi.org](http://www.ecpi.org)
- [www.foodplast.com](http://www.foodplast.com)
- [www.plasticisers.org](http://www.plasticisers.org)
- [www.dehp-facts.com](http://www.dehp-facts.com)
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AOL Arena Hamburg  
with PVC coated roof  
membranes

Photo: Jürgen Schmidt

**PVC. When it really counts.**



**Flexible PVC products:  
versatile and reliable**



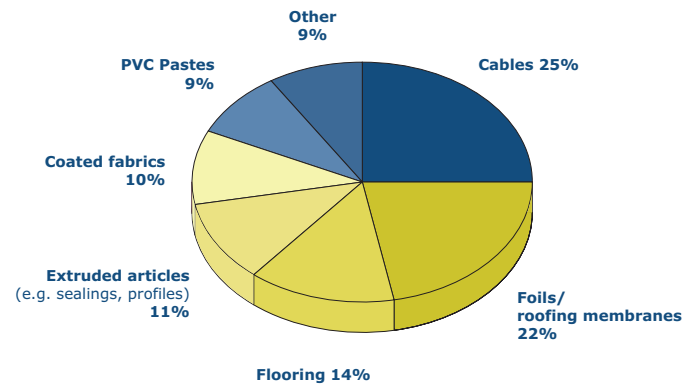
PVC document  
folder for efficient  
office organization,  
Loer & Schäfer



Marketing platform  
of the German PVC branch

Lifesaving oxygen tents, protective rain gear, flame-resistant cable insulation: as diverse as these flexible products may be, they are all made of PVC. Hardly any other plastic material can be processed for so many products and is so indispensable for construction, medicine, and leisure time. This has been made possible through additives which provide the finished solutions with practically any desired properties of use.

### The use of plasticizers according to areas of application in Western Europe



### How flexible PVC is made

Crude oil and rock salt are the basic materials for PVC production. From these one obtains pure white PVC powder. In order to turn this material into flexible PVC products, it is mixed with plasticizers. Approximately 90 % of these are phthalates. The remaining 10 % are made up of other materials such as adipates, citrates and phosphates. Phthalates are used in flexible PVC applications and also in rubber, colors, and glues. They provide PVC with elastic properties and make possible easy processing and great stability of shape.

### Versatile range of products

Flexible products constitute approximately one-third of all PVC applications. These include foils, PVC pastes, and coated fabrics. Thermoplastic foils can be widely used for office materials, medical products, and safety applications such as welding curtains and reflective articles. Flexible flooring and cable insulation play an important role in the construction industry. In the automobile industry, PVC pastes used for underbody coating have contributed to considerably greater longevity of vehicles. Additionally, there is coated fabric such as artificial leather for shoes and bags.

The chart on the left illustrates the use of plasticizers in individual product areas.

In Europe, the plasticizers DINP and DIDP have almost 60 % of the market, followed by DEHP with 22 %.



Comfortable mats for drowsing and sleeping, Kit for Kids

### Extensive research for safe products

For more than 50 years now, government agencies and the industry have been examining the safe handling of PVC products and how the plastic material affects people and the environment. Phthalates are one of the best researched chemical groups in general. These plasticizers do not chemically bind with PVC and are stored in the polymer molecule chain. Therefore, traces may be released from the surface of the products and enter into other materials. However, this so-called migration only occurs in very small amounts and is well researched.

### Scientific facts

The EU has been carrying out risk assessments on phthalates in accordance with the Existing Substances Regulation for years now. The European plasticizer industry contributes to these studies with its own research. Extensive analyses of important phthalates did not show any general dangers for people or the environment. The substances are easily biodegradable and do not permanently accumulate in the environment. Additionally, large-scale recycling possibilities for many used PVC products offer a closed material cycle which saves resources. Furthermore, there are no carcinogenic or estrogenic effects with phthalates. The EU's risk assessment came to the following conclusion for DINP: "The end products containing DINP (...) and the sources of exposure (...) are unlikely to pose a risk for consumers (...) following inhalation, skin contact and ingestion." (<http://ecb.jrc.it>.)

### Plasticizers in toys

The European parliament decided on July 5, 2005 to restrict the use of six phthalates in toys and baby articles. The plasticizers DEHP, DBP, and BBP are to be replaced in these kinds of products beginning in January 2007. DINP, DIDP, and DNOP may continue to be used if children do not place these articles in their mouths.

As the EU decision shows, the results of the official risk assessment were hardly taken into consideration. This especially applies to the phthalates DINP and DIDP. Even the USA with its very strict product liability laws rejected the demand for a ban on DINP in toys.

### EU decision only for toys

The restriction on the six phthalates applies exclusively to toys and baby articles. Therefore, it only refers to an extremely small segment of the market involving flexible PVC products. The decision does not affect other plasticizers that are used for water wings, inflatable swimming pools, and rain boots. PVC products from the construction, medical and leisure sector – by far the majority of applications – are not subject to restrictions.



Flexible PVC products: safe and reliable