



SPORTS

Plasticisers make PVC bendable and soft in order to withstand considerable physical stress without breaking. Flexible PVC is used in a large array of sporting gear, clothing and footwear.



FLOORING

PVC floors are not only stylish and affordable but also waterproof, anti-slip, sound and heat insulating as well as stain resistant. While requiring low maintenance, they ensure high hygienic standards and are therefore widely used in private houses as well as hospitals, sport halls or schools.



TOYS

Flexible PVC makes toys soft, flexible and safe by replacing or protecting sharp edges and avoiding brittleness. In Europe, the choice of plasticisers used to manufacture toys is strictly regulated by REACH.



OTHER APPLICATIONS

In addition to PVC applications, plasticisers can be used for other applications such as inks, rubber, sealants, and adhesives.



European Council for
Plasticisers and Intermediates
COMMITTED TO THE SCIENCE OF SAFETY

AVENUE E. VAN NIEUWENHUYSE 4, BOX 2
B-1160 BRUSSELS - BELGIUM
TEL: + 32 2 676 7260 @ECPlasticisers
WWW.ECPI.ORG INFO@ECPI.ORG



FOCUS ON PLASTICISERS & FLEXIBLE PVC



European Council for
Plasticisers and Intermediates
COMMITTED TO THE SCIENCE OF SAFETY



COATED FABRICS

PVC coated polyester is the flexible material most frequently used in tents, banners, energy efficient and lightweight architectural textiles, pool liners, seat covers as well as protective clothes.



FILM & SHEET

PVC can be calendered and embossed into films of different thickness and flexibility to be used in various applications such as stationary articles, banners, decorative films, and labels.



MEDICAL

Plasticised PVC medical devices have been used safely for over 60 years. Flexible PVC owes its success to its transparency and unsurpassed anti-kinking properties becoming a primary choice for tubing, blood bags, examination and surgical gloves.



WIRE & CABLES

Flexible PVC cables offer electrical insulation, strength and safety at a wide range of operating temperatures. Benefits include long service life, durability and recyclability at affordable costs.



CLADDING, ROOFING, WALLCOVERING

Flexible PVC – often reinforced with fiberglass or polyester – is durable, insulates, can stand bad weather and has good resistance to ultraviolet light and ozone.



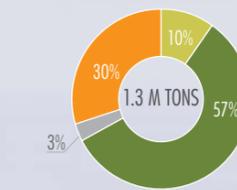
AUTOMOTIVE

Flexible PVC has doubled the life of modern cars through the use of protective underbody coatings. It is also used in dashboards, seats, armrests, etc.

PLASTICISERS AND FLEXIBLE PVC: BRINGING ESSENTIAL BENEFITS TO SOCIETY, SAFELY AND SUSTAINABLY

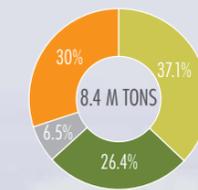
Plasticisers (US: plasticizers) are colourless and odourless liquids used primarily to soften plastic. Over 85% of all plasticisers consumed in Europe are employed in durable flexible PVC applications, largely for the construction, automotive and wire & cable sectors. Some plasticisers are used in non-PVC applications such as coatings, rubber products, adhesives and sealants. Over the last 60 years more than 30,000 different substances have been evaluated for their plasticising properties but only about 50 respond to the strict European criteria allowing their commercialisation. Each plasticiser is evaluated and regulated for its use in specific applications ensuring the highest performance, sustainability and safety standards.

EUROPEAN PLASTICISERS MARKET



Source: 2015 IHS and ECPI estimates

GLOBAL PLASTICISERS MARKET

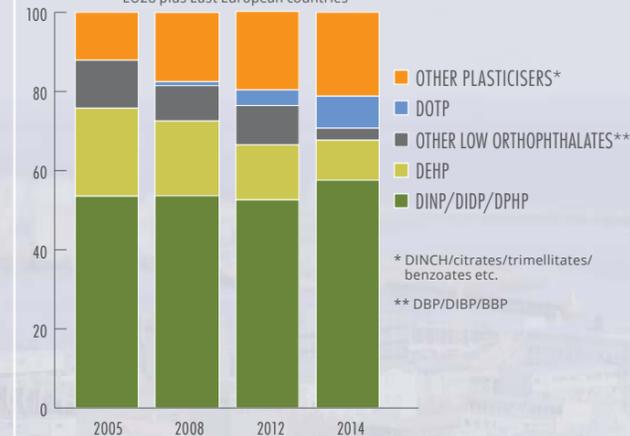


Legend: ■ DNP/DIDP/DPHP ■ DEHP ■ OTHER PLASTICISERS ■ OTHER ORTHOPHTHALATES

The European market has evolved rapidly in response to market and regulatory pressure. Orthophthalates make up the majority of the plasticisers followed by terephthalates and cyclohexanoates. Other plasticisers are also gaining market share. Globally, DEHP still represents almost 40 percent of all consumption and is still very popular in China, India, and other parts of Asia, the Middle East, Africa and Latin America.

EUROPEAN MARKET TRENDS

EU28 plus East European countries



Source: 2015 IHS and ECPI estimates

CLASSIFIED PLASTICISERS

CATEGORY 1B
TOXIC FOR REPRODUCTION
REACH Candidate List

ORTHOPHTHALATES

Low Molecular weight 3-6C

DEHP*
DIBP
DPP
DIHP
DHxP

DBP*
BBP
PIPP
711P
DnHxP

DCHP

*ECHA RECOMMENDS authorisation for Deza, Grupa Azoty and Arkema - selected applications

NON-CLASSIFIED PLASTICISERS

Not on REACH Candidate List

ORTHOPHTHALATES

High Molecular weight ≥ 7C
DINP DIDP DPHP

Cyclohexanoates

Terephthalates
DOTP DBT

Adipates
DEHA DINA
DIDA DTDA

Phosphate Esters
TPP

Dibenzoates
ODEB OXPDB

Vegetable Oil based
Expoxidized, hydrogenated and acetylated vegetable oil

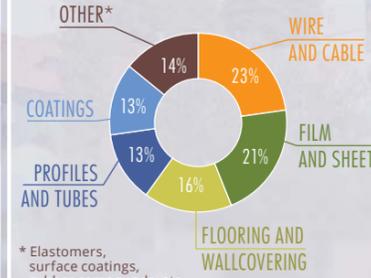
Benzoates
INB IDB

NOTE: some members of above families may not be REACH registered nor evaluated for classification or risk assessed

NOTE: Selection of plasticisers is non-exhaustive

Globally, almost 8.4 million tonnes of plasticisers are consumed every year, of which European consumption accounts for over 1.3 million tonnes.

EUROPE'S PLASTICISERS USE



Source: 2015 IHS and ECPI estimates

Modern plasticisers have undergone extensive testing for possible health and environmental effects and are amongst the most widely researched of all chemical substances. In Europe, the safe use of plasticisers is regulated under REACH, the most comprehensive product safety regulation in the world.