

What are Phthalates?

An Editorial

Phthalates have been in use since the early 1900's with the onset of the plastics or polyvinyl chloride (PVC) industry. In the 1930's, the commercial use of PVC opened the door to thousands of production opportunities. Today, PVC is the third most widely used thermoplastic polymer. The construction industry uses about half of the world's PVC production and, it is also found in clothing, flooring, roofing, upholstery, hoses, tubing, cable wiring, inflatable products, and so much more.

To understand phthalates requires an understanding of PVC. PVC is a polymer, a thermoplastic polymer. For the sake of simplicity, polymer is a large molecule composed of repeating structural units. A thermoplastic polymer melts when heated up and hardens when cooled. Materials known as plasticizers are added to PVC to create a more flexible result. Phthalates are the most commonly used type of plasticizer.

"Phthalates are the compounds that give plastics their softness. In order to make plastic resins such as PVC softer, plasticizers must be added. Think of plasticizer as the oil or egg (moistener/softener) in a cake and PVC as the flour (solid)," said Jeff Barket, Director of Sales and Marketing, Sinclair & Rush, Inc.

Barket goes on to say, "The good news is there are different types of phthalates like there are different types of alcohols. For example, you may drink ethyl alcohol, the substance found in wine, beer and spirits, but you would not drink isopropyl alcohol, the alcohol used in medical offices to sterilize your skin prior to a shot. They are both alcohols, but one, enjoyed in moderation, has been shown to provide positive health benefits, and the other will seriously injure you if consumed in even low amounts."

Today, most plastics are comprised of PVC and therefore, phthalates may be found in most plastic products. While the construction industry encompasses much of the world's PVC, it is also in items such as playground balls, rubber duckies, detergents, personal care products, fishing lures, packaging, waxes, printing inks, coatings, food products, shower curtains, adhesives, cleaning materials, and, yes, even in vinyl caps and plugs.

Most important of PVC products, are many life saving devices. Blood bags and medical tubing are two of the most significant to mention. In the 1950's another form of phthalate, DEHP, was discovered and its benefit is found in the tubing used to inject fluids into the body intravenously, as well as in the blood bags used to transport blood for transfusions.¹

Learn more from these additional resources

http://www.americanchemistry.com/s_plastics/index.asp

http://www.americanchemistry.com/s_plastics/doc.asp?CID=1102&DID=4665

¹ http://www.americanchemistry.com/s_phthalate/sec.asp?CID=1901&DID=7580