DPHP Information

About DPHP
Dipropylheptyl phthalate (DPHP) is used to make polyvinyl chloride (PVC) soft and flexible. Its chemical and physical properties make it especially suitable for automotive, wire and cable, and outdoor applications such as roofing membranes and tarpaulins, as well as many other products consumers use every day.

DPHP Has Unique Benefits
The unique properties of DPHP make it difficult to use substitutes, particularly in vinyl products that require high performance, durability and flexibility. For example, DPHP is highly weather resistant, and has a great ability to withstand prolonged sunlight without breaking down, making it ideal for products such as roofing membranes that are used to cover large buildings and arenas. Other beneficial characteristics of DPHP are its durability, giving products a long life span, and its low volatility makes it effective in products that need to be resistant to degradation due to high temperatures, such as electrical wiring and cables and automotive interiors. In addition, the ability of DPHP to make PVC flexible so that it can bend and twist without breaking is an essential safety feature when used in products such as insulation for electrical wiring and cable.

DPHP Meets Performance Standards for Consumer and Industrial Products
Softened vinyl is a standard material requirement in many of the products manufactured by the wire and cable industry, including wire insulation and cable, transmission cables and fiber optics. DPHP allows PVC to meet performance requirements for protecting wires in thousands of different machines and appliances that consumers rely on every day.
Today’s average car contains numerous plastic parts, many made of PVC made flexible with DPHP. This gives manufacturers the versatility they need to meet exact size, shape and texture specifications for products such as door panels, dashboards and arm rests, and other smaller parts. Flexible PVC made with DPHP can meet these challenges.

The use of PVC made flexible with DPHP in the automobile industry has made cars safer and more comfortable, and has helped enhance their appearance. For example, electrical wire insulation is strong enough to resist road shock, but flexible enough to handle sudden movements from the vehicle. In terms of appearance, PVC made flexible with DPHP provides a “soft touch” feel and can be made to look and feel like leather. DPHP does not contribute to “fogging” or “new car smell.”

**Weight of Scientific Evidence Supports the Safety of DPHP**

DPHP was part of the Organization for Economic Cooperation and Development (OECD) High Production Volume (HPV) Chemicals Program review of the High Molecular Weight Phthalate Esters (HMWPE) category in 2004.

The review found that toxicity studies indicate that HMWPEs do not present health or environmental hazards. The review concluded that DPHP, as an HMWPE, is “currently of low priority for further work because of [its] low hazard profile.”

In early 2010 DPHP was one of the first substances registered under the European chemicals regulation known as REACH. It is not on the REACH candidate list, which means it can be placed on the European market without any additional authorization.