About DINP

Diisononyl phthalate (DINP) is used to soften or “plasticize” polyvinyl chloride (PVC), commonly referred to as vinyl. DINP is a general purpose plasticizer used in a multitude of vinyl products that demand flexibility, durability and specific functionality. While DINP’s primary function is as a softener, it is also used in sealants, paints and lubricants.

DINP Has Unique Benefits

More than a chemical additive, DINP is a major component in determining the physical properties (e.g., degree of flexibility, resistance to heat, durability) of vinyl products. Without the ability to make vinyl flexible, products such as electrical cables and synthetic leather would not exist today.

DINP is extremely effective in a wide range of indoor and outdoor applications. Some of the many key properties of vinyl products with DINP include resistance to changing weather conditions, water resistance, high thermal insulation, long-lasting wear and durability. Its low volatility makes it effective in applications where products are exposed to high temperatures, making them more resistant to degradation.

Another very important property of DINP is its versatility. Manufacturers can select exactly the degree of flexibility needed to meet the specific mechanical requirements of each product, whether it’s wiring for a vehicle or hoses for a household appliance.

DINP Has Many Applications and its Benefits Can Be Seen in Products Developed Across Multiple Industries

The benefits of DINP in vinyl are evident in products manufactured by the automobile, building and construction, cable and wire and flooring industries. PVC made flexible with DINP extends the life of modern cars through its design, weight, comfort and cost benefits. Car manufacturers choose soft vinyl because of its protective benefits, and its durability provides a long-lasting and protective layer for chassis, protects cars against grit and reduces rust and corrosion. It is also easy to apply.
PVC made flexible with DINP is widely used in the building and construction industry today. DINP is used in cladding, or the facings of buildings, and roofing membranes, and frequently used to cover buildings and sports arenas because of its durability, water resistance and high thermal insulation properties.

Flexible PVC is a widely used electrical insulation material in our homes, offices and factories. It is also preferred insulation for transmission cables and fiber optics. It is a material of choice for protecting wires that run through homes and offices and charge our computers, appliances and a variety of other machines used in our daily lives. It provides durability and cost-effectiveness, and the flexibility that allows it to bend and twist without cracking.

Weight of Scientific Evidence Supports the Safety of DINP

DINP has been thoroughly studied and reviewed by a number of government scientific agencies and regulatory bodies in the United States and Europe, including:

- **National Toxicology Program’s Center for the Evaluation of Risks to Human Reproduction (NTP-CERHR)** (concluded in 2003 that there was “minimal concern” regarding risk of developmental or reproductive effects from current exposure levels to DINP).

- **Consumer Product Safety Commission (CPSC)** (the Chronic Hazard Advisory Panel on DINP in 2001 and the CPSC staff in 2002 both concluded that exposure to DINP from mouthing soft plastic toys would be expected to pose a minimal to non-existent risk of injury for the majority of children).

- **European Chemicals Bureau** (DINP has undergone a comprehensive risk assessment by the European Union (EU) under the Existing Substances Regulation. The European Chemicals Bureau Risk Assessment Report on DINP concluded that current uses of DINP in PVC, polymers, adhesives, glues, sealing compounds, inks and paints are not expected to pose a risk to human health or the environment).

- **EU’s Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals (REACH)** (DINP is REACH registered and is not listed on the REACH Candidate List, which means it can be placed on the European market without any additional authorization).

For more information, please contact

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