

Recently, the overdose of plasticizers in clouding agent has been reported. In Taiwan, many drinks and food are found to be contaminated by plasticizer, DEHP. But what are plasticizers and DEHP? Do PET and PP bottles and containers contain DEHP?

*Here are some **FAQs** about plasticizers to help you to get a better understanding about the DEHP problem.*

Q1: What is plasticizer?

Plasticizers are additives that increase the plasticity or fluidity of the material. They are added to plastics, cement, concrete, wallboard and clay etc.



Q2: Why plasticizers are added in plastics?

Plasticizers for plastics are additives, most commonly phthalates. It can:

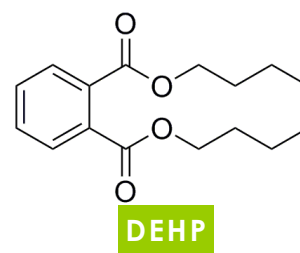
- **Soften** Hard plastics, such as PVC
- **Increase flexibility and durability** of plastics

Q3: How does plasticizers work?

They work by embedding themselves between the chains of polymers, spacing them apart and thus significantly lowering the glass transition temperature for the plastic.

Q4: What is DEHP?

DEHP, bis(2-ethylhexyl) phthalate, is widely used as a plasticizer in manufacturing of articles made of PVC. It has been used as a plasticizer in **medical devices** such as intravenous tubing, blood bags and transfusion tubing. Illegal use of DEHP in **clouding agents** for use in food has been reported in Taiwan recently.



Q5: What are the health effects of DEHP on living organism?

Animal studies have found that DEHP is toxic to the male reproductive system. DEHP metabolites in human body are likely **reproductive toxicants**.

DEHP metabolites measured from the blood of **pregnant women** have been significantly associated with the decreased penis width and incomplete descent of testes of their **newborn sons**.

There are concerns of its potential as an **hormonal disruptor**.



**DEHP
Free**

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Press Release - DEHP Issue in Taiwan

Q6: In what circumstances will I expose to DEHP?

Since DEHP is not chemically bound into the polymer matrix and therefore can migrate out of the polymer. It is especially likely to migrate out in the presence of **fatty solutions**.



Q7: Do I need to worry about phthalates, such as DEHP in PET containers?

Trendy & Classy



PET had been cleared as safe for **direct food and beverage contact** by US Food & Drug Administration (FDA), Health Canada and the EU's European Food Safety Authority.

PET (polyethylene terephthalate) makes people associated them with phthalate/ plasticizers. In fact, plasticizers (usually orthophthalate) are never substituted for terephthalates used in the manufacturing of PET. According to the Hong Kong Centre of Food Safe, DEHP are not need for PET production.

Q8: How about PP and PE containers, do they contain DEHP?

PP, polypropene, is easily processed by all methods and offers good material properties, such as **LOW DENSITY, GOOD MECHANICAL STRENGTH AND TEMPERATURE RESISTANCE**. It can be varied from hard to soft and flexible. **No plasticizers** are required for flexibility.

PE, polyethene, shares similar properties with PP, no additives are needed to soften PE as well.

According to research conducted by the Commonwealth of Massachusetts, **PE and PP, are GOOD ALTERNATIVE FOR PVC**. Besides good flexibility and high toughness, they are superior to DEHP/ PVC from the perspective of leaching plasticizers with known health concerns since none of them utilized plasticizers.



Q9: Are your product DEHP-free proven?

Our PET have safety certificate, MSDS and test report from our resin supplier. Proven by SGS, **NO** DEHP and any other Plasticizer is **detected** in PET resin.



To conclude, phthalate plasticizer are usually added to PVC to increase flexibility and durability. They are NOT used in PET, PP or PE. Therefore, those food & beverage containers should be safe for daily use.



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