PET Water Bottles

PLASTICS NEW ZEALAND

PO Box 76 378
Manukau City
New Zealand
Phone: +64-9-262-3773
Fax: +64-9-262-3850
Email: info@plastics.org.nz
Trade: www.plasticsnz.com
Info: www.plastics.org.nz

The use of PET or Polyester water and carbonated soft drink bottles has been widespread since they were developed in the early 1970's, with billions of bottles having been produced since. PET (polyethylene terephthalate) was first manufactured in the early 1940's and is manufactured using an alcohol, in this case ethylene glycol, and terephthalic or isophthalic acid. Bottles manufactured from PET equate for in excess of 30% of the PET manufactured globally, the other major use being fibres for clothing and carpet. PET bottles are used for soft drinks, sports drinks and water bottles, as well as containers for foods and spreads such as peanut butter, dressings, cooking oils and sauces. The choice of PET for these applications is due to its good clarity, high strength and low toxicity.

Several articles have been circulating indicating that re-use of the bottles can release a potential carcinogen called DEHA or Bisphenol A. There is even conflict between the articles circulating, DEHA is an acronym for di(2-ethylhexyl) adipate, however this has also been reported as diethyhydroxlamine. The claim of DEHA being present in PET originated in research that was submitted as part of a Masters Thesis. The work was never subject to peer review and DEHA is not used in the manufacture of PET as a material, or the manufacture of bottles from PET. DEHA is used in the manufacture of plasticized PVC. The identification of this compound in PET is believed to be through cross contamination of samples being prepared during the sample preparation for the student's thesis. The filling temperatures for a lot of the foods and drinks packaged in PET are at similar temperatures as typically experienced during domestic washing, negating the concept that allowing the bottles to warm in sunlight or being washed and reused will allow a substance such as DEHA to be released into the contents.

The release of Bisphenol A is related to products manufactured from polycarbonate and not PET bottles. Bisphenol A is one of the two materials used during manufacture of Polycarbonate resin. The appearance and feel of a PET bottle is similar to that of a Polycarbonate bottle, and without the use of an identification code which is often on the base these can easily be confused. As with DEHA, there is no Bisphenol A used in the manufacture of either the PET or during the process of manufacturing bottles from PET.