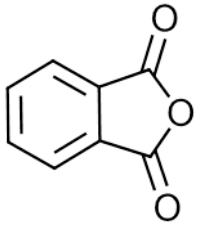
CAS 85-44-9

Phthalic Anhydride

$C_8H_4O_3$

VERMONT DEPARTMENT OF HEALTH



Summary of Health Effects

Phthalic anhydride irritates the eyes, skin and lungs. Phthalic anhydride affects the lungs and kidneys in animals.

How is phthalic anhydride used?

Phthalic anhydride is mainly used to produce phthalate plasticizers, which are then used to produce flexible polyvinyl chloride (PVC).[1]

Toxicity: What are its health effects?

Exposure to phthalic anhydride causes irritation of the skin, eyes, and lungs.[2] Phthalic anhydride was added to the Toxic Substances Control Act work plan due to respiratory sensitization.[3] The Globally Harmonized System for Classification and Labeling classified phthalic anhydride as presumed to cause respiratory and skin sensitization (category 1) and suspected to produce serious eye irritation or damage (category 2).[1] The Environmental Protection Agency's (EPA's) Integrated Risk Management System developed an oral reference dose based on lung and kidney histopathology and urinary and respiratory effects observed in exposed animals.[4]

Animals exposed to high concentrations of phthalic anhydride long-term experienced lung, kidney, and adrenal gland toxicity.[5]

Exposure: How can a person come in contact with it?

A person can come in contact with phthalic anhydride by skin contact with consumer products, eating and drinking contaminated food and water, or breathing in contaminated air.[6]

Exposure to phthalic anhydride may occur from the use of plastics that contain phthalate plasticizers.[3,4] Phthalic anhydride has been detected in food, cigarette smoke, ambient air, soil, groundwater, and waste effluent.[6] The Danish EPA detected phthalic anhydride in children's products such as wooden toys.[7] Phthalic anhydride is a high production volume chemical and is included in EPA's Toxic Release Inventory (TRI).[8,9]

Biomonitoring studies detected phthalic anhydride in the urine of exposed workers.[10,11]

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