

Pinfa's simplified pinFR substance factsheet

Phosphoric trichloride, reaction products with 4,4'-isopropylidenediphenol and phenol (BDP)

CAS# 181028-79-5, 5945-33-5; EC# 425-220-8

Basic information on Human Health and Environmental Properties

Phosphoric trichloride, reaction products with 4,4'-isopropylidenediphenol and phenol (BDP) is a colorless viscous liquid with no hazardous properties*.

As an organic polymeric-type ester, BDP may be used in solutions to flame retard solid thermoplastics (e.g. polycarbonate (PC), PC/ABS and HIPS/PPO), textile fibers, and wire and cables (e.g. TPU). The higher molecular weight is desirable for the applications.

BDP is not volatile and has very low water solubility. Accordingly BDP is not subject to hydrolysis under environmental conditions. The aquatic toxicity as the potential for bioaccumulation of BDP is low. Due to its functionality the molecule of BDP is stable and therefore not readily biodegradable.

When applied as flame retardant, BDP will not migrate or evaporate from the final product.

In case of an accidental fire or deliberate incineration BDP will decompose and mainly form smoke, fumes, oxides of carbon and oxides of phosphorus.

These products add to the acute toxicity of the combustion products, however, the flame retarding effect of BDP is meant to prevent the outbreak of fire from a small ignition source and therefore to avoid the formation of greater amounts of toxic smoke, the main toxic agent usually being carbon monoxide.

In flue gas treatment systems of the state of the art incinerators the combustion products will be properly removed.

**In accordance with Article (27) 4 of EC 1272/2008 [CLP] BDP has been de-classified [removal of R53 (DSD) / H413 CLP] by the Committee of Risk Assessment (RAC) on November 28, 2012: "No classification.*