

# POPs Chemicals

## Polychlorinated naphthalenes (PCNs)

**CAS No.** 70776-03-3

**Full Name:** Polychlorinated naphthalenes

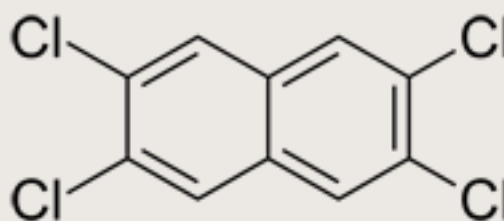
**Synonyms:** PCN; CNs; naphthalene chloro- derivatives

**Uses:** PCNs have historically been used in many applications including: use as wood preservative, as additive to paints and engine oils, and for cable insulation and in capacitors. PCNs are unintentionally generated during high-temperature industrial processes in the presence of chlorine. Of the known releases, combustion (primarily waste incineration) is considered the most significant current source. PCNs are also unintentionally generated with similar mechanisms as polychlorinated dibenzo-p-dioxins and dibenzofurans (PCDD/PCDF) during other industrial processes such as smelting in the secondary non-ferrous metal industry, cement and magnesia production, aluminium refining and coking.

**Stockholm Convention:** PCN is listed in Annex A (elimination) with specific exemptions for production of those chemicals as intermediates in production of polyfluorinated naphthalenes, including octafluoronaphthalene, and the use of those chemicals for the production of polyfluorinated naphthalenes, including octafluoronaphthalene; and in Annex C (Unintentional production) to the Stockholm Convention (decision SC-7/14).

### **Hazards and risks to human health and the environment:**

*After about twenty years of commercial production, health hazards began to be reported in workers exposed to PCNs: severe skin rashes and liver disease that led to deaths of workers. While some PCNs can be broken down by sunlight and, at slow rates, by certain microorganisms, many PCNs persist in the environment. Acute exposure causes chloracne. Chronic exposure increases risk of liver disease. Increased cancer risks have been suspected but so far not shown. Current concerns about PCNs include their release as byproducts of waste incineration.*



### **Reference**

1. Risk profile on chlorinated naphthalenes. Persistent Organic Pollutants Review Committee 2012; UNEP/POPS/POPRC.8/16/Add.1
2. Risk management evaluation on chlorinated naphthalenes. Persistent Organic Pollutants Review Committee 2013; UNEP/POPS/POPRC.9/13/Add.1



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STOCKHOLM CONVENTION

