

CAS 1763-23-1

**Substance name** Perfluorooctanyl sulphonic acid and its salts (PFOS)

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### Toxicity

PFOS is considered a developmental toxicant by the European Union.<sup>1</sup> In rodent studies, it caused high mortality of offspring, reduced weight gain in surviving pups, and developmental delays.<sup>2,3</sup> Recent epidemiological investigations into developmental effects associated with background levels of PFOS in pregnant women provide limited support. Apelberg et al. (2007) reported that PFOS in cord blood had a negative association with birth weight and head circumference in babies.<sup>4</sup> Fei et al. (2007) conducted a similar study but did not observe any association between fetal growth indicators and maternal PFOS levels during pregnancy.<sup>5</sup> The latter study followed children into early childhood and reported, however, that children whose mothers had the highest PFOS during pregnancy had slight delays in meeting two benchmarks: age at sitting without support and age for certain vocal benchmarks.<sup>6</sup>

In short and long-term tests in adult rats and primates, PFOS results in liver toxicity and mortality.<sup>2,3</sup>

### Exposure

PFOS is listed as a Persistent, Bioaccumulative and Toxic (PBT) chemical under Washington State's PBT rule (WAC 173-333-320).<sup>3</sup> It was historically used in Scotchgard and other waterproofing materials in children's apparel and furniture.<sup>3</sup> According to a 2009 survey, it currently has limited uses in photolithography and as a chemical intermediate in industrial applications. The potassium and ammonium salts of PFOS are used in metal plating and in the manufacture of semiconductors.<sup>4</sup> PFOS is also a degradation product of many other perfluorinated compounds.<sup>4</sup> Biomonitoring is still finding widespread detections of PFOS in the serum of the U.S. general population.<sup>5</sup>

### References

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