

PRODUCT INFORMATION

9-Chlorohexadecafluoro-3-oxanonane-1-sulfonate (potassium salt)

Item No. 42909

CAS Registry No.: 73606-19-6

Formal Name: 2-[(6-chloro-1,1,2,2,3,3,4,4,5,5,6,6-dodecafluorohexyl)oxy]-1,1,2,2-tetrafluoroethanesulfonic acid, monopotassium salt

Synonyms: C8 Cl-PFESA,
6:2 Chlorinated Polyfluoroalkyl Ether Sulfonate,
6:2 Chlorinated Polyfluoroalkyl Ether Sulfonic Acid,
6:2 Cl-PFAES, 6:2 Cl-PFESA, 9CI-PF3ONS

MF: $C_8ClF_{16}O_4S \cdot K$

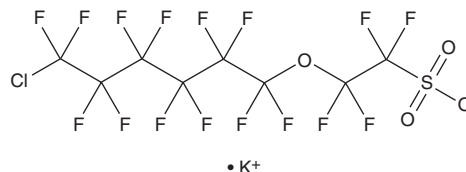
FW: 570.7

Purity: $\geq 95\%$

Supplied as: A solid

Storage: $-20^\circ C$

Stability: ≥ 4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

9-Chlorohexadecafluoro-3-oxanonane-1-sulfonate (9CI-PF3ONS) (potassium salt) is supplied as a solid. A stock solution may be made by dissolving the 9CI-PF3ONS (potassium salt) in the solvent of choice, which should be purged with an inert gas. 9CI-PF3ONS (potassium salt) is sparingly soluble (1-10 mg/ml) in DMSO and slightly soluble (0.1-1 mg/ml) in ethanol.

Description

9CI-PF3ONS is a chlorinated polyfluoroalkyl substance (PFAS).¹ It binds to the ligand-binding domains of estrogen receptor α (ER α) and ER β (IC₅₀s = 99.3 and 63.4 μM , respectively, for the human receptors) and increases the levels of vitellogenin (Vtg), estradiol (E₂), and testosterone in zebrafish larvae when used at a concentration of 500 nM. 9CI-PF3ONS (20 and 100 mg/kg) decreases serum triiodothyronine (T3) and thyroxine (T4) levels and induces thyroid gland follicular hyperplasia in rats.² It has been found in breast milk and negatively correlates with infant length gain rate.³ 9CI-PF3ONS has also been found in river and lake water.⁴

References

- Xin, Y., Wan, B., Yu, B., et al. Chlorinated polyfluoroalkylether sulfonic acids exhibit stronger estrogenic effects than perfluorooctane sulfonate by activating nuclear estrogen receptor pathways. *Environ. Sci. Technol.* **54**(6), 3455-3464 (2020).
- Hong, S.-H., Lee, S.H., Yang, J.-Y., et al. Orally administered 6:2 chlorinated polyfluorinated ether sulfonate (F-53B) causes thyroid dysfunction in rats. *Toxics* **8**(3), 54 (2020).
- Jin, H., Mao, L., Xie, J., et al. Poly- and perfluoroalkyl substance concentrations in human breast milk and their associations with postnatal infant growth. *Sci. Total Environ.* **713**, 136417 (2020).
- Wang, Y., Shi, Y., and Cai, Y. Spatial distribution, seasonal variation and risks of legacy and emerging per- and polyfluoroalkyl substances in urban surface water in Beijing, China. *Sci. Total Environ.* **673**, 177-183 (2019).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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