

WATER SOLUBILITY

TEST SUBSTANCE

Identity: Decafluoro(pentafluoroethyl)cyclohexanesulfonate, DEA salt; may be referred to as CS-2070. When dissolved in water may also be referred to or as CS-2151 or FC-90. (DEA salt of perfluoro(ethylcyclohexyl) sulfonate, [C2F5-CF(CF2CF2)2CF-SO3-][H2N(CH2CH2OH)2+])

Remarks: The 3M production lot number is not applicable. The test sample is FC-90, a mixture of CS-2070 in water (approximately 25% test substance and 75% water). All values reported relate to the solids portion of this mixture (CS-2070).

METHOD

Method: Calculated

GLP (Y/N): NA

Year (study performed): 1982

Remarks field: Calculation was done using the distribution coefficient of CS-2070 (0.65) and the equation:

$$\log S = \frac{6.5 - \log K_{ow} - 0.015 \text{ mp}}{0.89}$$

The molecular weight of FC-90 (used to convert the results of the calculation from $\mu\text{mols/L}$ to g/L) is 548.

RESULTS

Water solubility (S) = 250 g/L

Remarks: Significant digits and rounding were not considered in this calculation.

DATA QUALITY

Reliability: Klimisch ranking = 3. There is no information that validates this calculation for this compound. Additionally, the calculation is using a distribution coefficient rather than the octanol/water partition coefficient required for the calculation, and there is no information validating the distribution coefficient.

REFERENCES

This study was conducted by the 3M Company, Environmental Laboratory, 1982.

OTHER

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