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REACH

ammonium 2,3,3,3-tetrafluoro-2-(heptafluoropropoxy)propanoate

EC number: 700-242-3 | CAS number: 62037-80-3

Physical & Chemical properties

Endpoint summary

Administrative data

Description of key information

Additional information

Physical chemical properties are provided for the test substance. At 20ºCand 1013 hPa the substance - dried form - is a solid powder (99.4 % pure) and colorless liquid - substance as put on the market - (86% pure, 14.58% water, 7 ppm perfluorooctanoic acid).

For the dried substance, the melting point is 208ºC; and for the substance as placed on the market, the freezing point is -21ºC. The boiling point is 108ºC at 1013 hPa. The bulk density and relative density are 1.118 g/mL and 1.569, respectively. The particle size (inhalable fraction) of the test substance was determined by sieving the test substance through a 105 µm sieve: 76% of the particles were greater than 105 µm and 24% were less than 105 µm. Particles greater than 100 µm are not included in the inhalable convention. As expected the vapour pressure of the solid was less than the liquid. At 20ºC the vapour pressure of the solid was observed as1.17E-2. In solution,the vapour pressurewas slightly lower than that of pure water, 2910 Pa at 20ºC vs. water (2339 Pa at 20ºC). Because of the surface activity of the substance accurate determination of Kow or its measurement is difficult. An estimated value of the distribution coefficient or Log D of 2.58 at environmentally relevant pH was obtained for the ionized substance. Solubility in reagent grade water at 20ºC was greater than 1000 g/L. However solubility in both well water at 10ºC (218 mg/L) and AAP nutrient at 20ºC (207 mg/L) were also obtained. Stability was also observed in well water at 20ºC. The surface tension is 66.3 mN/m (0.663 mN/cm) at 23ºC. There was no sign of self ignition. At 20ºC above the melting temperature, no self ignition was observed. There was no sign of auto ignition. The sample did not ignite when held in a furnace heated to 616ºC.The test substance has no flashpoint, did not ignite when a hot flame was applied for a maximum of 2 minutes. Therefore, it was concluded that the test substance is not flammable. The titration method was used to determine the dissociation constant. The substance is amphoteric (pKa value was 3.82, SD = 0.0589, CV = 1.54%) at 20±1°C. The kinematic viscosity of the test substance at 22°C is 18.67 mm²/s (cSt). Structural assessment confirms the substance is neither explosive nor oxidising.

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