

1. General information

The aqueous solubility of this substance is 1.23×10^{-4} mg/L (20°C, pH=11.6), the partition coefficient (1-octanol/water) (log K_{ow}) is 2.03 (25°C), and the vapor pressure is 4.1×10^{-4} mmHg (=0.055 Pa) (20°C). Biodegradability (aerobic degradation) is characterized by a BOD degradation rate of less than 10% (28 days). Furthermore, most aliphatic amines are stable towards hydrolysis.

The major use of this substance is as a raw material for methylene bis (4,1-cyclohexylene) = diisocyanate. The production and import quantity in fiscal 2014 was less than 1,000 t.

2. Exposure assessment

Because this substance is not classified as a Class 1 Designated Chemical Substance under the PRTR Law, release and transfer quantities could not be obtained.

Predictions of proportions distributed to individual media by using a Mackay-type level III fugacity model indicate that if equal quantities are released to the atmosphere, water bodies, and soil, the proportion distributed to soil would be largest.

The predicted environmental concentration (PEC), which indicates exposure to aquatic organisms, was less than around 0.014 μ g/L for both public freshwater bodies and seawater.

3.Initial assessment of ecological risk

With regard to acute toxicity, the following reliable data were obtained: a 72-h EC₅₀ of 2,164,000 μ g/L for growth inhibition in the green algae *Desmodesmus subspicatus*, a 48-h EC₅₀ of 6,840 μ g/L for immobilization in the crustacean *Daphnia magna*, and a 96-h LC₅₀ of more than 100,000 μ g/L for the fish species *Leuciscus idus* (golden orfe).

Accordingly, based on these acute toxicity values and an assessment factor of 100, a predicted no effect concentration (PNEC) of 68 μ g/L was obtained.

Reliable data for chronic toxicity could not be obtained.

The value of 68 μ g/L obtained from the acute toxicity to the crustacean was used as the PNEC for this substance.

The PEC/PNEC ratio is less than 0.0002 for both freshwater bodies and seawater; accordingly, further work is considered unnecessary at this time.

Hazard Assessment (Basis for PNEC)					Predicted no	Exposure Assessment			Iudament			
Species	Acute	e/ ic En	dpoint	Assessment Coefficient	effect concentration PNEC (µg/L)	Water body	Predicted environmental concentration PEC (µg/L)	PEC/PNEC basec ratio PEC/P rati		on EC	Assessment result	
Crustacean	tacean		EC ₅₀	100	68	Freshwater	< 0.014	< 0.0002	0		0	
magna	Acut	immo	immobilization	100	00	Seawater	< 0.014	< 0.0002			U	
	Conclusions									Judgment		
4. Conclusions											idamont	
Ecological		No ne	No need for further work at present.								\bigcirc	
risk		-	F								Ű	
[Risk judgments] \bigcirc : No need for further work \blacktriangle : Requiring information collection												
■: Candidates for further work ×: Impossibility of risk characterization												
(\bigcirc) : Although risk to human health could not be confirmed, collection of further												
information would not be required.												
(\blacktriangle) : Further information collection would be required for risk characterizat									ion			