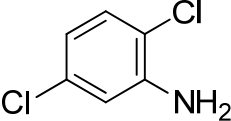


4	CAS No.: 95-82-9	Substance: 2,5-Dichloroaniline
<p>Chemical Substances Control Law Reference No.: 3-261 (Dichloroaniline)  PRTR Law Cabinet Order No.: 1-156 (Dichloroaniline)  Molecular Formula: C<sub>6</sub>H<sub>5</sub>Cl<sub>2</sub>N                      Structural Formula:  Molecular Weight: 162.02</p> <div style="text-align: center;">  </div>		
<p><b>1. General information</b></p>		
<p>The aqueous solubility of this substance is 2.5×10<sup>3</sup> mg/L (60°C), the partition coefficient (1-octanol/water) (log K<sub>ow</sub>) is 2.75, and the vapor pressure is 6.8 mmHg (900 Pa) (116°C). Biodegradability (aerobic degradation) is characterized by a BOD degradation rate of 0%, and bioaccumulation is thought to be nonexistent or low. The substance does not have any hydrolyzable groups under environmental conditions.</p> <p>Dichloroaniline is designated as a Class 1 Designated Chemical Substance under the Law Concerning Reporting, etc. of Releases to the Environment of Specific Chemical Substances and Promoting Improvements in Their Management (PRTR Law). The main use of this substance is as an intermediate for agricultural chemicals, dyestuffs, and pigments. The production and import quantity of dichloroaniline in fiscal 2013 was less than 1,000 t. The production and import category under the PRTR Law is 1 to &lt; 100 t.</p>		
<p>-----</p>		
<p><b>2. Exposure assessment</b></p>		
<p>Total release to the environment of dichloroaniline in fiscal 2013 under the PRTR Law was approximately 0 t. In addition, approximately 0.52 t was transferred to waste materials and 0.021 t was transferred to sewage. The sole source of reported releases was the chemical industry. Predictions of proportions distributed to individual media by using a Mackay-type level III fugacity model indicated that if equal quantities were released to the atmosphere, water bodies, and soil, the proportion distributed to soil would be largest.</p> <p>The predicted environmental concentration (PEC), which indicates exposure to aquatic organisms, was reported to be less than around 0.05 µg/L for both public freshwater bodies and seawater.</p>		
<p>-----</p>		
<p><b>3. Initial assessment of ecological risk</b></p>		
<p>With regard to acute toxicity, the following reliable data were obtained: a 48-h EC<sub>50</sub> of 5,940 µg/L for growth inhibition in the green algae <i>Pseudokirchneriella subcapitata</i>, a 48-h EC<sub>50</sub> of 1,810 µg/L for swimming inhibition in the crustacean <i>Daphnia magna</i>, a 96-h LC<sub>50</sub> of 2,210 µg/L for the fish species <i>Oryzias latipes</i> (medaka), and a 48-h IGC<sub>50</sub> of 42,800 µg/L for reproductive inhibition in the ciliate protozoan <i>Tetrahymena pyriformis</i>. Accordingly, based on these acute toxicity values and an assessment factor of 100, a predicted no effect concentration (PNEC) of 18 µg/L was obtained.</p> <p>With regard to chronic toxicity, the following reliable data were obtained: a 72-h NOEC of 1,890 µg/L for growth inhibition in the green algae <i>P. subcapitata</i>, and a 21-d NOEC of 32 µg/L for reproductive inhibition in the crustacean <i>D. magna</i>. Accordingly, based on these chronic toxicity values and an assessment factor of 100, a PNEC of 32 µg/L was obtained.</p> <p>The value of 0.32 µg/L obtained from the chronic toxicity to the crustacean was used as the PNEC for this substance.</p> <p>The PEC/PNEC ratio is less than 0.15 for both freshwater bodies and seawater; accordingly, the ecological risk could not be judged. Regarding this substance, efforts are needed to understand trends in production and import quantities as well as in PRTR data, and the necessity of conducting a survey and monitoring of this</p>		

substance in public water bodies should be considered.

Hazard Assessment (Basis for PNEC)			Assessment Coefficient	Predicted no effect concentration PNEC (µg/L)	Exposure Assessment		PEC/PNEC ratio	Judgment based on PEC/PNEC ratio	Assessment result
Species	Acute/ chronic	Endpoint			Water body	Predicted environmental concentration PEC (µg/L)			
Crustacean <i>Daphnia magna</i>	Chronic	NOEC reproductive inhibition	100	0.32	Freshwater	<0.05	<0.15	×	▲
					Seawater	<0.05	<0.15		

#### 4. Conclusions

	Conclusions	Judgment
Ecological risk	Requiring information collection.	▲

[Risk judgments] ○: No need for further work      ▲: Requiring information collection  
 ■: Candidates for further work      ×: Impossibility of risk characterization  
 (○) : Although risk to human health could not be confirmed, collection of further information would not be required..  
 (▲) : Further information collection would be required for risk characterization.