

## Morfin Viatris



### Meda

Oral lösning 5 mg/ml  
(apelsinsmak)



Narkotikaklass: II - Narkotika med medicinsk användning

### Särskilt läkemedel

Narkotiskt analgetikum

### Aktiv substans:

Morfin

### ATC-kod:

N02AA01

Läkemedel från Meda omfattas av Läkemedelsförsäkringen.

## Miljöpåverkan

### Morfin

Miljörisk: Risk för miljöpåverkan av morfin kan inte uteslutas då ekotoxikologiska data saknas.

Nedbrytning: Det kan inte uteslutas att morfin är persistent, då data saknas.

Bioackumulering: Morfin har låg potential att bioackumuleras.

### Detaljerad miljöinformation

#### Environmental Risk Classification

#### *Predicted Environmental Concentration (PEC)*

PEC is calculated according to the following formula:

$$PEC (\mu\text{g/L}) = (A \cdot 10^9 \cdot (100 - R)) / (365 \cdot P \cdot V \cdot D \cdot 100) = 1,37 \cdot 10^{-6} \cdot A \cdot (100 - R)$$

$$PEC = 0.011 \mu\text{g/L}$$

Where:

A = 82.1 kg (total sold amount API of morphine hydrochloride (trihydrate) and morphine sulfate (pentahydrate) in Sweden year 2023, data from IQVIA) (Ref. 1)

R = removal rate = 0% (no data available)

P = number of inhabitants in Sweden =  $10 \cdot 10^6$

V (L/day) = volume of waste water per capita and day = 200 (ECHA default) (Ref. 2)

D = factor for dilution of waste water by surface water flow = 10 (ECHA default) (Ref. 2)

### **Ecotoxicology**

No ecotoxicological data available.

### **Degradation**

No degradation data available

### **Bioaccumulation**

An experimentally derived Log  $P_{ow}$  of 0.89 (unknown method) (Ref. 3) indicates that morphine has a low potential for bioaccumulation.

Log  $P_{ow}$  < 4 which justifies use of the phrase "Morphine has low potential for bioaccumulation".

### **Excretion (metabolism)**

Elimination of morphine occurs mainly through glucuronidation, and excretion of unchanged morphine in urine constitutes <0.1%. Morphine-6-glucuronide is excreted via urine, which means that morphine-6-glucuronide may accumulate in case of impaired renal function. Impaired hepatic and renal function affects elimination of the substance. (Ref. 4)

### **References:**

1. Data from IQVIA "Consumption assessment in kg for input to environmental classification - updated 2024 (data 2023)".
2. ECHA, European Chemicals Agency. Guidance on information requirements and chemical safety assessment. Ver 2.1, 2011
3. Avdeef A., et al. (1996), ChemID+, US National Library of Medicine, National Institutes of Health
4. SPC (Summary of Product Characteristics) Morfin Meda, 2018-11-02, FASS.se.