

Corotrop

MR EF

Sanofi AB

Injektionsvätska, lösning 1 mg/ml
(klar, färglös eller svagt gul lösning)

Medel vid hjärtsvikt

Aktiv substans:

Milrinon

ATC-kod:

C01CE02

Läkemedel från Sanofi AB omfattas av Läkemedelsförsäkringen.

Miljöpåverkan

Milrinon

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

Nedbrytning: Milrinon är potentiellt persistent.

Bioackumulering: Milrinon har låg potential att bioackumuleras.

Detaljerad miljöinformation

Environmental Risk Classification

Predicted Environmental Concentration (PEC)

PEC is calculated according to the following formula:

$$\text{PEC } (\mu\text{g/L}) = (A \cdot 10^9 \cdot (100 - R)) / (365 \cdot P \cdot V \cdot D \cdot 100) = 1.37 \cdot 10^{-6} \cdot A \cdot (100 - R)$$

$$\text{PEC} = 5.48 \cdot 10^{-6} \mu\text{g/L}$$

Where:

A = 0.04 kg (total sold amount API in Sweden year 2020, data from IQVIA)

R = 0 % removal rate (due to loss by adsorption to sludge particles, by volatilization, hydrolysis or biodegradation) = 0 if no data is available.

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

V (L/day) = volume of wastewater per capita and day = 200 ECHA default) (Ref. I)

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

Predicted No Effect Concentration (PNEC)

Ecotoxicological studies

No ecotoxicological test results are available.

Environmental risk classification (PEC/PNEC ratio)

The PEC/PNEC ratio could not be determined since no ecotoxicological test results are available.

According to the European Medicines Agency guideline on environmental risk assessment of medicinal products (EMA/CHMP/SWP/4447/00), use of milrinone is unlikely to represent a risk for the environment, because the predicted environmental concentration (PEC) is below the action limit of 0.01 µg/L.

Justification of chosen summary phrases for the environmental risk:

Risk of environmental impact of milrinone cannot be excluded, since no ecotoxicity data are available.

Degradation

Biotic degradation

Ready degradability:

Milrinone is potentially persistent as indicated by a 2.1 % biodegradation in 28 days. (FDA 3.11) (Ref. II)

Chosen degradation phrase:

Milrinone is potentially persistent.

Bioaccumulation

Partitioning coefficient:

logP = 1.04; 0.33 (predicted (ALOGPS; ChemAxon, respectively) (Ref. III)

Justification of chosen bioaccumulation phrase:

Since logP < 4, milrinone has low potential for bioaccumulation.

Excretion (metabolism)

Milrinone is mainly excreted in the urine, mainly in unchanged form (83 %) and to a lesser extent as inactive O-glucuronide (12 %). A small amount is excreted via faeces. In healthy subjects, 60 % of the dose was found in the urine within 2 hours supply and within the first 8 hours 90 % were found. (Ref. IV)

References

- I. ECHA, European Chemicals Agency. 2008 Guidance on information requirements and chemical safety assessment; find here.
- II. Internal report, Sterling Winthrop: Milrinone: CO₂ Production Test, March 1992. Report number not available.
- III. Milrinone at Drug Bank, retrieved 2021-12-13 from Drug Bank.com; find here
- IV. SmPC of Corotrop, retrieved 2021-12-13 from SE MPA; find here.