1-Dodecanamine, N-dodecyl-N-methyl-

(CAS numbers: e.g. 2915-90-4, EC number: 220-838-2 / Entry number in HELCOM list of substances of concern: 1)

General sectors: Industry and commercial products

DRIVERS | ACTIVITIES | PRESSURES | STATE | IMPACTS

Why a HELCOM concern?

Main evidence

S Concentrations of a substance tentatively identified as 1-Dodecanamine, N-dodecyl-N-methyl- exceed the applied threshold value in all the **5** examined areas (assessment units) of the Baltic Sea. The threshold is exceeded in both coastal and off-shore areas (**1**/1 assessed off-shore areas). In these 5 areas, **100%** of the assessible samples in **sediment and/or biota** exceed the threshold value. This is based on suspect screening data from the project PreEMPT[1]. A total number of 7 data points were possible to evaluate for this substance.

By further considering how much above or below the threshold each concentration is, and how often the substance is detected, 1-Dodecanamine, N-dodecyl-N-methyl- scores **8.2/10** (confidence range: **4.1 – 8.5**) in the scale established when assessing the criticality/significance of current levels in the Baltic Sea pose, where 5 indicates concern and 10 extreme risk, and the range reflects the level of reliability and representativeness of concentrations and the thresholds.

The threshold values for 1-Dodecanamine, N-dodecyl-N-methyl- in sediment and biota were acquired from the NORMAN Network ecotoxicology database[2].

I Current levels in the Baltic Sea indicate potential negative impacts on pelagic biota and/or sediment dwelling biota and/or top predators such as mammals and birds and/or humans via consumption of seafood.

Overall assessment

When assessing current levels in the Baltic Sea, current inputs, and the severity of the relevant toxicity mechanism, 1-Dodecanamine, N-dodecyl-N-methyl- scores **43-85/100** in the scale established for assessing the overall risk for impacts/threat for the Baltic Sea, where 50 indicates concern, 100 extreme risk, and the width of the span outlines the uncertainty in the assessment.

Facts relevant for management considerations

Causal chain and pathways

A The substance is not registered under EU REACH Regulation. 6 companies manufacture it or import it in the EU in unknown amounts of less than a tonne/year/company and have accordingly submitted Classification & Labelling notifications under the EU CLP Regulation[3]. According to the SPIN database, for the period 2017-2021, in Sweden the substance was reported in total amounts up to the tonnage band of 15 kg/y – 1.5 t/y, up to the year 2019[4]. There is no information about what it is used for.

S ? *In order to further improve the evaluation of the risk, the first aspect to consider is identity confirmation (PreEMPT samples). If identity is confirmed, then furhter relevant aspects to consider are a review of the toxicity thresholds (sediment, biota) and further marine information plus information about its market in the Contracting Parties (tonnage, uses).*

Relevant policies (existing or planned measures)

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References:

1. 2. 3. 4.

[Note: Listing of detailed references will be provided in an upcoming update of the fact sheet – for a listing of the most common references among the different substances see the section at the end of the consolidated document which includes all the fact sheets]