



30 July 2024

Chemical profile

Lauryl (dodecyl) sulfates

Summary

- The chemicals are a group of monododecyl sulfate salts that are used in high volumes in Australia as surfactants in various domestic and cleaning products.
- Chemicals in this group are expected to be of low risk to the environment.
- The chemicals in this group are a priority for scheduling under the [Industrial Chemicals Environmental Management Standard](#) (IChEMS) due to their high-volume usage in Australia.

Introduction and use of lauryl (dodecyl) sulfates in Australia

The lauryl (dodecyl) sulfates group are typically used as surfactants in consumer and industrial products, such as in paints and coatings, plastic and polymer products, automotive and furniture care products, cleaning, laundry and dishwashing products, extractive products, and personal care products.

The chemicals in this group have a use volume in the thousands of tonnes per year in Australia.

Controls under international conventions

The chemicals in this group have no obligations under international conventions.

Chemical identity

Chemicals in this group are salts that share a common dodecyl sulfate anion, consisting of a linear aliphatic chain with 12 carbon atoms and terminating with a sulfate group. Chemicals in this group differ by the cation: sodium, potassium, magnesium or ammonium. These chemicals have been placed in a group as they have known applications as surfactants and a common emission scenario. Also, the dissociation of the salts upon entry to wastewater yields a common dodecyl sulfate anion. Therefore, the distinction between cations does not affect the chemical reactivity and hazard classification.

- **Group name:** Lauryl (dodecyl) sulfates
- **CAS registry numbers:** 151-41-7; 151-21-3; 2235-54-3; 3097-08-3; 4706-78-9

Table 1 – Indicative list of CAS RN included in the lauryl (dodecyl) sulfates group.

CAS Name	CAS RN
Lauryl sulfate	151-41-7
Sodium lauryl sulfate	151-21-3
Ammonium lauryl sulfate	2235-54-3
Magnesium lauryl sulfate	3097-08-3
Potassium lauryl sulfate	4706-78-9

Hazards and risks to the environment

The [environmental risk](#) of the lauryl (dodecyl) sulfates group was assessed by the Australian Industrial Chemical Introduction Scheme (AICIS) as being not persistent, not bioaccumulative, and not toxic according to Australian Environmental Criteria for Persistent, Bioaccumulative and/or Toxic Chemicals.

They are classified under the Globally Harmonized System of Classification and Labelling of Chemicals (GHS) as Aquatic Chronic Category 3 ('Harmful to aquatic life with long lasting effects') and Aquatic Acute Category 2 ('Toxic to aquatic life').

Taking into account the GHS chronic toxicity classification, the chemicals in this group, if used in Australia in accordance with the particular assessed use for the chemicals, have the potential to cause harm to the environment.

References

AICIS (2022). Lauryl (dodecyl) sulfates, [Evaluation Statement \[EVA00116\]](#), 22 December 2022, Australian Industrial Chemicals Introduction Scheme.

More information

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Web [Industrial Chemicals Environmental Management Standard - IChEMS - DCCEEW](#)