



27 March 2025

## *Chemical profile*

# Aryl sulfonate hydrotropes

### Summary

- Aryl sulfonate hydrotropes are a group of 25 chemicals that are used as stabilisers in personal care products and household and professional cleaning products.
- The chemicals in this group pose a low risk to the environment.
- The chemicals in this group are a priority for scheduling due to their high-volume usage in Australia.

### End Use

The aryl sulfonate hydrotropes group was assessed for environmental risk by the Australian Industrial Chemical Introduction Scheme (AICIS 2022).

Aryl sulfonate hydrotropes are used as solution stabilisers to solubilise the water insoluble or incompatible functional ingredients in a range of consumer and industrial products. The chemicals in this group are used in:

- paint and coating products
- personal care products
- plastic and polymer products
- automotive care products
- cleaning and furniture care products
- laundry and dishwashing products
- fabric, textile and leather products.

The chemicals in this group have a use volume of above a thousand tonnes per year in Australia (UNEP, 2005, p. 7).

### Controls under international conventions

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

### Chemical identity

Chemicals in this group are salts that are comprised of a methyl, dimethyl, or methylethyl substituted or unsubstituted benzene sulfonate anion, and a cationic counter ion which differs throughout the chemicals in this group. These chemicals have been placed in a group as they have known applications as solution stabilisers, have similar hazard properties, and have a common emission scenario. The chemical reactivity and environmental risk classification is not affected by the difference in counter ion.

CAS Name	CAS RN
Benzenesulfonic acid	98-11-3
Benzenesulfonic acid, sodium salt	515-42-4
Benzenesulfonic acid, calcium salt	934-54-3
Benzenesulfonic acid, 4-methyl-	104-15-4
Benzenesulfonic acid, 4-methyl-, sodium salt	657-84-1
Benzenesulfonic acid, 4-methyl-, monohydrate	6192-52-5
Benzenesulfonic acid, 4-methyl-, potassium salt	16106-44-8
Benzenesulfonic acid, methyl-, ammonium salt	26447-09-6
Benzenesulfonic acid, methyl-, potassium salt	30526-22-8
Benzenesulfonic acid, dimethyl-, sodium salt	1300-72-7
Benzenesulfonic acid, dimethyl-	25321-41-9
Benzenesulfonic acid, dimethyl-, ammonium salt	26447-10-9
Benzenesulfonic acid, dimethyl-, potassium salt	30346-73-7
Benzenesulfonic acid, 4-(1-methylethyl)-	16066-35-6
Benzenesulfonic acid, (1-methylethyl)-, sodium salt	28348-53-0
Benzenesulfonic acid, 2(or 4)-(1-methylethyl)-	28631-63-2
Benzene, (1-methylethyl)-, monosulfo derivative, sodium salt	32073-22-6
Benzenesulfonic acid, (1-methylethyl)-	37953-05-2
Benzenesulfonic acid, 2-ethyl-	91-24-7
Benzenesulfonic acid, 4-ethyl-	98-69-1
Benzenesulfonic acid, 3-ethyl-	138-29-4
Benzenesulfonic acid, 4-ethyl-, potassium salt	15497-96-8
Benzenesulfonic acid, ethyl-, sodium salt	30995-65-4
Benzenesulfonic acid, ethyl-, potassium salt	61168-61-4
Benzenesulfonic acid, ethyl-, ammonium salt	61168-62-5

**Table 1 – Chemicals which make up the “Aryl sulfonate hydrotropes” group.**

## Hazards and risks to the environment

The chemicals in this group are categorised as not persistent, not bioaccumulative, and not toxic according to Australian Environmental Criteria for Persistent, Bioaccumulative and/or Toxic Chemicals.

The calculated risk quotient (RQ) was below 1 for all environmental compartments. It was therefore concluded that the use of hydrotropes in household, laundry, and cleaning products does not pose a risk for the environment.

## References

AICIS (2022). Chemicals unlikely to require further regulation to manage risks to environment, [Evaluation Statement \[EVA00063\]](#), 14 January 2022, Australian Industrial Chemicals Introduction Scheme.

DCCEEW (Department of Climate Change, Energy, the Environment and Water) (2022). [Australian Environmental Criteria for Persistent, Bioaccumulative and/or Toxic Chemicals](#), Version 1, October 2022, DCCEEW, accessed 5 December 2024.

HERA (2005). [Human & Environmental Risk Assessment on ingredients of household cleaning products](#), Hydrotropes, September 2005.

Stanton, K., Tibazarwa, C., Certa, H., Greggs, W., Hillebold, D., Jovanovich, L., et al. (2009). Environmental risk assessment of hydrotropes in the United States, Europe and Australia. *Integrated Environmental Assessment and Management*, 6(1), 155–163. [https://doi.org/10.1897/ieam\\_2009-019.1](https://doi.org/10.1897/ieam_2009-019.1).

UNEP (2005), Hydrotropes, [OECD SIDS Initial Assessment Report](#), 18-20 October 2005, Washington DC, USA.

## More information

Email [ichems.enquiry@dcceew.gov.au](mailto:ichems.enquiry@dcceew.gov.au)

Web <https://www.dcceew.gov.au/environment/protection/chemicals-management/national-standard>