Product Stewardship Summary

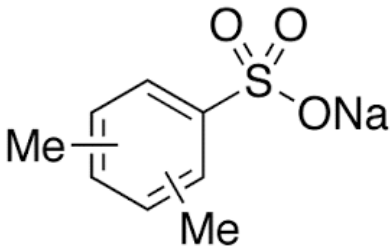
Sodium xylene sulfonate

General Statement

Sodium xylene sulfonate is a hydrotrope, an organic compound that increases the ability of water to dissolve other molecules. Sodium xylene sulfonate is a low hazard material and risk of adverse health effects associated with both occupational and consumer use of this chemical is anticipated to be low.

Chemical Identity

Name: Sodium xylene sulfonate
Brand Names: Not applicable
Chemical name (IUPAC): Sodium dimethylbenzenesulfonate
CAS number(s): 1300-72-7
EC number: 215-090-9
Molecular formula: $C_8H_9NaO_3S$
Structure:



Uses and Applications

Sodium xylene sulfonate is used in liquid household detergents and shampoos, in degreasing compounds and printing pastes used in the textile industry. It is also a surfactant found in personal care products, primarily in shampoos, because of its ability to serve as a claritant or wetting agent that helps a formula spread more easily. Sodium xylene sulfonate is also used to extract pentosans and lignin in the paper industry, and as a glue additive in the leather industry.

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Physical/Chemical Properties

Phys/Chem Safety Assessment

Property	Value
Form	Crystalline
Physical state	Solid
Color	White
Odor	Characteristic
Density	0.984 g/cm^3 @ 20°C
Melting / boiling point	>300°C / Not available
Flammability	Not highly flammable
Explosive properties	No data available
Self-ignition temperature	320.9 °C
Vapor pressure	Not available
Mol weight	208.21 g/mol
Water solubility	664 g/l at 20 °C
Flash point	Not available
Octanol-water partition coefficient (Logk_{ow})	-3.12 @20°C

Exposure, Hazard and Safety Assessment

The following section describes possible exposure scenarios and hazards associated with sodium xylene sulfonate. The exposure assessment describes both the amount of and the frequency with which a chemical substance reaches a person, a population of people, or the environment. Hazard refers to the inherent properties of a substance that make it capable of causing harm to human health or the environment. The safety assessment reports the possibility of a harmful event arising from exposure to a chemical or physical agent under specific conditions. Just because a substance may possess potentially harmful properties does not mean that it automatically poses a risk. It is not possible to make that determination without understanding the exposure.

Human Health Effects

Human Exposure Assessment

Consumer: Sodium xylene sulfonate is used in liquid household detergents and shampoos. Therefore, consumer oral and dermal exposures could occur when using products that contain sodium xylene sulfonate in the product formulations.

Worker: In industrial settings, sodium xylene sulfonate is manufactured and handled in closed processes as much as possible, which ensures that worker exposure is minimized. When there is potential for exposure, during loading, unloading, sampling or during maintenance operations, exposure to sodium xylene sulfonate can be further minimized by the proper use of personal protective equipment.

Human Hazard Assessment

Sodium xylene sulfonate is low for both acute and repeat dose toxicity. It can cause eye irritation but is not anticipated to result in skin irritation or sensitization. Sodium xylene sulfonate is not associated with reproductive toxicity, genotoxicity/mutagenicity or carcinogenicity.

Effect Assessment	Result
Acute Toxicity Oral / inhalation / dermal	Low toxicity.
Irritation / corrosion Skin / eye / respiratory test	Not irritating to the skin. Moderately irritating to the eyes. No anticipated to cause skin sensitization.
Toxicity after repeated exposure Oral / inhalation / dermal	Does not cause significant toxicity to internal organs after repeated exposure in animal studies by oral or dermal route.
Genotoxicity / Mutagenicity	Neither mutagenic or genotoxic.
Carcinogenicity	No carcinogenic effects expected.
Toxicity for reproduction	Not expected to elicit adverse effects on fertility and development, based on the effects and endpoints of similar chemicals.

Human Health Safety Assessment

Consumer: Sodium xylene sulfonate is used in liquid household detergents and shampoos. Risk to human health following exposure is unlikely due to the low toxicity of this material. Direct contact with the eyes should be avoided.

Worker: In industrial settings, sodium xylene sulfonate is manufactured and handled primarily in closed processes which limit exposure. Based on good manufacturing processes and industrial hygiene, the occupational health risk associated with sodium xylene sulfonate is low.

Environmental Effects

Environmental Exposures

Sodium xylene sulfonate is anticipated to be readily biodegradable and has low potential for bioaccumulation. Volatilization from water surfaces is not expected.

Environmental Hazard Assessment

Effect Assessment	Result
Aquatic Toxicity	Low toxicity to aquatic organisms.

Fate and behavior	Result
Biodegradation	Readily biodegradable, based on similar chemicals.
Bioaccumulation potential	Not potentially bioaccumulative (log Kow = -3.12).
PBT / vPvB conclusion	Not considered to be either PBT or vPvB.

Environmental Safety Assessment

Based on the available data, sodium xylene sulfonate is of low toxicity to aquatic organisms. It is readily biodegradable and has a low potential for bioaccumulation. Therefore, minor releases into the aquatic environment are not anticipated to result in adverse effects.

Risk Management Recommendations

Exposure to sodium xylene sulfonate in the workplace can be controlled by sufficient ventilation, proper handling and storage techniques, and the use of appropriate personal protective equipment as recommended in the SDS.

A selection of occupational exposure limits are provided, below.

- No occupational exposure limit identified.

Regulatory Agency Review

Sodium xylene sulfonate is on the following lists:

Australian Inventory of Chemical Substances (AICS)
China - Chemical Inventory of Existing Chemical Substances (IECSC) - CAS Numbers
ECHA - List of Pre-registered Substances
Environment Canada - Domestic Substances List (DSL)
Environment Canada - Domestic Substances List (DSL) Categorization of Existing Substances
EPA - Chemical Update System (CUS) - 2002
EPA - DfE - Safer Chemical Ingredients List - Safer Chemicals Ingredient List
EPA - DfE - Safer Chemical Ingredients List - Surfactants
EPA - High Production Volume (HPV) - Chemical Hazard Data Availability
EPA - Inert Ingredients in Pesticide Products
EPA - Inert Ingredients Permitted for Use In Nonfood Pesticide Products
EPA - Office of Pollution Prevention and Toxics (OPPT) High Production Volume (HPV) Program - 1990
EPA - TSCA - Inventory
EU - Cosmetic Ingredients and Fragrance Inventory
EU - European Inventory of Existing Commercial Substances (EINECS)
FDA - Inactive Ingredients List
FDA - Inventory of Effective Food Contact Substance (FCS) Notifications
FDA - List of Indirect Additives
International Council of Chemical Associations (ICCA) - High Production Volume (HPV) Initiative
International Council of Chemical Associations (ICCA) - High Production Volume (HPV) Initiative Completed Summaries
Mexico - National Inventory of Chemical Substances
New Zealand - Inventory of Chemicals (NZIoC)
OECD - High Production Volume (HPV) Chemicals - 2004
OECD - High Production Volume (HPV) Chemicals - 2007
Philippine Inventory of Chemicals and Chemical Substances (PICCS)

Regulatory Information / Classification and Labeling

Under the Globally Harmonized System for classification and labeling (GHS), substances are classified according to their physical, health, and environmental hazards. The hazards are communicated via specific labels and the (Extended) SDS. GHS attempts to standardize hazard communication so that the intended audience (workers, consumers, transport workers, and emergency responders) can better understand the hazards of the chemicals in use.

GHS Classification:

Eye Irritation, Category 2A
Acute toxicity (dermal), Category 5

Hazard Statements:

H313: May be harmful in contact with skin.
H319: Causes serious eye irritation

Signal Word: Warning

Precautionary Statements:

P280: Wear eye protection/ face protection/protective gloves.
P302: IF ON SKIN: Wash with plenty of soap and water.
P305: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P333: If skin irritation or rash occurs: Get medical advice/ attention.
P337: If eye irritation persists: Get medical advice/ attention.

Hazard Pictograms:

Conclusion

Sodium xylene sulfonate is used in liquid household detergents and shampoos, in degreasing compounds and printing pastes used in the textile industry in agents used to extract pentosans and lignin in the paper industry, and as a glue additive in the leather industry. When handled responsibly, the potential for eye irritation can be minimized, allowing consumers and workers to use materials containing sodium xylene sulfonate safely.

Contact Information with Company

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Additional Information

For more information on GHS, visit http://www.osha.gov/dsg/hazcom/ghsguideoct05.pdf or http://live.unece.org/trans/danger/publi/ghs/ghs_welcome_e.html.
Ashland product stewardship summaries are located at http://www.ashland.com/sustainability/product/product-stewardship

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Inclusion on the New Zealand Inventory of Chemicals applies only to the pure substance listed. The importer of record must determine whether or not their substances are in compliance.