MATERIAL SAFETY DATA SHEET SULPHONIC ACID

1. Chemical Product and Company Identification

Product Name: Sulphonic acid
Product form: Liquid
Substance Name: Dodecylbenzene sulphonic acid
EC No: 287-494-3
CAS No: 85536-14-7 (Alt 27176-87-0/68584-22-5)
REACH Registration No: 01-211949-0234-40
Type of product: Surfactant

Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses: Materials for use in industrial applications. Refer to supplier for additional information.
Uses advised against: No additional information available.

2. Composition and Information on Ingredients

Composition:

Name	Product identifier	% by Weight	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Benzene sulphonic acid 4-C10-C13-sec-alkyl derivatives.	(CAS No) 85536-14-7 (EC no) 287-94-3 (EC index no) - (REACH-no) 01-2119490234-40	60 – 100	Sk. Corr 1A, H314, Acute tox 4, H302 Acute Aq 2, H401 Xn, R22, C R34

Full text of R- and H-statements: see section 16
Mixture: Not applicable

3: Hazards Identification

Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 (CLP)

Sk Cor 1C, H314
Acute tox Oral 4, H302
Acute Aq tox 2, H401
For the full text of the H statements mentioned in this section, see Section 16.

Classification According to directive 67/548/EEC or 1999/45/EC

C; Xn, R34, R22
For the full text of the R phrases mentioned in this section, see Section 16.

Adverse physicochemical, human health and environmental effects

Causes severe skin burns and eye damage, Harmful if swallowed, toxic to aquatic life.

Label Elements

Labelling (Regulation (EC) No 1272/2008)

Hazard pictograms



Signal word: DANGER
Hazard Statements
H314 - Causes severe skin burns and eye damage
H302 — Harmful if swallowed
H401 — Toxic to aquatic life

Precautionary Statements
Precautionary
P264- Wash thoroughly after handling
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P270 — Do not eat, drink, or smoke when using this product.
P273 — Avoid release to the environment.
Response
P301+P330+P312 - IF SWALLOWED: rinse mouth, Call doctor/physician if you feel unwell.
P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
P363 — Wash contaminated clothing before re-use. contact lenses, if present and easy to do. Continue rinsing.
P304+P340— IF INHALED Remove to fresh air and keep at rest in a position comfortable for breathing.
P310: Immediately call doctor
P321: Specific treatment see section 4 of SDS
Other Hazards
Other hazards not contributing to the classification
No additional information

4. First Aid Measures
Description of First Aid Measures
First-aid measures general:
Call for immediate medical assistance in all cases of exposure.
First aid measures after inhalation:
Remove person to fresh air and keep comfortable for breathing. If breathing is difficult obtain immediate medical attention.
First aid measures after skin contact:
Rinse skin with water/shower. Immediately remove all contaminated clothing. Obtain immediate medical attention.
First aid measures after eye contact:
Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain immediate medical attention.
First aid measures after ingestion:
Rinse mouth, do not induce vomiting. Obtain immediate medical attention.
Most important symptoms and effects, both acute and delayed
Symptoms/injuries after inhalation: Inhalation of vapour or mist may cause respiratory irritation.
Symptoms/injuries after skin contact: Causes skin burns with redness, pain and possible blistering.
Symptoms/injuries after eye contact: Causes burns with possible corneal damage, redness, pain, tearing.
Symptoms/injuries after ingestion: Causes burns to mouth, throat, and gastric/intestinal mucosa. May cause gastric irritation and pain.
Indication of any immediate medical attention and special treatment needed
Symptomatic treatment and supportive therapy as indicated.

5. Fire and Explosion Data
Extinguishing media
Suitable extinguishing media: Use extinguishing medium suitable for surrounding fire.
Not suitable: None.

Special hazards arising from the substance or mixture
Hazardous decomposition products in case of fire:
Thermal decomposition can lead to release of irritating/toxic gases and vapours (oxides of sulphur and carbon). The product causes burns to eyes, skin, and mucous membranes.
Advice for firefighters
Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing. Prevent fire water from entering the environment

6. Accidental Release Measures
Personal precautions, protective equipment, and emergency procedures
For non-emergency personnel:
Emergency procedures: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk-through spilt material. Do not breathe vapour or mist. Provide adequate ventilation.
For emergency responders:
Personal protective equipment: As a minimum, use acid resistant gloves, clothing, eye/face protection, safety boots. Refer to Section 8. Wear appropriate respirator when ventilation is inadequate.
Environmental precautions:
Prevent entry into waterways, sewer, basements, or confined areas. Harmful to the environment if released in large quantities.
Methods and materials for containment and cleaning up:
Methods for cleaning up: Stop the flow of material if this is without risk. Dike spill with inert material and recover as much as possible. Cover remaining product with inert material. Sweep and shovel into suitably labelled containers for disposal. Mop to remove residual contamination.
Never return spills to original containers for re-use.
Other information: Dispose of materials or solid residues at an authorized site.
Reference to other sections: For further information refer to section 13.

7. Handling and Storage
Precautions for safe handling
Avoid contact with skin, eyes, and clothing. Avoid inhalation of vapour and mist. Ensure good ventilation of the workstation. Wear recommended personal protective equipment. see section 8.
Hygiene measures:
Wash contaminated clothing before reuse. Do not eat, drink, or smoke when using this product. Always wash hands after handling the product.
Conditions for safe storage, including any incompatibilities:
Storage conditions: Store in a cool, dry, well-ventilated area protected from direct sunlight. Recommended storage temperature <50°C. Keep away from incompatible materials. Keep in the original container. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Empty containers may contain product residue and can be hazardous.
Incompatible products: Strong bases, strong oxidizers
Incompatible materials: Direct sunlight, excess heat.
Suitable packaging materials: Polypropylene, plastic lined, stainless steel.
Specific end users: No additional information available

8. Exposure Controls/Personal Protection
Control parameters: No exposure limits specified for this product.

Appropriate engineering controls:
Provide eye wash and shower in work area. Ensure good ventilation of the workstation.
Personal protective equipment:
Hand protection: Protective gloves
Eye protection: Safety goggles
Skin and body protection: Wear suitable protective clothing and safety boots
Respiratory protection: In case of insufficient ventilation, wear suitable respiratory equipment



Environmental exposure controls: Avoid release to the environment

9. Physical and Chemical Properties

Information on basic physical and chemical properties

Product form:	Liquid
Appearance:	Brown viscous liquid
Odour:	Irritating, sulphurous
Odour threshold:	No data available
pH:	1 (1% solution)
Relative evaporation rates (butyIacetate=1):	No data available
Freezing point:	<-10°C
Boiling point:	>1000°C
Flash point:	2100 C (PMCC)
Auto-ignition temperature:	380 – 410°C
Decomposition temperature:	>80°C
Flammability (solid, gas):	Not applicable
Vapour pressure:	<0.00015kPa (room temperature)
Vapour density:	No data available
Relative vapour density @200°C:	No data available
Relative density (@ 20° C):	1.051-1.054
Density (@ 200 C):	1.05g/cm 3
Solubility:	10g/L@20°C in water.
Log Kow (noctanol/water coefficient):	3.2
Viscosity, kinematic (@ 400 C):	1077-1314mm2/sec
Viscosity, dynamic (@ 200 C):	1500-2000mPa s
Explosive properties:	No data available
Explosive limits Oxidising properties:	No data available
Soluble in methanol:	No data available

10. Stability and Reactivity Data

Reactivity: The product is non-reactive under recommended conditions of use, storage and transport. May react with strong oxidants.
Chemical stability: Stable under recommended storage conditions.
Possibility of hazardous reactions: None under recommended processing conditions.
Conditions to avoid: Incompatible products, excess heat
Incompatible materials: Strong bases, strong oxidizers. Will react exothermically with strong bases (alkalis
Hazardous decomposition products: Oxides of Sulphur (SO2, SO3), oxides of carbon (CO, CO2)

11. Toxicological Information

Information on toxicological effects

Acute toxicity: Category 4 Harmful if swallowed.

Test	Benzene sulphonic acid 4-C10-C13-sec-aIkyI derivatives.
LD50 oral	1470 mg/kg bodyweight
LD50 Dermal	>2000 mg/m^

Skin corrosion/irritation: Causes severe skin burns and eye damage.
pH: 1 (1% solution)
Serious eye damage/irritation: Causes serious eye damage (implicit)
pH: 1 (1% solution)
Respiratory or skin sensitisation: Not classified.
Germ cell mutagenicity: Not classified
Carcinogenicity: Not classified
Reproductive toxicity: Not classified
Specific target organ toxicity (single exposure): Not classified
Specific target organ toxicity (repeated exposure): Not classified
Aspiration hazard: Not classified

12. Ecological Information

Ecotoxicity — general: Toxic to aquatic life.
Although this product is considered is acutely toxic and chronically harmful to aquatic organisms, a risk for the environment is not identified since exposure of surface waters is expected to be negligible due to the rapid degradation. The product does not accumulate in the food chain

Test	Benzenesulphonic acid 4-CIO-C13-sec-aIkyl derivatives.
LC50 fish 1	1.67 mg/L, 96h flow-through (Cyprinus carpio)
EC50 invertebrates	2.4 mg/I (48 h) (Daphnia Magna)
EC50 algae	47.3 mg/L, 72h (Desmodesmus subspicatus

Persistence and degradability: Benzene sulphonic acid 4-C10-C13-sec-aIkyI derivatives-28days: 94%
Result: Readily biodegradable.
Bio accumulative potential: Does not accumulative in the food chain.
Mobility: mobile due to solubility.
Results of PBT and vPvB assessment: Substance is not considered persistent, bio accumulative and toxic (PBT)/very persistent and very bio accumulative (vPvB).
Other adverse effects: No additional information available.

13. Disposal Considerations

Methods of disposal: The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way in consultation with licensed waste disposal company in accordance with local legal requirements.
Special precautions: Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers

14. Transport Information

In accordance with ADR / IMDG / IATA

	ADR	IMDG	IATA	Class Diamond
UN Number	2586	2586	2586	
Proper Shipping Name	Aryl sulphonic acids, liquid	Aryl sulphonic acids, liquid	Aryl sulphonic acids, liquid	
Hazard Class	8	8	8	
Packing Group	III	III	III	
Marine pollutant	No	No	No	

15. Other Regulatory Information

Safety, health and environmental regulations/legislation specific for the substance or mixture:
EU Regulation (EC) No. 1907/2006 (REACH)
No REACH Annex XVII restrictions.
Benzene sulphonic acid is not on the REACH Candidate List
Benzene sulphonic acid is not on the REACH Annex XIV List
National Regulations: No additional information available
Chemical Safety Assessment: No chemical safety assessment has been carried out.

16. Other Information

Version: 1
Dated: March 2022
ISO 9001:2015 Quality Management System
Full text of H-Statements

Skin Corr. IC	Skin corrosion/irritation, Category 1C
Acute tax Oral 4,	Acute toxicity oral Category 4
Acute Aquatic 2	Aquatic Acute Category 2
H314	Causes severe skin burns and eye damage
H302	harmful by ingestion
H401	Toxic to aquatic life.
R34	Causes burns
R22	Harmful if swallowed
C	Corrosive
Xn	Harmful

EXCLUSION OF LIABILITY

All reasonable efforts were exercised to compile this SDS in accordance with the Globally Harmonized System of Classification and Labelling of Chemicals (GHS). The SDS only provides information regarding the health, safety, and environmental hazards at the date of issue, to facilitate the safe receipt, use and handling of this product in the workplace and does not replace any product information or product specifications. Since NuVest Chemicals and its subsidiaries cannot anticipate or control all conditions under which this product may be handled, used, and received in the workplace, it remains the obligation of each user, receiver or handler to, prior to usage, review this SDS in the context within which this product will be received, handled or used in the workplace. The user, handler or receiver must ensure that the necessary mitigating measures are in place with respect to health and safety.

This does not substitute the need or requirement for any relevant risk assessments to be conducted. It further remains the responsibility of the receiver, handler, or user to communicate such

information to all relevant parties that may be involved in the receipt, use or handling of this product.

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