



Safety Data Sheet

1. Identification

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| Product Name: Linear Alkyl benzene Sulfonate (LAS) |
| Other Names: |
| Recommended use and restrictions on use: LAS is one of the most widely used surfactants, primarily in laundry detergents and cleaning products. |
| Names, addresses, and phone numbers of the manufacturer or supplier: FORMOSA BIOMEDICAL TECHNOLOGY CORPORATION 359 CHUNGSHAN RD., SECTION 3, CHANGHWA 50011, TAIWAN |
| Emergency contact phone numbers/fax numbers: TEL : +886-4-723-6101 EXT.330 / FAX : +886-4-7259243 |

2. Hazard(s) identification

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| Product Hazard Class: Skin Corrosion/Irritation Hazard: category 2 Eye damage/Irritation Hazard: category 2A |
| Label Content:   <ul style="list-style-type: none">• Symbol:• Signal Word: Warning.• Hazard Statement: Causes skin irritation. Causes eyes irritation.• Precautionary Statements: Wear protective gloves and wash thoroughly after handling. Store in cool/well-ventilated place. |
| Other hazards: — |

3. Composition/information on ingredients

Pure material:

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| Chinese and English name: Linear Alkyl benzene Sulfonate, 直鏈式烷基苯磺酸 |
| Synonyms: LAS |
| Chemical Abstract Service No. (CAS No.): 68584-22-5 |
| The hazardous ingredient (% of the content): — |

Mixtures:

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| Chemical properties: — | |
| Chinese and English names of the hazardous ingredients | Concentration or concentration ranges (ingredient percentage) |
| — | — |

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| — | — |
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4. First-aid measures

The first aid measures for different exposure routes:

- Inhalation: —
- Skin contact: Wash the contact part of the skin with plenty of clean water. Get medical attention.
- Eye contact: Immediately flush with clean water for at least 10 minutes, to lift and clean the upper.
- Ingestion:
 1. Avoid vomiting by fingers.
 2. Rinsing the mouth with lots of water and seeking medical care as soon as possible.
 3. Never give anything by mouth to an unconscious person.

The most important symptoms and hazardous effects: Long time contact may cause stimulation of eyes or skin.

The protection of first-aiders: —

Notes to physicians: —

5. Fire-fighting measures

Suitable fire extinguishing media: Water spray, fog or mist, foam, powder, carbon dioxide.

Specific hazards may be encountered during fire-fighting: —

Specific fire-fighting methods: —

Special equipment for the protection of firefighters: —

6. Accidental release measures

Personal precautions: Use protective gloves made of Neoprene or nitrile. Wear tightly fitting safety goggles.

Environmental precautions: LAS is non-toxic material, but it foams easily.

Methods for cleaning up:

1. Gather all material practical for salvage or disposal. Remnants of LAS are washed with lots of water.
2. Waste liquid can be used as wash detergents.

7. Handling and storage

Handling: Handle in accordance with good goggles and gloves. Avoid contact with eyes and skin directly.

Storage: Store in a cool (40°C) ↓ and dry area, avoid to contact with water directly.

8. Exposure controls/personal protection

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| Engineering control: — |
| Control parameters: · 8 hours time weighted average exposure limits/Short-term exposure limits/maximum exposure limits : —/—/—/— · biological standards: LD50 : — |
| Personal protective equipment: Respiratory protection: Hand protection: rubber gloves and boots. Eye protection: chemical safety goggles. Skin and body protection: lab coat and boots. |
| Hygiene measures: 1. Removed soiled or soaked clothing immediately after work. Wearing them after wash to avoid touching and stimulating. 2. Wash hands during breaks and at the end of work. 3. Do not eat, drink or smoke during work time. |

9. Physical and chemical properties

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| Appearance: Brown liquid (colloid) | Odor: SO ² /SO ³ simulated odor |
| Viscosity: 1175cPs @25°C | Melting point: — |
| pH value: <1 | Boiling point/boiling point range: 129 °C various blends ASTM D-86 |
| Flammability (solid, gas) : — | Flash point: 208 °C °F |
| Decomposition temperature: — | Test method: — |
| Auto-ignition temperature: — | Explosion limits: — |
| Vapor pressure: — | Vapor density: — |
| Density: 1.075Kg/m ³ @30°C | Solubility: Miscible in water |
| Partition coefficient(n-octanol/water, log Kow) — | Evaporation rate : — |

10. Stability and reactivity

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| Stability : Stable |
| Possible hazardous reactions under specific conditions: — |
| Conditions to avoid: — |
| Materials to avoid: — |
| Hazardous decomposition products: — |

11. Toxicological information

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| Routes of exposure: — |
| Symptoms: — |
| Acute toxicity: — |

Chronic toxicity or long term toxicity: —

12. Ecological information:

Ecotoxicity: —

Persistence and degradability: The product is easily biodegradable.

Bioaccumulative potential: —

Mobility in soil: —

Other adverse effects: —

13. Disposal considerations

Methods of waste disposal:

1. Disposal is to be performed in compliance with related laws and regulations.
2. Dispose of waste liquid in accordance with hygiene burying method. Washing them with plenty of water.

14. Transport information

United Nations number(UN No): 2586

UN Proper shipping name: —

Transport hazard class(es): —

Packing group: —

Marine pollutant(Yes/No): No

Specific transport measures and precautionary conditions: —

15. Regulatory information

Applicable regulations: Environment Control Regulations and Labor Safety and Health Facilities Regulations

16. Other information

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| Literature references | FORMOSA BIOMEDICAL TECHNOLOGY CORPORATION | |
| Organization that prepared the MSDS | Name: FORMOSA BIOMEDICAL TECHNOLOGY CORPORATION | |
| | Address/telephone number: 359 CHUNGSHAN RD., SECTION 3 , CHANGHWA 50011, TAIWAN TEL : +886-4-723-6101 EXT.330 | |
| Person who prepared the MSDS | Title: Researcher | Name (signature): Tsung-Cheng Lin |
| Date that the MSDS was prepared: | 2017/08/07 | |

The data are based on the current state of our knowledge, and are intended to describe the product with regard to the requirements of safety. The data should not be taken to imply any guarantee of a particular or general specification. It is the responsibility of the user of the product to ensure to his satisfaction that the product is suitable for the intended purpose and method of use. We do not accept responsibility for any harm caused by the use of this information. In all cases, our general conditions of sale apply.