

MATERIAL SAFETY DATA SHEET  
COMPLIES WITH OSHA HCS 29 CFR 1910.1200 AND OSHA 174

MSDS# L-108 Revision # 1

PRODUCT NAME (AS USED ON LABEL): LIQUID DIAL SOAP, ANTIMICROBIAL

ALTERNATE PRODUCT NAME: DIAL LIQUID SOAP

\*\*EMERGENCY TELEPHONE NUMBER: (602) 253-3334\*\*

SECTION I

MANUFACTURER/DISTRIBUTOR: THE DIAL CORPORATION  
111 WEST CLARENDON AVE.  
PHOENIX, AZ 85077

TELEPHONE NUMBER FOR GENERAL INFORMATION: (602) 991-3000

SECTION II-HAZARDOUS INGREDIENTS

Finished Product: OSHA (PEL)-N/A ACGIH (TLV)-N/A  
Hazardous Components:

Chemical/Common Name	CAS Number	Concentration, % Wt.	Exposure Limits
Ammonium Lauryl Sulfate	2235-54-3	5 - 10	N/A
Sodium Laureth Sulfate	1335-72-4	1 - 5	N/A
Lauramide DEA	120-40-1	1 - 5	N/A
Formaldehyde	50-00-0	less than 0.1	see below
Formaldehyde Exposure Limits: OSHA 8-hr TWA = 1 ppm, OSHA short-term exposure limit (15 min.) = 2 ppm ACGIH TWA = 1 ppm, ACGIH STEL = 2 ppm (Threshold limit values and biological exposure indices for 1987-1988).			

SECTION III-PHYSICAL/CHEMICAL CHARACTERISTICS

Boiling Point: 212°F	Melting Point: N/A Vapor
Vapor Density (Air=1): N/A	Freezing Point: 32°F
Specific Gravity (Water=1): 1.007-1.027	pH: 6.4
Vapor Pressure (mm Hg.): N/A	Evaporation Rate (*=1): N/A
Volatiles by Weight (%): 78-88	*Butyl Acetate
Solubility in Water: 100%	
Appearance/Odor: Fragrant/gold color	

SECTION IV-FIRE AND EXPLOSION HAZARD DATA

Flash Point (°F)/Method Used: None  
Flammable Limits (LEL/UEL): N/A  
Extinguishing Media: N/A  
Special Fire Fighting Procedures: None  
Unusual Fire and Explosion Hazards: None

50307, 50308

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SECTION V-REACTIVITY DATA

Stability: Stable  
 Chemical Incompatibility: None  
 Hazardous Decomposition Products: None  
 Hazardous Polymerization: Will Not Occur

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SECTION VI-HEALTH HAZARD DATA

Route of Entry: Inhalation-Unlikely Skin-Likely Ingestion-Unlikely  
 Eyes-Likely

Health Hazards (Acute and Chronic) other than carcinogenicity:

Local Effects:

Skin: Like many shampoos, the product would be expected to be a "primary irritant" because it contains ammonium lauryl sulfate at a concentration reported (1) to produce primary irritation, as defined in 29 CFR 1910.1200, and because it contains two other surfactants, lauramide DEA and sodium laureth sulfate, which also would be expected to contribute to the irritancy of the product (2 & 3).

Results of human testing indicate prolonged repeated exposures to the product can irritate the skin.

Eye: Based upon animal testing, the product would be considered and "eye irritant" as defined in 29 CFR 1910.1200. Results of eye irritation tests in animals on ammonium lauryl sulfate (1), lauramide DEA (2), and sodium laureth sulfate (3) at concentrations similar to those in the product suggest that these ingredients contribute to this effect.

Ingestion: The product like many detergent containing toiletry products, may irritate or damage the gastrointestinal tract. Results of acute and subchronic animal tests on ammonium lauryl sulfate, lauramide DEA, and sodium laureth sulfate indicate they would contribute to the effect (1, 2, & 3). Depending on the amount of product swallowed, damage to the G.I. tract could be severe. For example, in a study involving massive doses (6.8 - 10 ml/kg) of a shampoo containing more than twice the concentration of ammonium lauryl sulfate, blanching of the gastric mucosa and inflammation of the tract were found in animals dying within two days of dosing and adhesions between the stomach, spleen, liver, diaphragm and rib cage were found in animals killed two weeks after dosing (1).

Inhalation: NIF for the product. Because of their physical properties, none of the ingredients would be expected to present a hazard by this route. —

Systemic and Special Effects:

Skin: Results of human testing on the product suggest its perfume may induce or elicit contact allergic reactions in some individuals. Also like many shampoos, the product might under extreme exposure conditions, elicit contact allergic reactions in rare individuals exceptionally sensitive to formaldehyde(4 & 5).

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Animal tests on the ingredients in the product indicate it has negligible potential for producing internal toxicity following brief exposures, but considerable potential for serious toxicity following prolonged extreme exposures. A massive dose (10 g/kg) of sodium lauryl sulfate, a material similar to the product ingredient ammonium lauryl sulfate, produced diarrhea, salivation incoordination, and death among the treated rabbits. Also, a shampoo containing 26% sodium lauryl sulfate produced depression, labored breathing, abnormal positions of legs, nasal discharge, and death in rabbits when it was applied under occlusion to their backs at 10 ml/kg. Finally large doses (1.5 ml/kg/day) of four and six percent solutions of sodium lauryl sulfate applied daily to the backs of pregnant mice reduced their body weight gains (1).

Ingestion: Animal testing indicates the product is not "toxic" or "highly toxic" by this route under the definitions in Appendix A 29 CFR 1910.1200. Animal tests on ammonium lauryl sulfate, on a related material (sodium lauryl sulfate), and on other formulations containing them indicate ingestion of massive quantities of the product could result in injury to internal organs, especially the gastrointestinal tract and lungs, and death (1).

Developmental Toxicity: NIF for the product. Fetotoxicity has been reported in the offspring of pregnant mice dermally treated with maternally toxic doses (1.5 ml/kg/day on gestation days 6 - 13) of 4 and 6% solutions of sodium lauryl sulfate. These unconfirmed findings, however, have not been considered to indicate any hazard exists from the many current uses of this ingredient in cosmetics and toiletries (1).

Mutagenicity: NIF for the product. Positive and negative mutagenicity results have been reported from in vitro tests on lauramide DEA and formaldehyde. These findings, however, have not been interpreted to indicate any hazard exists from the many current uses of these ingredients in cosmetics and toiletries (2, 4 & 5).

<u>Carcinogenicity*</u>	<u>NTP</u>	<u>IARC Monographs</u>	<u>OSHA Regulated</u>
	N/A	N/A	N/A

The substances contained in this product are not anticipated to cause a carcinogenic effect under any foreseeable exposures to the product. Nevertheless, the product does contain formaldehyde, a substance listed in the NTP Annual Report on Carcinogens and found to be a potential carcinogen in the IARC monographs. However, at the concentrations present in this product, formaldehyde would not be considered a potential carcinogen under the OSHA Hazard Communication Standard. Moreover, the level of formaldehyde present in the product is within a range commonly found and considered safe in cosmetic products (4 & 5).

Effects of Overexposure:

Inhalation - N/A

Ingestion - On the basis of animal experiments involving massive doses of a shampoo containing ammonium lauryl sulfate or massive doses of sodium lauryl sulfate any or all of the following may occur: nausea, vomiting diarrhea, chest or abdominal pain, difficulty in breathing, excessive urination, tearing, salivation, tremors, convulsions, sedation, ataxia, ptosis, and death (1).

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Skin - Any or all of the following: flaking, redness, swelling, escharosis, cracking, blistering, pain, and itching.

Eyes - Any or all of the following: blurred vision, tearing, swelling of eyelids, inflammation of eyelids and iris, and pain.

Medical conditions generally aggravated by exposure: NIF for the product. Because of its irritation potential, the product might upon prolonged skin contact aggravate pre-existing skin disorders.

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SECTION VII-PRECAUTIONS FOR SAFE HANDLING AND USE

Steps to be taken in case material is released or spilled:

Eye Protection - Goggles or safety glasses with side shields, if product is likely to be splashed.

Skin Protection - Rubber, plastic, vinyl or other water impervious gloves and garments, if prolonged skin exposure is expected.

Respiratory Protection - N/A

Handling: Store in adequate container

Storage: Avoid freezing or excessive heat.

Normal Clean Up: Wipe up, soak up, wet-vac, or absorb with an absorbent material; then flush with water.

Waste Disposal: Collect with absorbent material; recover, recycle, or dispose, then flush with water. Dispose of in an approved landfill in accordance with state and local regulations.

Other Precautions: Clean up product before it dries. Remove contaminated clothing and launder before reusing.

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SECTION VIII-FIRST AID & MEDICAL EMERGENCY PROCEDURES

Eyes: Flush eyes immediately and gently with water until all material is removed. Seek medical attention, preferably an ophthalmologist, if any more than minor irritation develops or if irritation persists.

Skin: Remove contaminated clothing and shoes promptly. Rinse affected area with water until all material is removed. Wash clothing and clean any residue from shoes before reusing.

Inhalation: N/A

Ingestion: For amounts exceeding a taste, call a poison control center or a physician. Keep person calm and warm. If vomiting occurs, assist victim in avoiding aspirating vomitus. If person is conscious and not vomiting, give person water or milk.

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SECTION IX-CONTROL MEASURES-OCCUPATIONAL

Respiratory Protection (Specify Type): NE

Ventilation:

Local Exhaust- Ensure fresh adequate ventilation

Mechanical (General)- See above

Special- N/A See above

Protective Gloves: Rubber, plastic, vinyl or other water impervious gloves, if prolonged skin exposure is expected.

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**Eye Protection:** Goggles or safety glasses with side shields, if product is likely to be splashed.

**Other Protective Clothing or Equipment:** Water impervious apron, shoe covers, and other protective clothing as necessary to prevent prolonged skin contact.

**Work/Hygienic Practices:** Remove any clothing that becomes soaked with this material and place clothing in a closed container for storage until the employer has the clothing cleaned.

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**SECTION X-ENVIRONMENTAL IMPACT**

**Applicable Regulations:** 21 CFR 701

**DOT/EPA Hazard Class:** None

**Shipping Name:** See product name

**References:**

- (1) Cosmetic Ingredient Review (CIR). Final report on the safety assessment of sodium lauryl sulfate and ammonium lauryl sulfate. J. Am. Coll. Toxicol. 2 (7), 1983.
- (2) Cosmetic Ingredient Review (CIR). Final report on the safety assessment of cocamide DEA, lauramide DEA, linoleamide DEA, and oleamide DEA. J. Am. Coll. Toxicol. 5 (5), 1986.
- (3) Cosmetic Ingredient Review (CIR). Final report on the safety assessment of sodium laureth sulfate and ammonium laureth sulfate. J. Am. Coll. Toxicol. 2 (5), 1983.
- (4) Cosmetic Ingredient Review (CIR). Final report on the safety assessment of formaldehyde. J. Am. Coll. Toxicol. 3 (3), 1984.
- (5) Scheuplein, R. J. (1985). Formaldehyde: The Food and Drug Administration's Perspective. Advances in Chem. Series/210. American Chemical Society.

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EPA - SARA Title III Section 313: Toxic chemical - no

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**NOTE:** N/A=Not Applicable  
NIF=No Information Found

ND= Not Determined

NL=Not Listed  
NE=None Established

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Date Prepared: 2-3-89  
Change: New format; add SARA statement  
End of MSDS