Material Safety Data Sheet
S-110

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Product Name(s): Dial® Professional Foaming Hand Sanitizer (65%)
Dial® Professional Foaming Hand Sanitizer (72%)

Product Use: Alcohol Hand Foam Sanitizer

Formula IDH Number(s): 1380191

Company Address: The Dial Corporation, a Henkel Company; 19001 N Scottsdale Road; Scottsdale, AZ 85255-9672 USA

Contact Information: Medical Emergencies: 1-888-689-9082   CHEMTREC: 1-800-424-9300 (24 hours daily)

SECTION 2: HAZARD IDENTIFICATION

EMERGENCY OVERVIEW

CAUTION: This product is a water white liquid with a pleasant alcoholic odor. Direct contact with eyes cause irritation. May be harmful if swallowed. Repeated or prolonged contact to skin may cause irritation or dermatitis. No significant environmental effects. Flammable- keep away from fire or flame. Keep out of reach of children.

This product is labeled in accordance with guidelines set forth in the Food, Drug, and Cosmetic Act. The use pattern and exposure in the workplace are generally not consistent with those experienced by consumers. The requirements of the Occupational Safety and Health Administration applicable to this Material Safety Data Sheet may differ from the requirements of the FD&C Act and as a result, this MSDS may contain additional health hazard information not pertinent to consumer use and not found on the product label.

Regulatory Status: This product is considered to be hazardous under OSHA's Hazard Communication Standard (29 CFR 1900.1200). This MSDS should be retained and available for employees and other users of this product.

Potential Health Effects

NOTE: The acute health effects described below are those which could potentially occur for the finished product. They are based on the toxicology information available for the finished product and/or each hazardous ingredient, and are consistent with the product type and the likelihood of a specific route of exposure. Known chronic health effects related to exposure to a specific ingredient are indicated.

Eye Contact: This product may cause moderate to severe irritation.

Skin Contact: Repeated or prolonged excessive contact may cause irritation or dermatitis.

Ingestion: May be harmful if swallowed. Disulfiram (Antabuse®) reactions such as vomiting, headache, and even collapse, may result from ingestion of small quantities of alcohol and have also been described from skin contact

Inhalation: Not an anticipated route of entry. Intentional inhalation of vapors from product may cause central nervous system effects and irritation of the throat and lungs with coughing.

Subchronic/Chronic Health Effects: Due to the nature and composition of this product no subchronic/ chronic health effects are anticipated. Nonetheless, the following effects have been reported for one of the product's components.

Ethyl Alcohol: Chronic oral studies in laboratory animals have resulted in effects such as liver damage, teratogenicity, embryotoxicity, and fetotoxicity. The newborns of alcoholic mothers may exhibit fetal alcohol syndrome. Human consumption of alcoholic beverages has been causally related to the occurrence of malignant tumors of the oral cavity, pharynx, larynx, esophagus, and liver. Normal use of this product is not expected to produce these effects.

Medical Conditions Generally Recognized As Being Aggravated By Exposure: Pre-existing respiratory illnesses or skin conditions.

Potential Environmental Effects

See Section 12: Ecological Information.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

Based on our hazard evaluation, the following chemical substance(s) in this product have been identified as hazardous.

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>CAS Number</th>
<th>Percent (w/w)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethyl Alcohol</td>
<td>64-17-5</td>
<td>65 – 72 %</td>
</tr>
</tbody>
</table>

SECTION 4: FIRST AID MEASURES

Eyes: Immediately rinse eyes with plenty of water, occasionally lifting upper and lower lids, until no evidence of product remains. Get medical attention if pain or irritation persist.
Skin: Rinse affected area with mild soap and water until no evidence of product remains. Get medical attention if irritation persists.

Ingestion: Treat symptomatically and supportively. Maintain airway and respiration. If vomiting occurs, keep head below hips to prevent aspiration. Dilution by rinsing the mouth and giving water or milk to drink is generally recommended. If unconscious, the victim should not be given anything to drink. Contact physician or local poison control center.

Inhalation: Remove from exposure area to fresh air immediately. Keep affected person warm and at rest. Treat symptomatically and supportively. Contact physician or local poison control center. If breathing has stopped, give artificial respiration, and get medical attention immediately.

Note to Physician: The physician's judgment should be used to control symptoms and clinical condition based on the individual reactions of the patient.

SECTION 5: FIRE FIGHTING MEASURES

Flammable Properties

OSHA Flammability Classification: Flammable Liquid Class IC  Flash Point: 76°F (24.4°C)
Auto-Ignition Temperature: Not applicable  Flame Projection: Not available
Flammable/Explosive limits – lower: Not available  Flammable/Explosive limits – upper: Not available
Hazardous Combustion Products: Oxides of carbon and oxides of nitrogen.

Fire and Explosion Hazard: Mixture is a flammable liquid. Vapors are heavier than air and may travel to an ignition source.

Extinguishing Media

Dry chemical, carbon dioxide, water spray or regular foam.

Protection of Firefighters

In case of fire, wear a full-face positive-pressure self-contained breathing apparatus and protective suit. Shut off all ignition sources. Move container from fire area if you can do it without risk. Apply cooling water to sides of containers that are exposed to flames until well after fire is out. Use flooding amounts of water as a fog, solid streams may be ineffective. Avoid breathing vapors; keep upwind.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions:

Wear skin, eye and respiratory protection as recommended in Section 8. Stop or reduce any leaks if it is safe to do so. Spills present a slipping hazard. Keep unnecessary personnel away. Ventilate spill area if possible. Make sure area is slip-free before re-opening to traffic.

Environmental Precautions:

Small or household quantities may be disposed in sewer or other liquid waste system. For larger quantities check with your local water treatment plant.

Methods for Containment and Clean-Up:

Shut off ignition sources. Stop leak if you can do it without risk. Use water spray to reduce vapors. Isolate area until vapors have dispersed. No smoking, flames or flares in hazard area! Keep unnecessary people away; isolate hazard area and deny entry. Ventilate closed spaces before entering. Stay upwind; keep out of low areas.

SMALL SPILLS: Absorb with sand or other non-combustible material. Containerize for disposal. LARGE SPILLS: Dike far ahead of spill to prevent further movement. Recover by pumping or by using a suitable absorbent material and place into containers for later disposal. Dispose in suitable waste container.

SECTION 7: HANDLING AND STORAGE

Handling: Do not get in eyes. Do not take internally. Use with adequate ventilation. Avoid generating aerosols and mists.

Storage: Flammable liquid. Store away from incompatible substances, excessive heat, flames, sparks or other ignition sources. Storage areas for large quantities (warehouse) should be well ventilated. Keep the containers tightly closed when not in use.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

This product is a personal care product. The use of this product by consumers is safe under normal and reasonable foreseen use. The information provided below refers to the occupational settings.

Worker Exposure Limits

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>AIHA WEEL</th>
<th>NIOSH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethanol</td>
<td>TWA: 1000 ppm (1880 mg/m³)</td>
<td>TWA: 1000 ppm (1880 mg/m³)</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Engineering Controls:

Provide local exhaust or general dilution ventilation to keep exposure to airborne contaminants below the permissible exposure limits where mists or vapors may be generated.

Respirator:

Air contamination monitoring should be carried out where mists or vapors are likely to be generated, to assure that the employees are not exposed to airborne contaminants above the permissible exposure limits. If respiratory protection is required, it must be based on the contamination levels found in the workplace, must not exceed the working limits of the respirator and be jointly approved by the National Institute for Occupational Safety and Health and the Mine Safety and Health Administration (NIOSH).
For Fire Fighting and Other Immediately Dangerous To Life or Health Conditions:

Any self-contained breathing apparatus that has a full-face piece and is operated in a pressure-demand or other positive-pressure mode. Any supplied-air respirator that has a full-face piece and is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained breathing apparatus operated in pressure demand or other positive-pressure mode.

Clothing: Protective clothing is required where repeated or prolonged skin contact may occur.

Gloves: Chemical-resistant gloves are required where repeated or prolonged skin contact may occur.

Eye/Face Protection: Splash-proof safety glasses are required to prevent eye contact where splashing of product may occur.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>White or clear</td>
</tr>
<tr>
<td>Odor</td>
<td>Pleasant</td>
</tr>
<tr>
<td>Boiling point</td>
<td>Not available</td>
</tr>
<tr>
<td>Melting point</td>
<td>Not available</td>
</tr>
<tr>
<td>Specific gravity</td>
<td>0.89</td>
</tr>
<tr>
<td>pH</td>
<td>6.0 – 8.5 @ 25°C</td>
</tr>
<tr>
<td>Partition coefficient (n-octanol/water)</td>
<td>Not available</td>
</tr>
<tr>
<td>Flammable Properties</td>
<td>See Section 5</td>
</tr>
<tr>
<td>Physical state</td>
<td>Liquid</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>None</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>Not available</td>
</tr>
<tr>
<td>Vapor density</td>
<td>Not available</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>Not available</td>
</tr>
<tr>
<td>Water solubility</td>
<td>Complete</td>
</tr>
<tr>
<td>Viscosity (Dynamic)</td>
<td>7,000 – 12,500 cps</td>
</tr>
</tbody>
</table>

SECTION 10: STABILITY AND REACTIVITY

Chemical Stability: Stable under normal ambient temperature (70°F, 21°C) and pressure (1 atm).

Conditions to Avoid: Avoid storing in direct sunlight and avoid extremes of temperature.

Incompatible Materials: Strong oxidizers, metals, acids, peroxides, bases, and combustible materials.

Hazardous Decomposition Products: Thermal decomposition may release oxides of carbon and nitrogen.

Possibility of Hazardous Reactions: Hazardous polymerization has not been reported to occur under normal temperatures and pressures.

SECTION 11: TOXICOLOGICAL INFORMATION

Product Information Summary: This product is a personal care product. The use of this product by consumers is safe under normal and reasonable foreseen use. Direct contact with eyes cause irritation. May be harmful if swallowed. No adverse effects are anticipated to skin from normal use. Repeated or prolonged contact to skin may cause irritation or dermatitis.

Component Analysis: The following toxicity information is for the hazardous ingredient(s) when used as technical grade and is provided as reference for the occupational settings.

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Acute Oral Toxicity</th>
<th>LD50 / Draize Score</th>
<th>Toxicity / Irritation Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethanol</td>
<td></td>
<td>&gt; 5,000 mg/kg (rat)</td>
<td>Non-hazardous</td>
</tr>
</tbody>
</table>

Sensitization: This product is not considered a skin or respiratory sensitizer.

Carcinogenicity: IARC classifies ethanol as “Human Sufficient Evidence” from chronic ingestion of alcoholic beverages.

Mutagenicity: None of the ingredients in this product are known to cause mutagenicity.

Reproductive/Fetal/Developmental effects: Ethanol crosses the placenta and can cause acute intoxication of the newborn or teratogenic effects, including fetal alcohol syndrome.

Target organ toxicity: Ethanol consumption produces depressant effects in the central nervous system.

Epidemiological information: None of the ingredients in this product are known to have health-related information in working populations.

SECTION 12: ECOLOGICAL INFORMATION

This product is anticipated to be safe for the environment at concentrations predicted in household settings under normal use conditions. The following toxicity information is available for the hazardous ingredient(s) when used as technical grade and is provided as reference for the occupational settings.

<table>
<thead>
<tr>
<th>Product / Ingredient</th>
<th>LC50/EC50 (Animal Specie)</th>
<th>Toxicity Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vertebrates</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ethanol</td>
<td>96-hr LC50: 14.2 mg/L (Pimephales promelas)</td>
<td>Harmful</td>
</tr>
<tr>
<td></td>
<td>96-hr LC50: 12,900 mg/L (Oncorhynchus mykiss) (flow-through) (30 days old)</td>
<td>Practically Non-Hazardous</td>
</tr>
<tr>
<td>Invertebrates</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ethanol</td>
<td>48-hr EC50: 9,268 mg/L (Daphnia magna)</td>
<td>Practically Non-Hazardous</td>
</tr>
</tbody>
</table>

Environmental Fate: No environmental fate data exists for the product. The product is anticipated biodegradable.

Persistence and Degradability: The persistence and degradability of this product has not been determined.

Bioaccumulation Potential: The bioaccumulation potential of this product has not been determined.
Mobility: The mobility of this product (in soil and water) has not been determined.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Number and Description: D001 (Ignitable)

Disposal Considerations:

Industrial/Commercial Disposal of products: This product is a RCRA hazardous waste and can be disposed of in accordance with federal, state and local regulations.

Disposal of package/Container: Do not reuse this container.

Consumer Disposal: Product residue is considered household waste. Do not reuse this container. If empty place in trash or in a recycle container if this is available.

Additional information: Observe all federal, state and local regulations when storing or disposing of this substance.

SECTION 14: TRANSPORT INFORMATION

DOT Transportation of Dangerous Goods – Ground

DOT Hazard Class: ORM-D Consumer Commodity (DOT 49CFR)

International Air Transportation (ICAO/IATA)

ICAO/IATA Number: ID 8000 - Consumer Commodity Misc 9

Combustible liquid (Liters and smaller are classed as Consumer Commodity ORM-D except when shipped by air).

Water Transportation (IMO/IMDG)

IMO/IMDG Number: UN 1170 Ethanol (Ethyl Alcohol Solution): Flammable Liquid, Class 3, PG II Limited Quantity

SECTION 15: REGULATORY INFORMATION

Occupational Safety and Health Act: Hazard Communication Rule, 29 CFR 1910.1200: The Occupational Safety and Health Administration (OSHA) require Material Safety Data Sheets (MSDSs) to provide information about any hazard that may be associated with the product and make this information available in the workplace. Since the use pattern and exposure in the workplace are generally not consistent with those experienced by consumers, this MSDS may contain health hazard information not relevant to consumer use.

United States Regulatory Information:

Food and Drug Administration: This product is regulated as an over-the-counter (OTC) drug under the Food and Drug Administration.

TSCA: All components of this product are either listed on or exempt from the U.S. Toxic Substances Control Act (TSCA) chemical substance inventory.

EPA CERCLA/SARA TITLE III Superfund Amendment and Reauthorization Act: This product contains no CERCLA/SARA Title III materials

CERCLA/SARA Section 302 EHS: This product contains no extremely hazardous substances reportable under Sections 302.

CERCLA/SARA 311/312: This product contains no hazardous chemicals reportable under Sections 311/312.

CERCLA/SARA 313: Not applicable - Consumer product. Ethanol is listed by CWA –Section 304B (effluent limitations guidelines).

State Regulations

California Proposition 65: Ethanol in alcoholic beverages is listed for developmental effects.

Canada Regulatory Information:

Canadian Environmental Protection Act:

Inventory Status: Some components of this product are not listed on the Canadian Domestic Substances List (DSL) nor the NDSL.

Health Canada:

This product is not registered for sale in Canada.

Worker Hazardous Materials Information System:

WHMIS Classification: D2B- Irritating; B2- Flammable Liquid

SECTION 16: OTHER INFORMATION

DISCLAIMER: The information contained herein is provided in good faith and is believed to be correct as of the date hereof. However, The Dial Corporation makes no representation as to the comprehensiveness or accuracy of the information. It is expected that individuals receiving the information will exercise their independent judgment in determining its appropriateness for a particular purpose. Accordingly, The Dial Corporation will not be responsible for damages of any kind resulting from the use of or reliance upon such information. No representations, or warranties, either expressed or implied of merchantability, fitness for a particular purpose or of any other nature is made hereunder with respect to the information set forth herein or to the product to which the information refers.

NFPA RATINGS (Scale 0-4, where 4=high degree of hazard):

HEALTH=2 FLAMMABILITY=3 REACTIVITY=0

HMIS RATINGS (Scale 0-4, where 4=high degree of hazard):

HEALTH=2 FLAMMABILITY=3 REACTIVITY=0