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**MATERIAL SAFETY DATA SHEET**  
**MSDS N-102 REVISION 7**

THE DIAL CORPORATION  
TECHNICAL AND ADMINISTRATIVE CENTER  
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SCOTTSDALE, ARIZONA 85254-9934

MEDICAL EMERGENCIES: 1-888-689-9082  
CHEMTREC: 1-800-424-9300 (24 Hours Daily)  
OTHER INFORMATION: 1-888-458-6673

**SUBSTANCE IDENTIFICATION**

SUBSTANCE: LIQUID STARCH  
TRADE NAMES/SYNONYMS: STA-FLO LIQUID STARCH; VANO LIQUID STARCH  
CHEMICAL FAMILY: Mixture  
I.D. NUMBERS: 990002, 990003

NFPA RATINGS (Scale 0-4, where 4=high degree of hazard): HEALTH=0 FLAMMABILITY=0 REACTIVITY=0  
HMIS RATINGS (Scale 0-4, where 4=severe hazard): HEALTH=0 FLAMMABILITY=0 REACTIVITY=0

This product is labeled in accordance with regulations administered by the Consumer Product Safety Commission. 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 differ from the requirements of the CPSC and as a result, this MSDS may contain additional health hazard information not pertinent to consumer use and not found on the product label.

**HAZARDOUS INGREDIENT INFORMATION**

COMPONENT: STARCH CAS# 9005-25-8  
5 mg/m<sup>3</sup> OSHA TWA (respirable fraction); 15 mg/m<sup>3</sup> OSHA TWA (total dust)  
10 mg/m<sup>3</sup> ACGIH TWA

Carcinogen status of components: Not listed as carcinogens by NTP, IARC, or OSHA.

**PHYSICAL AND CHEMICAL DATA**

DESCRIPTION: Blue opaque liquid.  
pH: (1% solution): 8.17 - 9.0 SPECIFIC GRAVITY: 1.025 - 1.045 @ 20 °C  
SOLUBILITY IN WATER: Complete. BOILING POINT: Not determined.  
VISCOSITY: 60 - 220 cps (Brookfield LV\_ - Spindle #2, 30 rpm or Brookfield RV\_ Spindle #1, 20 rpm)

**FIRE AND EXPLOSION DATA**

FIRE AND EXPLOSION HAZARD - The fire hazard for this product has not been determined. The hazard(s) of the component(s) with the most severe hazard(s) are:

Negligible fire hazard when exposed to heat or flame.

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**FIRE FIGHTING MEDIA** - Dry chemical or carbon dioxide. For larger fires, use water spray, fog or regular foam.

**FIRE FIGHTING** - Move container from fire if you can do it without risk. Do not scatter spilled material with high-pressure water streams. Dike fire-control water for later disposal. Extinguish using agent indicated. Use agents suitable for type of surrounding fire. Avoid breathing hazardous vapors, keep upwind.

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### HEALTH HAZARD DATA

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**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.

**ACUTE HEALTH EFFECTS:**

- INHALATION:** Unlikely to occur given the nature of the product.
- SKIN CONTACT:** May cause irritation.
- EYE CONTACT:** May cause irritation.
- INGESTION:** No adverse effects are anticipated given the nature of the product.

**CHRONIC HEALTH EFFECTS:** None known.

**MEDICAL CONDITIONS GENERALLY RECOGNIZED AS BEING AGGRAVATED BY EXPOSURE:** None known.

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### EMERGENCY AND FIRST AID PROCEDURES

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**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.

**SKIN CONTACT:** Rinse affected area with plenty of water until no evidence of product remains. Get medical attention if irritation persists.

**EYE CONTACT:** 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.

**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.

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### REACTIVITY

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**REACTIVITY** - Stable under normal temperatures and pressures.

**INCOMPATIBILITIES:** Oxidizers.

**DECOMPOSITION** - Thermal decomposition may release toxic and/or hazardous gases.

**POLYMERIZATION** - Hazardous polymerization has not been reported to occur under normal temperatures and pressures.

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**STORAGE AND DISPOSAL**

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

**CONDITIONS TO AVOID**

Avoid contact with excessive heat.

**SPILL AND LEAK PROCEDURES**

OCCUPATIONAL SPILL - Stop leak if you can do it without risk. For small spills, take up with sand or other absorbent material and place into clean, dry containers for later disposal. Keep unnecessary people away. Isolate hazard area and deny entry.

**OCCUPATIONAL PROTECTIVE EQUIPMENT**

VENTILATION - Provide local exhaust ventilation in areas where dusts may be generated, to meet permissible exposure standards.

RESPIRATOR - Air contamination monitoring should be carried out where dusts or vapors may be generated to assure that the employees are not exposed to harmful concentrations of above permissible exposure standards. 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-MSHA).

FOR FIRE FIGHTING AND OTHER IMMEDIATELY DANGEROUS TO LIFE OR HEALTH CONDITIONS - Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode. Any supplied-air respirator that has a full facepiece 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 prolonged or repeated skin contact may occur.

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

EYE PROTECTION - Safety glasses are required to prevent eye contact under conditions where splashing may occur.

**REGULATORY INFORMATION**

DOT FLAMMABILITY CLASSIFICATION:	Not applicable.
EPA - SARA TITLE III SECTION 313:	Not applicable - Consumer product.
TSCA:	All components of this product are listed or are exempted or excluded from listing on the U.S. Toxic Substances Control Act (TSCA) chemical substance inventory.

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MSDS CREATION DATE: 02/03/89  
SUPERSEDES: Rev. 6, 04/07/97  
REVISION DATE: 12/17/97  
REVISION: Update address and medical emergency telephone number.