

MATERIAL SAFETY DATA SHEET**CHEMSPEC® • 901 N. NEWKIRK STREET • BALTIMORE, MD 21205 • (410) 675-4800**

HEALTH = 2, FLAMMABILITY = 0, REACTIVITY = 0, SPECIAL = NONE, DEGREE OF HAZARD: 4 = EXTREME, 3 = HIGH, 2 = MODERATE, 1 = SLIGHT, 0 = INSIGNIFICANT

PRODUCT NAME: **LIQUID FORMULA 90™**

DOCUMENT CODE: Liquid Formula 90

CHEMICAL FAMILY: Aqueous mixture

DATE: 11/15/95

DATE REVIEWED: 08/19/99

EMERGENCY 24-HOUR TELEPHONE # (CHEMTREC)

N/A = Not applicable

N/D = Not determined

SECTION I: HAZARDOUS INGREDIENTS/HEALTH HAZARD DATA

This product has not been tested as a whole for health effects on animals or humans. According to the OSHA Hazardous Communications Standard (29 CFR 1910.1200) any hazardous ingredients that comprise >1.0% of the material and any carcinogenic ingredients that comprise >0.1% must be listed on the MSDS.

SECTION I (a): List of carcinogenic ingredients at >0.1%.

NAME	CAS NO.
TRISODIUM NITRILOTRIACETATE	18662-53-8

May cause eye and skin irritation. Oral rat LD50 is 1450 mg/kg; dermal rabbit LD50 is > 10,000 mg/kg. Listed as a possible carcinogen by IARC and NTP. OSHA PEL and ACGIH TLV not available. Detergents containing Sodium Nitrilotriacetate are exempt from labeling under California Proposition 65 because exposure in detergent applications are significantly less than the "NO SIGNIFICANT RISK LEVEL" established by Cal-EPA for this compound. The Universities Associated for Research and Education in Pathology, Inc. determined that the cancer risk to man was so low 'one in ten million or less' as to be of no practical significance. Thus UAREP concluded that 'use of NTA in detergent products does not pose a practical risk to human health.'

SECTION I (b): List of hazardous ingredients at >1.0%.

NAME	CAS NO.
SODIUM METASILICATE	6834-92-0

Corrosive to eyes, skin, respiratory and digestive tracts. May be harmful if ingested. OSHA PEL and ACGIH TLV not available.

SECTION II: EMERGENCY AND FIRST AID PROCEDURES

EYES: Immediately flush with water for at least 15 min. Seek qualified medical attention.
SKIN: Remove contaminated clothing. Thoroughly wash exposed skin with water. Consult physician if irritation persists.
INHALED: Remove to fresh air.
INGESTION: Drink at least 2 glasses of water. Immediately contact qualified medical personnel.
PHYSICIAN: Treatment based on judgment of attending physician.

SECTION III: PHYSICAL / CHEMICAL DATA

APPEARANCE AND ODOR: Clear blue liquid with pleasant odor.
WATER SOLUBILITY, % BY WT: 84-87
pH :12.5-13.5
pH(320:1): 10.5-11.5

SPECIFIC GRAVITY: 1.22-1.23 WT/GAL: 10.2	% VOLATILE BY WT: 61-63 BOILING POINT: N/D
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SECTION IV: FIRE AND EXPLOSION DATA

FLASH POINT: >200 DEG F (TCC) AUTO-IGNITION TEMPERATURE: N/A
EXPLOSIVE LIMITS - LEL: N/A UEL: N/A
EXTINGUISHING MEDIA: N/A. Use applicable media for surrounding material.
SPECIAL FIRE FIGHTING PROCEDURES: Hazardous decomposition products may be formed in the intense heat of a fire. Use NIOSH/MSHA approved self-contained positive pressure breathing apparatus and protective clothing where this material is involved in a fire.
UNUSUAL FIRE AND EXPLOSION HAZARD: N/A

SECTION V: REACTIVITY DATA

STABILITY: Stable HAZARDOUS POLYMERIZATION: Will not occur.
INCOMPATIBILITY: Concentrated acids.
HAZARDOUS DECOMPOSITION/COMBUSTION PRODUCTS: Possible unidentified organic compounds, oxides of nitrogen and carbon.

SECTION VI: SPILLS, LEAKS AND DISPOSAL PROCEDURES

WASTE DISPOSAL: In accordance with Federal, State and Local regulations.
NEUTRALIZING CHEMICALS: Water and dilute weak acids such as vinegar.

SECTION VII: PROTECTION MEASURES

VENTILATION: Local exhaust or dilution ventilation may be necessary in poorly ventilated areas.
EYE PROTECTION: Avoid eye contact. Safety glasses or splash goggles.
RESPIRATORY PROTECTION: Not usually required.
GLOVES: Rubber gloves.
OTHER PROTECTIVE EQUIPMENT: Body-covering clothing should be worn.

SECTION VIII: SPECIAL PRECAUTIONS

One should always use chemicals with awareness of potential hazards, known and unknown, and their effect on the human system. We urge users to minimize employee exposure to all chemicals, including this product and to keep the level of exposure commensurate with good industrial hygiene practices.

DISCLAIMER OF LIABILITY

The manufacturer and seller warrants that this product conforms to its standard specifications when used according to directions. As the conditions or methods of use are beyond our control, we do not assume any responsibility and expressly disclaim any liability for use of this product. Information contained herein is believed to be true and accurate but all statements or suggestions are made without any warranty, expressed or implied, regarding accuracy of the information, the hazards connected with the use of the material and the results to be obtained from the use thereof.