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MATERIAL SAFETY DATA SHEET

HELENA LABORATORIES
1530 Lindbergh Dr./P.O. Box 752
Beaumont, TX 77704-0752
USA Toll Free 800-231-5663

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DATE PREPARED: 9/27/2010
REVISION: 5

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1. IDENTIFICATION:

PRODUCT NAME: STARLINE ES COLOSCAN III OFFICE PACK

PRODUCT NO: 175085

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2. INGREDIENTS (THE ABOVE KIT CONTAINS THE FOLLOWING ITEMS):

Table with 4 columns: PRODUCT NUMBER, PRODUCT IDENTIFICATION (LABEL NAME), CAS #, %, COMMENTS. Rows include STARLINE ES COLOSCAN TRIPLE SLIDES (NON-HAZARDOUS), STARLINE COLOSCAN ES DEVELOPER, and hazardous ingredients N-PROPANOL and HYDROGEN PEROXIDE SOLUTIONS with their respective CAS numbers and percentages.

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ATTACHED ARE THE MSDSs FOR THE ABOVE NAMED HAZARDOUS INGREDIENTS.

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DATE PREPARED: 8/19/2010
REVISION: 2

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1. IDENTIFICATION:

NAME: N-PROPANOL

CAS #: 71-23-8

MOLECULAR FORMULA: C3H8O

MOLECULAR WEIGHT: 60.10

SYNONYMS: PROPYL ALCOHOL, N-PROPYL ALCOHOL, N-PROPANOL

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2. HAZARDOUS INGREDIENTS:

Table with 5 columns: CHEMICAL NAME/COMMON NAME, CAS #, %, EXPOSURE LIMITS (OSHA PEL, ACGIH TLV). Row 1: n-PROPYL ALCOHOL, 71-23-8, 100, 200 ppm, 100 ppm.

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NA = Not Applicable NE = Not Established
NL = Not Listed NIF = No Information Found

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3. HAZARD IDENTIFICATION:

EMERGENCY OVERVIEW: FLAMMABLE LIQUID AND VAPOR.

PRIMARY ROUTE(S) OF ENTRY:

INHALATION? X SKIN? X INGESTION? X

ACUTE EFFECT OF OVEREXPOSURE:

EYES: RISK OF SERIOUS DAMAGE TO EYES.

SKIN: MAY CAUSE IRRITATION. MAY BE HARMFUL IN CONTACT WITH SKIN.

INHALATION: INHALATION MAY CAUSE CENTRAL NERVOUS SYSTEM EFFECTS. MAY CAUSE IRRITATION OF RESPIRATORY TRACT.

INGESTION: ASPIRATION HAZARD. MAY BE HARMFUL IF SWALLOWED. INGESTION MAY CAUSE GATROINTESTINAL IRRITATION, NAUSEA, VOMITING AND DIARRHEA.

CHRONIC EFFECTS OF EXPOSURE: TUMORIGENIC EFFECTS HAVE BEEN REPORTED IN EXPERIMENTAL ANIMALS. EXPERIMENTS HAVE SHOWN REPRODUCTIVE TOXICITY EFFECTS ON LABORATORY ANIMALS. MAY CAUSE ADVERSE LIVER EFFECTS.

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4. FIRST AID MEASURES:

EYE CONTACT: RINSE IMMEDIATELY WITH PLENTY OF WATER, ALSO UNDER THE EYELIDS, FOR AT LEAST 15 MINUTES. IMMEDIATE MEDICAL ATTENTION IS REQUIRED.

SKIN CONTACT: WASH OFF IMMEDIATELY WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES. GET MEDICAL ATTENTION IMMEDIATELY IF SYMPTOMS OCCUR.

INHALATION: MOVE TO FRESH AIR. IF BREATHING IS DIFFICULT, GIVE OXYGEN. DO NOT USE MOUTH-TO-MOUTH RESUSCITATION IF VICTIM INGESTED OR INHALED THE SUBSTANCE; INDUCE ARTIFICIAL RESPIRATION WITH A RESPIRATORY MEDICAL DEVICE. GET MEDICAL ATTENTION IMMEDIATELY IF SYMPTOMS OCCUR.

INGESTION: DO NOT INDUCE VOMITING. OBTAIN MEDICAL ATTENTION.

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5. FIRE AND EXPLOSION HAZARD DATA:

FLASH POINT (METHOD USED): 15°C (59°F)

FLAMMABLE LIMITS: LEL 2.00% UEL 13.7%

EXTINGUISHING MEDIA: USED WATER SPRAY TO COOL FIRE-EXPOSED CONTAINERS. USE DRY CHEMICAL, CARBON DIOXIDE, OR ALCOHOL-RESISTANT FOAM. DO NOT USE STRAIGHT STREAMS OF WATER.

SPECIAL FIRE FIGHTING PROCEDURES: CONTAINERS CAN BUILD UP PRESSURE IF EXPOSED TO HEAT AND/OR FIRE. AS IN ANY FIRE, WEAR A SELF-CONTAINED BREATHING APPARATUS IN PRESSURE-DEMAND, MSHA/NIOSH (APPROVED OR EQUIVALENT), AND FULL PROTECTIVE GEAR. COMBUSTION GENERATES TOXIC FUMES. FLAMMABLE LIQUID. CAN RELEASE VAPORS THAT FORM EXPLOSIVE MIXTURES AT TEMPERATURES ABOVE THE FLASHPOINT. VAPORS MAY BE HEAVIER THAN AIR. THEY CAN SPREAD ALONG THE GROUND AND COLLECT IN LOW OR CONFINED AREAS.

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6. SPILL OR LEAK PROCEDURES:

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

USE PERSONAL PROTECTIVE EQUIPMENT. REMOVE ALL SOURCES OF IGNITION. TAKE PRECAUTIONARY MEASURES AGAINST STATIC DISCHARGES. AVOID CONTACT WITH SKIN, EYES AND CLOTHING.

SHOULD NOT BE RELEASED INTO THE ENVIRONMENT.

REMOVE ALL SOURCES OF IGNITION. SOAK UP WITH INERT ABSORBENT MATERIAL. TAKE PRECAUTIONARY MEASURES AGAINST STATIC DISCHARGES. KEEP IN SUITABLE AND CLOSED CONTAINERS FOR DISPOSAL.

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7. HANDLING AND STORAGE:

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:

WEAR PERSONAL PROTECTIVE EQUIPMENT. KEEP AWAY FROM OPEN FLAMES, HOT SURFACES AND SOURCES OF IGNITION. PRECAUTIONARY MEASURES AGAINST STATIC DISCHARGES. DO NOT BREATHE VAPORS OR SPRAY MIST. DO NOT GET IN EYES, ON SKIN OR ON CLOTHING.

KEEP CONTAINERS TIGHTLY CLOSED IN A DRY, COOL WELL-VENTILATED PLACE. KEEP AWAY FROM HEAT AND SOURCES OF IGNITION.

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8. EXPOSURE CONTROL/PERSONAL PROTECTION:

RESPIRATORY PROTECTION (SPECIFY TYPE): USE NIOSH/MSHA APPROVED RESPIRATORS

VENTILATION: LOCAL EXHAUST: X MECHANICAL:  
OTHER:

PROTECTIVE GLOVES: WEAR CHEMICAL RESISTANT GLOVES

EYE PROTECTION: WEAR SAFETY GLASSES OR GOGGLES

OTHER PROTECTIVE EQUIPMENT: WEAR APPROPRIATE PROTECTIVE CLOTHING TO MINIMIZE CONTACT WITH SKIN.

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9. PHYSICAL DATA:

BOILING POINT: 97°C SPECIFIC GRAVITY (H<sub>2</sub>O = 1): 0.8040  
pH: NIF

VAPOR PRESSURE (MM HG.): 14.3 MELTING POINT: -127°C

VAPOR DENSITY (AIR = 1): 2.1

SOLUBILITY IN WATER: MISCIBLE APPEARANCE AND ODOR: CLEAR, COLORLESS LIQUID, ALCOHOL-LIKE ODOR

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10. STABILITY AND REACTIVITY:

STABILITY: UNSTABLE: STABLE: X

INCOMPATIBILITY (MATERIALS TO AVOID): ALDEYDES, HALIDES, HALOGENATED ORGANICS, HALOGEN, STRONG ACIDS AND STRONG OXIDIZERS.

HAZARDOUS DECOMPOSITION OF BY-PRODUCTS: CARBON MONOXIDE, CARBON DIOXIDE.

HAZARDOUS POLYMERIZATION: MAY OCCUR: WILL NOT OCCUR: X

11. TOXICOLOGICAL INFORMATION:

LD50/LC50: LD50 ORAL, RAT 1870 MG/KG

REPRODUCTIVE TOXICITY: EXPERIMENTS HAVE SHOWN REPRODUCTIVE TOXICITY EFFECTS ON LABORATORY ANIMALS.

IRRITANCY, SENSITIVITY: SEVERE EYE IRRITANT.

CARCINOGENICITY: NO NTP? IARC? OSHA?

POTENTIAL HEALTH EFFECTS: TUMORIGENIC EFFECTS HAVE BEEN REPORTED IN EXPERIMENTAL ANIMALS.

12. ECOLOGICAL INFORMATION: MATERIAL IS READILY BIODEGRADABLE. MATERIAL IS PRACTICALLY NON-TOXIC TO AQUATIC ORGANISMS ON AN ACUTE BASIS (LC50/EC50>100 mg/L IN THE MOST SENSITIVE SPECIES TESTED).

13. DISPOSAL CONSIDERATIONS: OBSERVE ALL FEDERAL AND STATE REGULATIONS.

14. TRANSPORTATION INFORMATION:

DOT UN NUMBER: UN1274 PROPER SHIPPING NAME: N-PROPANOL HAZARD CLASS: 3 PACKING GROUP: II

15. REGULATORY INFORMATION: SARA 313: NOT APPLICABLE

16. OTHER INFORMATION: HAZARD RATING SYSTEM NFPA HEALTH FIRE REACTIVITY 1 3 0

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The information herein is given in good faith but no warranty, expressed or implied, is made.

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DATE PREPARED: 8/17/2010
REVISION: 6

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1. IDENTIFICATION:

NAME: HYDROGEN PEROXIDE SOLUTIONS, 30%

CAS #: 7722-84-1

CHEMICAL FAMILY: PEROXIDE
MOLECULAR WEIGHT: H2-02
MOLECULAR FORMULA: 34.01

SYNONYMS: HYDROGEN PEROXIDE SOLUTION 30%, HYDROGEN DIOXIDE

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2. CHEMICAL COMPOSITION:

Table with 5 columns: CHEMICAL NAME/COMMON NAME, CAS #, %, EXPOSURE LIMITS (OSHA PEL), and TLV (ACGIH TLV). Row 1: ETHYL ALCOHOL, 7722-84-1, 30, 1 ppm (1.4 MG/M3), 1 ppm (1.4 MG/M3)

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NA = Not Applicable NE = Not Established
NL = Not Listed NIF = No Information Found

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3. HAZARD IDENTIFICATION:

EMERGENCY OVERVIEW: DANGER! STRONG OXIDIZER. CONTACT WITH OTHER MATERIAL MAY CAUSE A FIRE. CORROSIVE.

PRIMARY ROUTE(S) OF ENTRY:

INHALATION? X SKIN? X INGESTION? X

ACUTE EFFECT OF OVEREXPOSURE:

EYES: CONTACT WITH LIQUID IS CORROSIVE TO THE EYES AND CAUSES SEVERE BURNS. CONTACT WITH THE EYES MAY CAUSE CORNEAL DAMAGE.

SKIN: CAUSES SEVER SKIN IRRITATION AND POSSIBLE BURNS. MAY CAUSE DISCOLORATION, ERYTHEME (REDNESS), SWELLING, AND THE FORMATION OF PAPULES AND VESICLES (BLISTERS).

INHALATION: CAUSES GASTROINTESTINAL IRRITATION WITH NAUSEA, VOMITING AND DIARRHEA. CAUSES GASTROINTESTINAL TRACT BURNS. MAY CAUSE VASCULAR COLLAPSE AND DAMAGE. MAY CAUSE DAMAGE TO THE RED BLOOD CELLS. MAY CAUSE DIFFICULTY IN SWALLOWING, STOMACH DISTENSION, POSSIBLE CEREBRAL SWELLING AND DEATH. INGESTION MAY RESULT IN IRRITATION OF THE ESOPHAGUS, BLEEDING OF THE STOMACH AND ULCER FORMATION.

INGESTION: CAUSES CHEMICAL BURNS TO THE RESPIRATORY TRACT. MAY CAUSE ULCERATION OF NASAL TISSUE, INSOMNIA, NERVOUS TREMORS WITH NUMB EXTREMITIES, CHEMICAL PNEUMONIA, UNCONSCIOUSNESS, AND DEATH. AT HIGH CONCENTRATIONS, RESPIRATORY EFFECTS MAY INCLUDE ACUTE LUNG DAMAGE AND DELAYED PULMONARY EDEMA.

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4. FIRST AID MEASURES:

EYE CONTACT: GET MEDICAL AID IMMEDIATELY. DO NOT ALLOW VICTIM TO RUB OR KEEP EYES CLOSED. EXTENSIVE IRRIGATION WITH WATER IS REQUIRED (AT LEAST 30 MINUTES).

SKIN CONTACT: GET MEDICAL AID IMMEDIATELY. IMMEDIATELY FLUSH SKIN WITH PLENTY OF SOAP AND WATER FOR AT LEAST 15 MINUTES WHILE REMOVING CONTAMINATED CLOTHING AND SHOES. WASH CLOTHING BEFORE REUSE. DESTROY CONTAMINATED SHOES.

INHALATION: GET MEDICAL AID IMMEDIATELY. REMOVE FROM EXPOSURE TO FRESH AIR IMMEDIATELY. IF BREATHING IS DIFFICULT, GIVE OXYGEN. DO NOT USE MOUTH-TO-MOUTH RESUSCITATION. IF BREATHING HAS CEASED APPLY ARTIFICIAL RESPIRATION USING OXYGEN AND A SUITABLE MECHANICAL DEVICE SUCH AS A BAG AND A MASK.

INGESTION: DO NOT INDUCE VOMITING. IF VICTIM IS CONSCIOUS AND ALERT, GIVE 2-4 CUPFULS OF MILK OR WATER. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. GET MEDICAL AID IMMEDIATELY. WASH MOUTH OUT WITH WATER. VOMITING MAY OCCUR SPONTANEOUSLY. IF VOMITING OCCURS AND THE VICTIM IS CONSCIOUS, GIVE WATER TO FURTHER DILUTE THE CHEMICAL.

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5. FIRE AND EXPLOSION HAZARD DATA:

FLASH POINT (METHOD USED): NON-COMBUSTIBLE

FLAMMABLE LIMITS: LEL 40 VOL% UEL 100 VOL%

EXTINGUISHING MEDIA: USE WATER ONLY. DO NOT USE CARBON DIOXIDE. DO NOT USE DRY CHEMICAL. DO NOT GET WATER INSIDE CONTAINERS.

SPECIAL FIRE FIGHTING PROCEDURES: WEAR SELF-CONTAINED BREATHING APPARATUS AND PROTECTIVE CLOTHING TO PREVENT CONTACT WITH SKIN AND EYES.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

CONTACT WITH OTHER MATERIAL MAY CAUSE FIRE. CONTAINER EXPLOSION MAY OCCUR UNDER FIRE CONDITIONS.

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6. SPILL OR LEAK PROCEDURES:

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

EVACUATE AREA.

WEAR SELF-CONTAINED BREATHING APPARATUS, RUBBER BOOTS AND HEAVY RUBBER GLOVES.

ABSORB ON SAND OR VERMICULITE AND PLACE IN CLOSED CONTAINERS FOR DISPOSAL. VENTILATE AREA AND WASH SPILL SITE AFTER MATERIAL PICKUP IS COMPLETE.

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7. HANDLING AND STORAGE:

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:

HANDLING: WASH THOROUGHLY AFTER HANDLING. REMOVE CONTAMINATED CLOTHING AND WASH BEFORE REUSE. USE ONLY IN A WELL-VENTILATED AREA. CONTENTS MAY DEVELOP PRESSURE UPON PROLONGED STORAGE. DO NOT GET IN EYES, ON SKIN, OR ON CLOTHING. KEEP CONTAINER TIGHTLY CLOSED. AVOID CONTACT WITH CLOTHING AND OTHER COMBUSTIBLE MATERIALS. DO NOT INGEST OR INHALE. STORE PROTECTED FROM LIGHT. DISCARD CONTAMINATED SHOES. UNUSED CHEMICALS SHOULD NOT BE RETURNED TO THE CONTAINER. RINSE EMPTY DRUMS AND CONTAINERS THOROUGHLY WITH WATER BEFORE DISCARDING.

STORAGE: KEEP AWAY FROM HEAT, SPARKS, AND FLAME. DO NOT STORE NEAR COMBUSTIBLE MATERIALS. KEEP CONTAINER CLOSED WHEN NOT IN USE. STORE IN A COOL, DRY, WELL-VENTILATED AREA AWAY FROM INCOMPATIBLE SUBSTANCES. STORE PROTECTED FROM LIGHT. KEEP AWAY FROM ALKALIES, OXIDIZABLE MATERIALS, FINELY DIVIDED METALS, ALCOHOLS, AND PREMANGANATES. STORE BELOW 35°C. STORE ONLY IN LIGHT-RESISTENT CONTAINERS FITTED WITH A SAFETY VENT.

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8. EXPOSURE CONTROL/PERSONAL PROTECTION:

RESPIRATORY PROTECTION (SPECIFY TYPE): APPROPRIATE NIOSH

VENTILATION: LOCAL EXHAUST: X MECHANICAL: OTHER:

PROTECTIVE GLOVES: APPROPRIATE PROTECTIVE GLOVES TO PREVENT CONTACT.

EYE PROTECTION: WEAR APPROPRIATE PROTECTIVE EYEGLASSES OR CHEMICAL SAFETY GOGGLES.

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8. EXPOSURE CONTROL/PERSONAL PROTECTION (cont):

OTHER PROTECTIVE EQUIPMENT: WEAR APPROPRIATE PROTECTIVE CLOTHING TO PREVENT SKIN EXPOSURE.

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9. PHYSICAL DATA:

BOILING POINT: 108°C SPECIFIC GRAVITY (H<sub>2</sub>O = 1): 1.1  
 pH: 3.3 (30% SOLUTION)

VAPOR PRESSURE (MM HG.): MELTING POINT: -33°C  
 23 @ 30°C

VAPOR DENSITY (AIR = 1): 1.1

SOLUBILITY IN WATER: SOLUBLE APPEARANCE AND ODOR: COLORLESS,  
 CLEAR LIQUID/SLIGHTLY ACID ODOR

10. STABILITY AND REACTIVITY:

STABILITY: UNSTABLE: STABLE: X

CHEMICAL STABILITY: DECOMPOSES SLOWLY TO RELEASE OXYGEN. UNSTABLE WHEN HEATED OR CONTAMINATED WITH HEAVY METALS, REDUCING AGENTS, RUST, DIRT OR ORGANIC MATERIALS. STABILITY IS REDUCED WHEN pH IS ABOVE 4.0.

CONDITIONS TO AVOID: MECHANICAL SHOCK, INCOMPATIBLE MATERIALS, LIGHT, IGNITION SOURCES, DUST GENERATION, EXCESS HEAT, COMBUSTIBLE MATERIALS, REDUCING AGENTS, ALKALINE MATERIALS, STRONG OXIDANTS, RUST, DUST, pH > 4.0.

INCOMPATIBILITY (MATERIALS TO AVOID): STRONG OXIDIZING AGENTS, STRONG REDUCING AGENTS, ACETIC ACID, ACETIC ANHYDRIDE, ALCOHOLS, BRASS, COPPER, COPPER ALLOYS, FINELY POWDERED METALS, GALVANIZED IRON, HYDRAZINE, IRON, MAGNESIUM, NITRIC ACID, SODIUM CARBONATE, POTASSIUM PERMANGANATE, CYANIDES (EXAMPLES: POTASSIUM CYANIDE, SODIUM CYANIDE), ETHERS (EXAMPLES: DIOXANE, FURFURAN, TETRAHYDROFURAN (THF)), UREA, CHLORISULFONIC ACID, ALKALIES, LEAD, NITROGEN COMPOUNDS, TRIETHYLAMINE, SILVER, NICKEL, PALLADIUM ORGANIC MATTER, CHARCOAL, SODIUM BORATE, ANILINE, PLATINUM, FORMIC ACID, CYCLOPENTADIENE, ACTIVATED CARBON, TERT-BUTYL ALCOHOL, HYDROGEN SELENIDE, MAGANESE DIOXIDE, MERCUROUS CHLORIDE, RUST, KETONES, CARBOXYLIC ACIDS, GLYCERINE, SODIUM FLUORIDE, SODIUM PYROPHOSPHATE, SOLUBEL FUELS (ACETONE, ETHANOL, GLYCEROL), WOOD, ASBESTOS, HEXAVALENT CHROMIUM COMPOUNDS, SALTS OF IRON, COPPER, CHROMIUM, VANADIUM, TUNGSTEN, MOLYBDEUM, AND PLATINUM.

HAZARDOUS DECOMPOSITION OF BY-PRODUCTS: OXYGEN, HYDROGEN GAS, WATER, HEAT, STEAM.

HAZARDOUS POLYMERIZATION: MAY OCCUR: WILL NOT OCCUR: X

11. TOXICOLOGICAL INFORMATION:

LD50/LC50: SKIN, RAT: LD50 = 3 GM/KG;  
SKIN, RAT: LD50 = 4060 MG/KG;

CARCINOGENICITY: ACGIH: A3 - CONFIRMED ANIMAL CARCINOGEN WITH UNKNOWN RELEVANCE TO HUMANS

IARC: GROUP 3 (NOT CLASSIFIABLE)

POTENTIAL HEALTH EFFECTS:

CAUSES BURNS.

MAY BE HARMFUL BY INHALATION, INGESTION, OR SKIN ABSORPTION.

MATERIAL IS EXTREMELY DESTRUCTIVE TO TISSUE OF THE MUCOUS MEMBRANES AND UPPER RESPIRATORY TRACT, EYES AND SKIN.

INHALATION MAY RESULT IN SPASM, INFLAMMATION AND EDEMA OF THE LARYNX AND BRONCHI, CHEMICAL PNEUMONITIS AND PULMONARY EDEMA.

SYMPTOMS OF EXPOSURE MAY INCLUDE BURNING SENSATION, COUGHING, WHEEZING, LARYNGITIS, SHORTNESS OF BREATH, HEADACHE, NAUSEA AND VOMITING.

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12. ECOLOGICAL INFORMATION: DATA NOT YET AVAILABLE

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13. DISPOSAL CONSIDERATIONS: OBSERVE ALL FEDERAL, STATE AND LOCAL ENVIRONMENTAL REGULATIONS.

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14. TRANSPORTATION INFORMATION:  
US DOT  
SHIPPING NAME: HYDROGEN PEROXIDE, AQUEOUS SOLUTIONS  
HAZARD CLASS: 5.1  
UN NUMBER: UN2014  
PACKING GROUP: II

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15. REGULATORY INFORMATION: CAS# 7722-84-1 IS LISTED ON THE TSCA INVENTORY.

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16. OTHER INFORMATION: NA

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