
MATERIAL SAFETY DATA SHEET

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

DATE PREPARED: 9/27/2010
REVISION: 4

1. IDENTIFICATION:

PRODUCT NAME: FISHER FOBT DEVELOPER 15

PRODUCT NO: 23038033

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

Table with 3 columns: PRODUCT NUMBER, PRODUCT IDENTIFICATION (LABEL NAME), COMMENTS. Includes entries for DENATURED ETHANOL and HYDROGEN PEROXIDE SOLUTIONS.

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ATTACHED ARE THE MSDSs FOR THE ABOVE NAMED HAZARDOUS INGREDIENTS.

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DATE PREPARED: 8/17/2010
REVISION: 7

1. IDENTIFICATION:

NAME: ETHANOL SDA 3A, 190 PROOF

CAS#: MIXTURE

CHEMICAL FAMILY: ALCOHOL

SYNONYMS: DENATURED ETHANOL

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2. CHEMICAL COMPOSITION:

CHEMICAL NAME/COMMON NAME	CAS #	%	EXPOSURE LIMITS	
			OSHA PEL	ACGIH TLV
ETHYL ALCOHOL	64-17-5	93 TO 98%	1000 ppm	1000 ppm
METHYL ALCOHOL	67-56-1	2 TO 7%	200 ppm	200 ppm

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NA = Not Applicable
NL = Not Listed

NE = Not Established
NIF = No Information Found

3. HAZARD IDENTIFICATION:

EMERGENCY OVERVIEW:

PRIMARY ROUTE(S) OF ENTRY:

INHALATION? X SKIN? X INGESTION? X

ACUTE EFFECT OF OVEREXPOSURE: IRRITATION AS NOTED BELOW. SHORTNESS OF BREATHING, CONFUSED BEHAVIOR, REDNESS OF SKIN, SWELLING OF TISSUES, WATERY EYES AND NAUSEA.

EYES: CAN CAUSE MODERATE EYE IRRITATION. HIGH VAPOR CONCENTRATION MAY ALSO BE IRRITATING.

SKIN: CAN CAUSE MILD SKIN IRRITATION. PROLONGED OR REPEATED CONTACT CAN RESULT IN DEFATTING AND DRYING OF THE SKIN WHICH MAY RESULT IN SKIN IRRITATION AND DERMATITIS (RASH).

INHALATION: MAY CAUSE MILD IRRITATION TO NOSE, RESPIRATORY TRACT AND MAY RESULT IN CENTRAL NERVOUS SYSTEM (CNS) DEPRESSION, DROWSINESS, DIZZINESS, LOSS OF APPETITE, IRRITATION OF THE RESPIRATORY TRACT, DRUNKENNESS, UNCONSCIOUSNESS, OR DEATH.

INGESTION: POISONOUS. MAY BE FATAL OR CAUSE BLINDNESS IF SWALLOWED. INGESTION MAY HAVE A NARCOTIC EFFECT INCLUDING SIGNS OF NERVOUS SYSTEM DEPRESSION (HEADACHE, DROWSINESS, DIZZINESS, LOSS OF COORDINATION AND FATIGUE).

CHRONIC EFFECTS OF EXPOSURE: PRE-EXISTING SKIN AND RESPIRATORY DISORDERS MAY BE AGGRAVATED BY EXPOSURE TO ETHANOL.

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4. FIRST AID MEASURES:

EYE CONTACT: IMMEDIATELY FLUSH WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES, WHILE HOLDING EYELIDS OPEN.

SKIN CONTACT: FLUSH SKIN WITH WATER. FOLLOW BY WASHING WITH SOAP AND WATER. IF IRRITATION OCCURS, SEEK MEDICAL ATTENTION.

INHALATION: REMOVE VICTOM TO FRESH AIR AND PROVIDE OXYGEN IF BREATHING IS DIFFICULT. SEEK MEDICAL ATTENTION.

INGESTION: DO NOT INDUCE VOMITING IF VICTIM IS UNCONSCIOUS OR DROWSY. OTHERWISE, IF WITHIN THE FIRST 15 MINUTES GIVE SYRUP OF IPECAC, UPON DIRECTIONS OF PHYSICIAN OR POISON CONTROL CENTER. CALL DOCTOR.

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5. FIRE AND EXPLOSION HAZARD DATA:

FLASH POINT (METHOD USED): 52°F

FLAMMABLE LIMITS: LEL 3.3 UEL 19

EXTINGUISHING MEDIA: USE WATER FOG, ALCOHOL FOAM, DRY CHEMICAL OR CO2.

5. FIRE AND EXPLOSION HAZARD DATA (cont):

SPECIAL FIRE FIGHTING PROCEDURES: CLEAR FIRE AREA OF UNPROTECTED PERSONNEL. DO NOT ENTER FIRE AREA WITHOUT FULL BUNKER GEAR, HELMET WITH FACE SHIELD, BUNKER COATS, GLOVES AND RUBBER BOOTS. INCLUDE A POSITIVE PRESSURE NIOSH APPROVED SELF-CONTAINED BREATHING APPARATUS. COOL FIRE EXPOSED CONTAINER WITH WATER.

UNUSUAL FIRE AND EXPLOSION HAZARDS: FIRE FIGHTERS SHOULD WEAR SELF-CONTAINED BREATHING APPARATUS IN THE POSITIVE PRESSURE MODE WITH A FULL FACEPIECE WHEN THERE IS A POSSIBILITY OF EXPOSURE TO SMOKE, FUMES OR HAZARDOUS DECOMPOSITION PRODUCTS.

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6. SPILL OR LEAK PROCEDURES:

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

WARNING! FLAMMABLE.
WEAR APPROPRIATE RESPIRATORY PROTECTION AND PROTECTIVE CLOTHING.
ELIMINATE ALL IGNITION SOURCES. EQUIPMENT MUST BE GROUNDED TO PREVENT SPARKING.
CONTAIN LIQUID WITH ABSORBENT MATERIAL AND PLACE IN NON-LEAKING CONTAINER.
SEAL TIGHTLY FOR DISPOSAL.

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7. HANDLING AND STORAGE:

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:

DO NOT CONTACT SKIN, EYES, MOUTH OR INGEST.
EYE WASH FOUNTAINS AND SHOWERS SHOULD BE AVAILABLE FOR EMERGENCY USE.
DO NOT STORE ABOVE 120°F. FLAMMABLE LIQUID.
DO NOT PUNCTURE, CRUSH OR INCINERATE THE CONTAINER IN UNAPPROVED MANNER.

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8. EXPOSURE CONTROL/PERSONAL PROTECTION:

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

VENTILATION: LOCAL EXHAUST: X MECHANICAL:
OTHER:

PROTECTIVE GLOVES: CHEMICAL RESISTANT GLOVES

EYE PROTECTION: CHEMICAL GOGGLES OR SAFETY GLASSES

OTHER PROTECTIVE EQUIPMENT: WEAR RECOMMENDED CLOTHING TO MINIMIZE CONTACT.

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9. PHYSICAL DATA:

BOILING POINT: 147°F TO 241°F SPECIFIC GRAVITY (H₂O = 1): 0.79 TO 1.0
pH: NA

9. PHYSICAL DATA (cont):

VAPOR PRESSURE (MM HG.): 44.6 MELTING POINT: NA

VAPOR DENSITY (AIR = 1): HEAVIER THAN AIR

SOLUBILITY IN WATER: COMPLETE

APPEARANCE AND ODOR: CLEAR, COLORLESS LIQUID, MILD ODOR

10. STABILITY AND REACTIVITY:

STABILITY: UNSTABLE: STABLE: X

INCOMPATIBILITY (MATERIALS TO AVOID): AVOID HEAT, SPARKS, FLAME AND CONTACT WITH STRONG OXIDIZING AGENTS.

HAZARDOUS DECOMPOSITION OF BY-PRODUCTS: CARBON MONOXIDE AND UNIDENTIFIED ORGANIC COMPOUNDS MAY BE FORMED DURING COMBUSTION.

HAZARDOUS POLYMERIZATION: MAY OCCUR: WILL NOT OCCUR: X

11. TOXICOLOGICAL INFORMATION:

LD50/LC50: LD50 ORAL RAT: 6200-17800 MG/KG

REPRODUCTIVE TOXICITY:

IRRITANCY, SENSITIVITY: IRRITANT

CARCINOGENICITY: NO NTP? IARC? OSHA?

POTENTIAL HEALTH EFFECTS: PERSONS WITH A HISTORY OF AILMENTS OR WITH A PRE-EXISTING DISEASE INVOLVING THE SKIN, EYE, RESPIRATORY TRACT, LIVER OR KIDNEY MAY BE AT INCREASED RISK FROM EXPOSURE.

12. ECOLOGICAL INFORMATION: AQUATIC TOXICITY: LOW POTENTIAL TO AFFECT AQUATIC ORGANISMS AND SECONDARY WASTE TREATMENT ORGANISMS.

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

14. TRANSPORTATION INFORMATION:

CLASS: 3
UN#: 1170
PG: II FLAMMABLE LIQUID

15. REGULATORY INFORMATION: THIS PRODUCT IS LISTED IN THE TSCA INVENTORY OF CHEMICAL SUBSTANCES.

16. OTHER INFORMATION:

HAZARD RATINGS:
HMIS: HEALTH = 0 FLAMMABILITY = 3 REACTIVITY = 0
NFPA: HEALTH = 0 FLAMMABILITY = 3 REACTIVITY = 0

MSDS: ETHANOL (SDA) 3A, 190 PROOF
expressed or implied, is made.

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DATE PREPARED: 8/17/2010
REVISION: 6

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

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 PERMANGANATES. 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.

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 (H₂O = 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

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 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

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 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

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