

pmmSDs # 015119

DATE: 04/26/93 ACCT: 626040-06 PAGE: 1
INDEX: 15931133910 CAT NO: H325100 PO NBR: SP02875

HYDROGEN PEROXIDE SOLUTIONS
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MATERIAL SAFETY DATA SHEET

FISHER SCIENTIFIC
CHEMICAL DIVISION
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SUBSTANCE IDENTIFICATION

SUBSTANCE: **HYDROGEN PEROXIDE SOLUTIONS**
CAS-NUMBER 7722-84-1
TRADE NAMES/SYNONYMS:
HYDROGEN PEROXIDE SOLUTION, 30-50%; STCC 4918776; UN 1414; H-323; H-325;
H-327; H-341; ACC11189

CHEMICAL FAMILY:
PEROXIDE

MOLECULAR FORMULA: H2-O2

MOLECULAR WEIGHT: 34.02

CERCLA RATINGS (SCALE 0-3): HEALTH-3 FIRE-0 REACTIVITY-1 PERSISTENCE-0
NTPA RATINGS (SCALE 0-4): HEALTH-2 FIRE-0 REACTIVITY-1 PERSISTENCE-0

COMPONENTS AND CONTAMINANTS

COMPONENT: HYDROGEN PEROXIDE PERCENT: 30-50
COMPONENT: WATER PERCENT: 70-50
OTHER CONTAMINANTS: MAY CONTAIN ACETANILIDE OR SODIUM STANNATE AS AN INHIBITOR

EXPOSURE LIMITS
HYDROGEN PEROXIDE:
1 PPM (1.4 MG/M3) OSHA TWA
1 PPM (1.4 MG/M3) ACGIH TWA
1 PPM (1.4 MG/M3) ACGIH RECOMMENDED TWA
1 PPM (1.4 MG/M3) DFG MAK TWA
2 PPM (2.8 MG/M3) DFG MAK 5 MINUTE PEAK, MOMENTARY VALUE, 8 TIMES/SHIFT

[CONCENTRATIONS GREATER THAN 52%]
1000 POUNDS SARA SECTION 302 THRESHOLD PLANNING QUANTITY
1 POUND SARA SECTION 304 REPORTABLE QUANTITY
7500 POUNDS OSHA PROCESS SAFETY MANAGEMENT THRESHOLD QUANTITY

PHYSICAL DATA

DESCRIPTION: COLORLESS, CLEAR WATER-LIKE LIQUID WITH A SLIGHTLY SHARP
ODOR AND BITTER TASTE BOILING POINT: 223 F (106 C)
MELTING POINT: -13 F (-25 C) SPECIFIC GRAVITY: 1.1
VAPOR PRESSURE: 25 MMHG @ 30 C SOLUBILITY IN WATER: SOLUBLE
VAPOR DENSITY: 1.2
SOLVENT SOLUBILITY: ALCOHOL; INSOLUBLE IN PETROLEUM ETHER

FIRE AND EXPLOSION DATA

FIRE AND EXPLOSION HAZARD:
NEGLECTIBLE FIRE HAZARD WHEN EXPOSED TO HEAT OR FLAME.
OXIDIZER: OXIDIZERS DECOMPOSE, ESPECIALLY WHEN HEATED, TO YIELD OXYGEN OR OTHER GASES WHICH WILL INCREASE THE BURNING RATE OF COMBUSTIBLE MATTER.

DATE: 04/26/93 ACCT: 626040-06 PAGE: 2
INDEX: 15931133910 CAT NO: H325100 PO NBR: SP02875

FIREFIGHTING MEDIA:
WATER ONLY, NO DRY CHEMICAL, CARBON DIOXIDE OR HALON
(1980 EMERGENCY RESPONSE GUIDEBOOK, DOT P 5600.5).
FOR LARGER FIRES, FLOOD AREA WITH WATER FROM A DISTANCE
(1980 EMERGENCY RESPONSE GUIDEBOOK, DOT P 5600.5).

FIREFIGHTING:
MOVE CONTAINERS FROM FIRE AREA IF YOU CAN DO IT WITHOUT RISK. APPLY COOLING
WATER TO CONTAINERS FROM FIRE EXPOSURE. CONTAINERS THAT ARE EXPOSED TO FLAMES UNTIL WELL AFTER FIRE
IS OUT, STAY AWAY FROM ENDS OF TANKS. FOR MASSIVE FIRE IN CARGO AREA, USE
UNMANNED HOSE HOLDER OR MONITOR NOZZLES. IF THIS IS IMPOSSIBLE, WITHDRAW FROM
AREA AND LET FIRE BURN (1980 EMERGENCY RESPONSE GUIDEBOOK, DOT P 5600.5).

USE WATER IN FLOODING AMOUNTS AS A FOG. COOL CONTAINERS WITH FLOODING
QUANTITIES OF WATER. APPLY FROM AS FAR A DISTANCE AS POSSIBLE. AVOID BREATHING
TOXIC VAPORS. KEEP UPWIND.

TRANSPORTATION DATA

DEPARTMENT OF TRANSPORTATION HAZARD CLASSIFICATION 49-CFR 172.101:

OXIDIZER
DEPARTMENT OF TRANSPORTATION LABELING REQUIREMENTS 49-CFR 172.101 AND
SUBPART E:
OXIDIZER

DEPARTMENT OF TRANSPORTATION PACKAGING REQUIREMENTS: 49-CFR 173.260
EXCEPTIONS: 49-CFR 173.244

FINAL RULE ON HAZARDOUS MATERIALS REGULATIONS (HMR, 49 CFR PARTS 171-180),
DOCKET NUMBERS HM-181, HM-181A, HM-181B, HM-181C, HM-181D AND HM-204,
EFFECTIVE DATE OCTOBER 1, 1991. HOWEVER, COMPLIANCE WITH THE REGULATIONS IS
AUTHORIZED ON AND AFTER JANUARY 1, 1991. (55 FR 52402, 12/21/90)

EXCEPT FOR EXPLOSIVES, INHALATION HAZARDS, AND INFECTIOUS SUBSTANCES, THE
EFFECTIVE DATE FOR HAZARD COMMUNICATION REQUIREMENTS IS EXTENDED TO
OCTOBER 1, 1993 (55 FR 47156, 09/18/91)

U.S. DEPARTMENT OF TRANSPORTATION SHIPPING NAME: ID NUMBER, 49 CFR 172.101.
HYDROGEN PEROXIDE, AQUEOUS SOLUTIONS-UN 1414

U.S. DEPARTMENT OF TRANSPORTATION HAZARD CLASS OR DIVISION, 49 CFR 172.101:
5.1 - OXIDIZER

U.S. DEPARTMENT OF TRANSPORTATION PACKING GROUP, 49 CFR 172.101:
PG II

U.S. DEPARTMENT OF TRANSPORTATION LABELING REQUIREMENTS, 49 CFR 172.101
AND SUBPART E:
OXIDIZER, CORROSIVE

U.S. DEPARTMENT OF TRANSPORTATION PACKAGING AUTHORIZATIONS:
NON-BULK PACKAGING: 49 CFR 173.202
BULK PACKAGING: 49 CFR 173.243

U.S. DEPARTMENT OF TRANSPORTATION QUANTITY LIMITATIONS 49 CFR 172.101:
PASSENGER AIRCRAFT OR RAILCAR, FORBIDDEN
CARGO AIRCRAFT ONLY: FORBIDDEN

TOXICITY

HYDROGEN PEROXIDE, 30%:
TOXICITY DATA: 1429 MG/KG ORAL-MAN LOLO. MUTAGENIC DATA (RTCS): TUMORIGENIC
DATA (RTCS).
CANCER STATUS: ANIMAL LIMITED EVIDENCE (IARC GROUP-3). ORAL ADMINISTRATION
IN MICE RESULTED IN ADENOMAS AND CARCINOMAS OF THE DUODENUM. OTHER STUDIES
WERE INADEQUATE FOR EVALUATION. ONE STUDY BY SKIN APPLICATION INDICATED
THAT HYDROGEN PEROXIDE HAS NO TUMOR PROMOTING ACTIVITY.
LOCAL EFFECTS: CORROSION, INHALATION SKIN, EYE, INGESTION.
LOCAL EFFECTS: CORROSION, INHALATION SKIN, EYE, INGESTION.
TARGET EFFECTS: NO DATA AVAILABLE.

HEALTH EFFECTS AND FIRST AID

INHALATION:
HYDROGEN PEROXIDE, 30%:
CORROSIVE. 75 PPM IS IMMEDIATELY DANGEROUS TO LIFE AND HEALTH.
ACUTE EXPOSURE MAY CAUSE IRRITATION AND INFLAMMATION OF THE
ACUTE THROAT, COUGHING, DYSPNEA, LABORED BREATHING, AND DELAYED PULMONARY
EDEMA.

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