



KENCRO

CHEMICALS

HYDROGEN PEROXIDE 30-60% AQUEOUS SOLUTION

MATERIAL SAFETY DATA SHEET

SECTION 1: PRODUCT AND COMPANY INFORMATION

PRODUCT IDENTIFIER: HYDROGEN PEROXIDE, AQUEOUS SOLUTION
PRODUCT USE: BLEACHING/OXIDIZING AGENT IN PULP & PAPER, SURFACE TREATMENT IN METALS INDUSTRY AND BACTERIAL AGENT IN WATER TREATMENT.
CHEMICAL FAMILY: INORGANIC PEROXIDE
SUPPLIER'S NAME AND ADDRESS: KENCRO CHEMICALS LIMITED
2172 WYECROFT RD., UNIT #4
OAKVILLE, ON
L6L 5V6
905-827-4133
24 HR. EMERGENCY NUMBER: 613-996-6666 (CANUTEC)

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENTS	C.A.S. #	WT.%	LC50	LD50	
				(ORAL, MOUSE)	(VAPOUR, RAT)
HYDROGEN PEROXIDE	7722-84-1	30 – 60%	N/AV.	>2000mg/kg	1437ppm, 4 hours

SECTION 3: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

CLEAR, COLOURLESS LIQUID HARMFUL IF SWALLOWED.
OXIDIZER THAT ACCELERATES COMBUSTION OF ORGANIC MATERIAL (WOOD, PAPER, OIL, CLOTHING).
TEMPERATURES ABOVE (38°C) CAN INCREASE THE DECOMPOSITION RATE OF THE PRODUCT.
MATERIAL WILL DECOMPOSE WHEN EXPOSED TO HEAT, METALS, ALKALIS, REDUCING AGENTS OR IMPURITIES
AND THIS WILL GENERATE OXYGEN GAS, STEAM AND HEAT.

SIGNS AND SYMPTOMS OF SHORT-TERM EXPOSURE:

SKIN CONTACT: PROLONGED EXPOSURE MAY CAUSE SKIN IRRITATION OR BURNS. CORROSIVE TO SKIN ON CONTACT. SKIN INFLAMMATION IS CHARACTERIZED BY ITCHING, SCALING, REDENING, OR OCCASIONALLY, BLISTERING.

SKIN ABSORPTION: N/AP.

EYE CONTACT: SEVERE IRRITATION, REDNESS, TEARING AND BLURRED VISION. STINGING, BURNING, OPAQUENESS OF CORNEA. PROLONGED CONTACT MAY CAUSE DAMAGE TO EYE TISSUE AND POSSIBLE BLINDNESS. CORROSIVE TO EYES ON CONTACT. LIQUID OR SPRAY MIST MAY PRODUCE TISSUE DAMAGE PARTICULARLY ON MUCOUS MEMBRANES OF EYES, MOUTH AND RESPIRATORY TRACT. INFLAMMATION OF THE EYE IS CHARACTERIZED BY REDNESS, WATERING AND ITCHING.

INHALATION: IRRITATING TO NOSE, THROAT AND RESPIRATORY TRACT. SEVERE OVEREXPOSURE COULD BE FATAL.

INGESTION: HARMFUL IF SWALLOWED. CAN BURN MOUTH, THROAT AND STOMACH. OXYGEN GAS IN THE STOMACH CAN CAUSE SWELLING LEADING TO SEVERE INJURIES. MAY INCLUDE IRRITATION OF THE GASTROINTESTINAL INTERNAL TRACT AND ABDOMINAL PAIN, OR RED BLOOD CELL DESTRUCTION, PAIN IN SWALLOWING, INTENSE THIRST, NAUSEA AND VOMITING, DIFFICULTY IN BREATHING, CONVULSIONS AND COMA. LARGE EXPOSURE MAY BE FATAL.

POTENTIAL CHRONIC HEALTH EFFECTS: CHRONIC INHALATION CAN CAUSE NASAL AND RESPIRATORY IRRITATION, DIZZINESS, WEAKNESS, FATIGUE, NAUSEA AND HEADACHE. MAY LEAD TO FREQUENT ATTACKS OF BRONCHIAL INFECTION.

OTHER IMPORTANT HAZARDS:

EXTREMELY CORROSIVE TO ALL TISSUES, WILL CAUSE IRRITATION, BURNS.

SECTION 4: FIRST AID MEASURES

- INHALATION:** REMOVE VICTIM TO FRESH AIR. AID IN BREATHING IF NECESSARY. IF BREATHING STOPS, ADMINISTER ARTIFICIAL RESPIRATION. SEEK MEDICAL ATTENTION. EFFECTS MAY BE DELAYED FOR A FEW HOURS AND AGGRAVATED BY PHYSICAL EXERTION.
- SKIN CONTACT:** FLUSH CONTAMINATED SKIN WITH PLENTY OF SOAP AND WATER. REMOVE CONTAMINATED CLOTHING. LAUNDRY CONTAMINATED CLOTHING THOROUGHLY BEFORE RE-USE. SEEK MEDICAL ATTENTION IF SKIN IS BURNED OR SYMPTOMS CONTINUE.
- EYE CONTACT:** FLUSH WITH RUNNING WATER FOR AT LEAST 15 MINUTES WHILE HOLDING EYELIDS OPEN. CONTACT LENSES SHOULD NOT BE WORN WHEN WORKING WITH THIS CHEMICAL. GET MEDICAL ATTENTION.
- INGESTION:** GIVE PLENTY OF WATER TO DRINK TO DILUTE STOMACH CONTENTS. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON.
DO NOT INDUCE VOMITING.

NOTES TO PHYSICIAN: RISK OF PERMANENT CORNEAL INJURY AND POSSIBLE BLINDNESS IF SPLASHED IN EYES. ATTEMPTS AT EVACUATING THE STOMACH VIA EMESIS INDUCTION OR GASTRIC LAVAGE SHOULD BE AVOIDED. IN THE EVENT OF SEVERE DISTENTION OF THE STOMACH OR ESOPHAGUS DUE TO GAS FORMATION, INSERTION OF A GASTRIC TUBE MAY BE REQUIRED.

SECTION 5: FIRE FIGHTING MEASURES

FIRE HAZARDS/CONDITION OF FLAMMABILITY:

NOT FLAMMABLE. THIS PRODUCT IS NOT COMBUSTIBLE, BUT A STRONG OXIDIZER. MIXTURES WITH COMBUSTIBLE OR FLAMMABLE MATERIALS MAY IGNITE EASILY, OR MAY EXPLODE IN CONTAMINATED, CLOSED CONTAINERS. RESIDUAL HYDROGEN PEROXIDE THAT IS DRIED ON ORGANIC MATERIALS SUCH AS WOOD, PAPER, FABRICS, COTTON, LEATHER OR OTHER COMBUSTIBLES CAN CAUSE THE MATERIALS TO IGNITE AND RESULT IN A FIRE. DO NOT HEAT SOLUTION TO CONCENTRATIONS OF 74% OR GREATER.

- FLASH POINT:** N/AP.
- FLASH POINT METHOD:** N/AP.
- LOWER FLAMMABLE LIMIT:** N/AP.
- AUTO IGNITION TEMPERATURE:** *SEE BELOW
- UPPER FLAMMABLE LIMIT:** N/AP.
- (% BY VOL.)** **(% BY VOL.)**
- OXIDIZING PROPERTIES:** KEEP AWAY FROM FLAMMABLE AND COMBUSTIBLE MATERIALS.
- FLAME PROJECTION LENGTH:** N/AP.

*NON-FLAMMABLE, BUT DECOMPOSES AT APPROXIMATELY 38°C (100°F).

EXPLOSION DATA: SENSITIVITY TO MECHANICAL IMPACT/STATIC DISCHARGE:

MAY BE SENSITIVE. PROTECT AGAINST PHYSICAL DAMAGE.

SUITABLE EXTINGUISHING MEDIA:

USE WATER ONLY! USE LARGE AMOUNTS OF WATER AND SPRAY TO COOL CONTAINERS. DO NOT USE DRY CHEMICALS, FOAM OR A FIRE BLANKET. FOR LARGE FIRES, FLOOD FIRE AREA FROM A DISTANCE, DO NOT FLUSH TO SEWER UNLESS CONCENTRATION IS 1% OR LESS DUE TO EXPLOSION HAZARD. ALWAYS STAY AWAY FROM THE ENDS OF TANKS.

SPECIAL FIRE-FIGHTING PROCEDURES/EQUIPMENT:

ALWAYS WEAR SELF-CONTAINED BREATHING APPARATUS.

HAZARDOUS COMBUSTION PRODUCTS:

OXYGEN-DANGEROUS PRESSURES. IMPURITIES OR AN INCREASE IN TEMPERATURE CAN CAUSE QUICK DECOMPOSITION. OXYGEN RELEASES CAN CAUSE DANGEROUS PRESSURES (GAS, STEAM, HEAT).

SECTION 6: ACCIDENTAL RELEASE MEASURES

LEAK AND SPILL PROCEDURES:

VENTILATE. ELIMINATE ALL SOURCES OF IGNITION. WEAR FULL PROTECTIVE EQUIPMENT INCLUDING ADEQUATE RESPIRATORY PROTECTION. REVIEW OF SAFETY PROCEDURES IN CASE OF EXPLOSION OR FIRE, BEFORE PROCEEDING IN CLEAN UP. COMPLY WITH FEDERAL, PROVINCIAL AND MUNICIPAL REGULATIONS. DO NOT USE ABSORBENTS. CONTAIN SMALL SPILLS USING NON-COMBUSTIBLE MATERIAL SUCH AS VERMICULITE, SAND OR EARTH. FLUSH COMBUSTIBLE MATERIALS WITH LARGE AMOUNTS OF WATER. CONTAIN RUNOFF UNTIL HYDROGEN PEROXIDE DECOMPOSES. DO NOT ALLOW TO ESCAPE INTO SEWERS OR NATURAL WATERCOURSES BEFORE DECOMPOSITION.

SECTION 7: HANDLING AND STORAGE

SAFE HANDLING PROCEDURES:

AVOID ALL SKIN CONTACT. VENTILATE ADEQUATELY. OTHERWISE WEAR AN APPROPRIATE BREATHING APPARATUS. AVOID CONTACT WITH EYES, SKIN OR CLOTHING. NEVER RETURN UNUSED PEROXIDE TO ORIGINAL CONTAINER. TREAT AS FLAMMABLE MATERIAL; KEEP AWAY FROM HEAT, SPARKS AND OPEN FLAMES. KEEP CONTAINER CLOSED WHEN NOT IN USE. NEVER ADD WATER TO THIS PRODUCT. AVOID SHOCK AND FRICTION. IN CASE OF INSUFFICIENT VENTILATION, WEAR SUITABLE RESPIRATORY EQUIPMENT.

STORAGE REQUIREMENTS:

STORE IN A COOL, DRY, WELL-VENTILATED PLACE AWAY FROM OTHER MATERIALS. STORE IN ORIGINAL, VENTED CONTAINERS AWAY FROM STRONG ACIDS, STRONG OXIDIZING AND REDUCING AGENTS. DO NOT STORE IN HEAT OR DIRECT SUNLIGHT. DO NOT CONFINED IN UN-VENTED VESSELS OR BETWEEN CLOSED VALVES. DO NOT ALLOW TEMPERATURE OF STORAGE TANK TO RISE ABOVE 38°C (100°F). STORE DRUMS ON FLAME RETARDED PALLETS.

INCOMPATIBLE MATERIALS:

STORE AWAY FROM INCOMPATIBLE MATERIALS SUCH AS HIGH pH MATERIAL, METALS, SALTS, ORGANICS, DUST & DIRT. INCOMPATIBLE WITH CYANIDES, IRON, COPPER AND ITS ALLOYS, HEXAVALENT CHROMIUM COMPOUNDS, NITRIC ACID, POTASSIUM PERMANGANATE, ORGANICS, ACIDS, SOLVENTS, FUEL, OXIDIZERS, METAL OXIDES OR SULFIDES, WOOD, POWDER METALS, SULFUR, REDUCING AGENTS AND OTHER FLAMMABLES AND COMBUSTIBLES.

SECTION 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION

EXPOSURE LIMITS

INGREDIENTS	ACGIH TLV	NIOSH IDLH	OSHA PEL	
	TWA	TWA	PEL	STEL
HYDROGEN PEROXIDE	1 PPM	75 PPM	1 PPM (1.4 MG/M ³)	N/AV.

SEE COMPOSITION/INFORMATION ON INGREDIENTS, SECTION 2.

ENGINEERING CONTROLS:

USE PROCESS ENCLOSURES, OR LOCAL EXHAUST VENTILATION TO KEEP AIRBORNE LEVELS BELOW RECOMMENDED EXPOSURE LIMITS. EMERGENCY SHOWER SHOULD BE IN CLOSE PROXIMITY. EYE WASH FACILITY SHOULD BE CLOSE IN PROXIMITY. CHEMICAL RESISTANT GLOVES. BUTYL RUBBER, VINYL OR NEOPRENE GLOVES. FOR VAPOUR OR MIST CONCENTRATION IN EXCESS OF 10 PPM, A SELF-CONTAINED BREATHING APPARATUS (NIOSH/MSHA APPROVED) SHOULD BE USED. CHEMICAL GOGGLES AND FACE SHIELD. WEAR SAFETY GLASSES WITH SIDE SHIELDS.

GLOVES/TYPE:

RESPIRATORY/TYPE:

EYE/TYPE:

FOOTWEAR/TYPE:

CLOTHING/TYPE:

OTHER/TYPE:

RUBBER OR NEOPRENE BOOTS.
IMPERMEABLE APRON, PVC OR RUBBER RAIN SUIT. LAUNDRY CLOTHING DAILY.
EYE BATH AND SAFETY SHOWER SHOULD BE IN CLOSE PROXIMITY.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE:	LIQUID	APPEARANCE:	CLEAR, COLOURLESS LIQUID
ODOUR:	SLIGHTLY SHARP, PUNGENT	ODOUR THRESHOLD:	N/AV.
PH:	LESS THAN 2	BOILING POINT:	35% - 108°C, 50% - 114°C
SPECIFIC GRAVITY:	35% - 1.13, 50% - 1.19	MELTING/FREEZING POINT:	35% is -33°C, 50% is -52°C
COEFFICIENT OF WATER/OIL		SOLUBILITY IN WATER:	100%
DISTRIBUTION:	N/AV.	VAPOUR DENSITY (AIR=1):	0.66 - 0.95
EVAPOURATION RATE:	>1	VAPOUR PRESSURE (mmHg) at 30°C:	35% - 23, 50% - 18
MOLECULAR WEIGHT:	34.02		
MOLECULAR FORMULA:	H ₂ O ₂		

SECTION 10: REACTIVITY AND STABILITY DATA

STABILITY AND REACTIVITY:

STABLE WHEN PRODUCT IS PURE, STORED UNDER SUITABLE CONDITIONS AND TEMPERATURE IS LESS THAN 38°C. STABILITY IS REDUCED WHEN pH IS ABOVE 4.0. HEAT AND CONTACT WITH COMBUSTIBLE MATERIALS.

CONDITIONS TO AVOID: AVOID HEATING OR MIXING WITH ORGANIC MATERIALS, TISSUES. CONTAINERS CAN EXPLODE IN FIRE. AVOID CONTAMINATION OF ANY KIND. AVOID CONTACT WITH COMBUSTIBLE MATERIAL.

HAZARDOUS DECOMPOSITION PRODUCTS:
OXYGEN, STEAM AND HEAT.

SECTION 11: TOXICOLOGICAL INFORMATION

TOXICOLOGICAL DATA: N/AV.
CARCINOGENIC STATUS: NOT LISTED.
REPRODUCTIVE EFFECTS: N/AV.
TERATOGENICITY: N/AV.
MUTAGENICITY: N/AV.
SENSITIZATION TO MATERIAL:
SEE ROUTE OF ENTRY: SKIN CONTACT.
SYNERGISTIC MATERIALS:N/AV.
MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:
REPEATED OR PROLONGED EXPOSURE TO SPRAY MIST MAY PRODUCE CHRONIC EYE IRRITATION AND SEVERE SKIN IRRITATION.
ADDITIONAL HEALTH HAZARDS:
HARMFUL IF SWALLOWED, INGESTING LARGE AMOUNTS MAY BE FATAL.

SECTION 12: ECOLOGICAL INFORMATION

ENVIRONMENTAL EFFECTS:
HYDROGEN PEROXIDE OCCURS NATURALLY AS A RESULT OF PHOTOCHEMICAL PROCESSES IN LIVING ORGANISMS.
IMPORTANT ENVIRONMENTAL CHARACTERISTICS:
PRODUCT DECOMPOSES INTO WATER AND OXYGEN.
ECOTOXICOLOGICAL: HARMFUL TO AQUATIC ORGANISMS, ESPECIALLY TO ALGAE. FRESHWATER ALGAE ARE AFFECTED BY HYDROGEN PEROXIDE IN CONCENTRATIONS OF 2-20 mg/L; WHILE 1 mg/L AFFECTS CERTAIN MARINE ALGAE.

SECTION 13: DISPOSAL CONSIDERATIONS

HANDLING FOR DISPOSAL:CONTACT A WASTE DISPOSAL FIRM FOR ADVICE. EMPTY CONTAINERS SHOULD BE RINSED WITH WATER PRIOR TO DISPOSAL. MAY CREATE FIRE OR EXPLOSION HAZARD.
METHOD OF DISPOSAL: DISPOSE IN ACCORDANCE WITH FEDERAL, PROVINCIAL AND LOCAL HAZARDOUS WASTE LAWS.

SECTION 14: TRANSPORTATION INFORMATION

PROPER SHIPPING NAME: HYDROGEN PEROXIDE, AQUEOUS SOLUTION
TDG CLASSIFICATION: CLASS 5.1(8) OXIDIZER, CORROSIVE UN2014, PACKING GROUP II

SECTION 15: REGULATORY INFORMATION

WHMIS CLASSIFICATION: CLASS C, DB 2
LISTED ON THE DOMESTIC SUBSTANCE LIST (DSL).

SECTION 16: OTHER INFORMATION

LEGEND:	ACGIH	AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS
	CAS #	CHEMICAL ABSTRACTS SERVICE REGISTRY NUMBER
	DSL	DOMESTIC SUBSTANCE LIST
	IDLH	IMMEDIATE DANGEROUS TO LIFE OR HEALTH
	LC	LETHAL CONCENTRATION
	LD	LETHAL DOSE
	MSHA	MINE SAFETY AND HEALTH ADMINISTRATION
	N/AP.	NOT APPLICABLE
	N/AV.	NOT AVAILABLE
	NIOSH	NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH
	OSHA	OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
	PEL	PERMISSIBLE EXPOSURE LIMIT
	STEL	SHORT TERM EXPOSURE LIMIT
	T.D.G.	TRANSPORTATION OF DANGEROUS GOODS ACT/REGULATIONS

TLV
TWA
WHMIS

THRESHOLD LIMIT VALUE
TIME WEIGHTED AVERAGE
WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM

PREPARED BY:

KENCRO CHEMICALS LIMITED

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MSDS PREPARATION DATE:

(DD/MM/YYYY)

01/06/2011

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