



KENCRO

CHEMICALS

PRODUCT: HYDROGEN PEROXIDE

SECTION 1: PRODUCT INFORMATION

T.D.G. CLASSIFICATION	5.1 (8)
UN NUMBER	2014
PACKING GROUP	II
PRODUCT NAME	HYDROGEN PEROXIDE
WHMIS CLASSIFICATION	C: OXIDIZING MATERIAL E: CORROSIVE LIQUID F: DANGEROUSLY REACTIVE MATERIAL D-1B: MATERIAL CAUSING IMMEDIATE AND SERIOUS TOXIC EFFECTS
CHEMICAL FORMULA	H ₂ O ₂
MOLECULAR WEIGHT	34.02
CHEMICAL FAMILY	INORGANIC PEROXIDE
MATERIAL USE	N.AV.

SECTION 2: HAZARDOUS INGREDIENTS

HAZARDOUS INGREDIENTS	%	T.L.V.	C.A.S. #	LD/50,ROUTE,SPECIE	LC/50,ROUTE,SPECIE
HYDROGEN PEROXIDE	30-50	----	7722-84-1	2000mg/Kg ORAL, MOUSE 4060 mg/Kg DERMAL, RAT	>2000 mg/m ³ / 4HR INHALATION,RAT

SECTION 3: PHYSICAL DATA

APPEARANCE	CLEAR, COLOURLESS						
PHYSICAL STATE	LIQUID						
ODOR	SLIGHTLY PUNGENT						
ODOR THRESHOLD	N.AV.						
		20%	30%	35%	40%	50%	60%
BOILING POINT	°C	103	106	108	109	114	125
	°F	217	222	226	228	237	257
FREEZING POINT	°C	-17	-26	-33	-39	-52	-56
	°F	2	-15	-27	-38	-62	-68
VAPOR PRESSURE (MMHG)	@ 86°F	28	25	23	22	18	15
SPECIFIC GRAVITY (WATER=1)	@ 68°F	1.07	1.11	1.13	1.17	1.19	1.23
VAPOUR DENSITY (AIR=1)	0.8 TO 1.17 (CALCULATED)						
EVAPORATION RATE	>1 COMPARED TO BUTYLACETATE						
PH	3.3						
SOLUBILITY IN WATER (% W/W)	100% EASILY SOLUBLE IN COLD WATER, HOT WATER.						
COEFFICIENT OF WATER/OIL DIST.	N.AV.						

SECTION 4: FIRE AND EXPLOSION DATA

FLAMMABILITY	NOT FLAMMABLE
IF YES, UNDER WHICH CONDITIONS?	SLIGHTLY FLAMMABLE TO FLAMMABLE IN PRESENCE OF ORGANIC MATERIALS.
EXTINGUISHING MEDIA	USE WATER ONLY TO FIGHT FIRE WHERE HYDROGEN PEROXIDE IS INVOLVED
SPECIAL PROCEDURES	AVOID ALL BODILY CONTACT. WEAR SELF CONTAINED BREATHING APPARATUS AND APPROPRIATE PROTECTIVE EQUIPMENT. IN CASE OF EXTERNAL FIRE, COOL HYDROGEN PEROXIDE AND SURROUNDING CONTAINERS WITH PLENTY OF WATER.
FLASH POINT(C), METHOD	N.AP.

PRODUCT: HYDROGEN PEROXIDE

AUTO IGNITION TEMPERATURE	N.AV.
UNUSUAL FIRE AND EXPLOSION HAZARDS	SPONTANEOUS COMBUSTION CAN OCCUR IF ALLOWED TO REMAIN IN CONTACT WITH OXIDIZABLE MATERIALS. DRYING PRODUCTS ON CLOTHING OR COMBUSTIBLE MATERIAL MAY CAUSE FIRE. DO NOT ALLOW TEMPERATURE OF STORAGE TANK TO RISE ABOVE 38°C (100°F). DO NOT HEAT SOLUTION TO CONCENTRATIONS OF 74% OR GREATER. MIXTURES WITH COMBUSTIBLE MATERIAL MAY BE EXPLOSIVE.
HAZARDOUS COMBUSTION PRODUCTS	OXYGEN - DANGEROUS PRESSURES
EXPLOSION DATA	
SENSITIVITY TO STATIC DISCHARGE	N.AV.
SENSITIVITY TO IMPACT	N.AV.
RATE OF BURNING	N.AV.
EXPLOSIVE POWER	CONTAINERS CAN EXPLODE IN FIRE

SECTION 5: REACTIVITY DATA

CHEMICAL STABILITY	
YES	STABLE
NO, WHICH CONDITIONS?	UNSTABLE WHEN HEATED OR CONTAMINATED WITH HEAVY METALS, REDUCING AGENTS, RUST, DIRT OR ORGANIC MATERIALS. STABILITY IS REDUCED WHEN PH IS ABOVE 4.0. TEMPERATURE MUST NOT EXCEED 38°C. DECOMPOSITION IN DIRECT LIGHT
COMPATIBILITY WITH OTHER SUBSTANCES:	
YES	
NO, WHICH ONES?	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. ALSO; HEAVY METALS, HEAVY METAL IONS/SALTS, RUST, DUST, AND DIRT.
REACTIVITY CONDITIONS	AVOID CONTAMINATION OF ANY KIND. AVOID CONTACT WITH COMBUSTIBLE MATERIAL. HIGHLY REACTIVE WITH REDUCING AGENTS, COMBUSTIBLE MATERIALS, METALS, ALKALIS.
HAZARDOUS POLYMERIZATION	WILL NOT OCCUR.
CONDITIONS TO AVOID	AVOID CONTACT WITH ORGANIC MATERIALS.
HAZARDOUS PRODUCTS OF DECOMPOSITION	CONTAMINATION FROM ANY SOURCE MAY CAUSE RAPID DECOMPOSITION, OXYGEN GAS RELEASE, AND DANGEROUS PRESSURES

SECTION 6: TOXICOLOGICAL PROPERTIES

ROUTE OF ENTRY	
SKIN CONTACT	MAY CAUSE SEVERE SKIN IRRITATION. CORROSIVE TO SKIN ON CONTACT. SKIN CONTACT MAY PRODUCE BURNS. SKIN INFLAMMATION IS CHARACTERIZED BY ITCHING, SCALING, REDDENING, OR, OCCASIONALLY, BLISTERING.
EYE CONTACT	CONTACT OF THE EYE MAY CAUSE EYE IRRITATION WITH TEARING OR BLURRING OF VISION 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	MAY INCLUDE IRRITATION OF THE UPPER RESPIRATORY PASSAGES, NAUSEA, HEADACHES OR WEAKNESS
INHALATION, CHRONIC	REPEATED OR PROLONGED EXPOSURE TO SPRAY MIST MAY PRODUCE RESPIRATORY TRACT IRRITATION LEADING TO FREQUENT ATTACKS OF BRONCHIAL INFECTION. REPEATED EXPOSURE TO A HIGHLY TOXIC MATERIAL MAY PRODUCE GENERAL DETERIORATION OF HEALTH BY AN ACCUMULATION IN ONE OR MANY ORGANS.
INGESTION	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
EFFECTS OF ACUTE EXPOSURE	REFER TO ROUTE OF ENTRY

PRODUCT: HYDROGEN PEROXIDE

EFFECTS OF CHRONIC EXPOSURE	REPEATED OR PROLONGED EXPOSURE TO SPRAY MIST MAY PRODUCE CHRONIC EYE IRRITATION AND SEVERE SKIN IRRITATION.
LD 50 MATERIAL, SPECIES & ROUTE	SEE SECTION II
LC 50 MATERIAL, SPECIES & ROUTE	SEE SECTION II
EXPOSURE LIMIT OF MATERIAL	SEE SECTION II
IRRITANCY OF MATERIAL	SEE ABOVE
SENSITIZING CAPABILITY OF MATERIAL	N.AV.
CARCINOGENICITY OF MATERIAL	NONE IDENTIFIED
REPRODUCTIVE EFFECTS	N.AV.
SYNERGISTIC MATERIALS	N.AV.
MUTAGENIC EFFECTS	N.AV.
TERATOGENIC EFFECTS	N.AV.

SECTION 7: PREVENTATIVE MEASURES

GLOVES/TYPE	WEAR LIQUID PROOF AND CHEMICALLY RESISTANT GLOVES, SUCH AS BUTYL RUBBER, VINYL OR NEOPRENE
RESPIRATORY/TYPE	FOR VAPOR OR MIST CONCENTRATIONS IN EXCESS OF 10 PPM, A SELF CONTAINED BREATHING APPARATUS SHOULD BE USED. DO NOT USE OXIDIZABLE SORBANTS
EYE/TYPE	WEAR SAFETY GLASSES WITH SIDE SHIELDS OR CHEMICAL GOGGLES. WHEN APPROPRIATE WEAR A FACE SHIELD
FOOTWEAR/TYPE	USE RUBBER OR NEOPRENE FOOTWEAR
CLOTHING /TYPE	IF SKIN CONTACT OR CLOTHING CONTAMINATION IS POSSIBLE, USE CHEMICAL RESISTANT CLOTHING SUCH AS POLYESTER OR ACRYLIC. LAUNDRER CLOTHING DAILY
OTHER/TYPE	EYE BATH AND SAFETY SHOWER
ENGINEERING CONTROLS	VENTILATE ADEQUATELY. PROVIDE EXHAUST VENTILATION OR OTHER ENGINEERING CONTROLS TO KEEP THE AIRBORNE CONCENTRATIONS OF VAPORS BELOW THEIR RESPECTIVE THRESHOLD LIMIT VALUE (TLV). ENSURE THAT EYEWASH STATIONS AND SAFETY SHOWERS ARE PROXIMAL TO THE WORK-STATION LOCATION.
LEAK/SPILL	OBTAIN FULL PROTECTIVE EQUIPMENT, INCLUDING RESPIRATORY PROTECTION. REVIEW FIRE AND EXPLOSION HAZARDS AND SAFETY PRECAUTIONS BEFORE PROCEEDING WITH CLEANUP. DILUTE WITH A LARGE VOLUME OF WATER AND CONTAIN RUNOFF UNTIL HYDROGEN PEROXIDE DECOMPOSES. DO NOT ALLOW TO ESCAPE INTO SEWERS OR NATURAL WATERCOURSES BEFORE DECOMPOSITION. MAY BE DESTROYED WITH SODIUM METABISULFITE OR SODIUM SULFITE (1.7 LBS SO ₂ EQUIVALENT PER LB. OF HYDROGEN PEROXIDE) AFTER DILUTING TO 5-10% HYDROGEN PEROXIDE. CARE MUST BE EXERCISED BECAUSE OF TEMPERATURE RISE.
WASTE DISPOSAL HANDLING PROCEDURES AND EQUIPMENT	IN ACCORDANCE WITH MUNICIPAL, PROVINCIAL AND FEDERAL REGULATIONS AVOID ALL SKIN CONTACT. AVOID GETTING IN EYES. AVOID BREATHING VAPORS KEEP AWAY FROM HEAT, SPARKS AND OPEN FLAME. USE ADEQUATE VENTILATION. KEEP CONTAINER CLOSED AND DRY. MAINTAIN A GOOD PERSONAL HYGIENE. KEEP AWAY FROM DIRECT SUNLIGHT OR STRONG INCANDESCENT LIGHT. EMPTY CONTAINERS POSE A FIRE RISK, EVAPORATE THE RESIDUE UNDER A FUME HOOD. <u>DO NOT BREATHE GAS, FUMES, VAPOR, OR SPRAY. NEVER ADD WATER TO THIS PRODUCT.</u> AVOID SHOCK AND FRICTION. IN CASE OF INSUFFICIENT VENTILATION, WEAR SUITABLE RESPIRATORY EQUIPMENT.
STORAGE NEEDS	STORE IN A PROPERLY VENTED CONTAINER OR IN APPROVED BULK STORAGE FACILITIES. DO NOT BLOCK VENT. STORE DRUMS ON FLAME RETARDANT PALLETS. DO NOT STORE WHERE CONTACT WITH INCOMPATIBLE MATERIAL COULD OCCUR, EVEN WITH A SPILL. HAVE WATER SOURCE AVAILABLE FOR DILUTING. KEEP CONTAINERS OUT OF SUN AND AWAY FROM HEAT, SPARKS AND FLAMES. KEEP CONTAINER DRY AND IN A COOL PLACE. <u>DO NOT</u> ADD ANY OTHER PRODUCT TO CONTAINER. NEVER RETURN UNUSED PRODUCT TO CONTAINER. RINSE EMPTY CONTAINERS THOROUGHLY WITH CLEAN WATER BEFORE DISCARDING.
CORROSIVE CABINET OR SPECIAL SHIPPING INSTRUCTIONS	MATERIALS SHOULD BE STORED IN A SEPARATE SAFETY STORAGE ROOM. SEE SECTION 1 TDG CLASSIFICATION

PRODUCT: HYDROGEN PEROXIDE

SECTION 8: FIRST AID MEASURES

INSTRUCTIONS:

EYE CONTACT: FLUSH EYES WITH DIRECTED STREAM OF WATER FOR AT LEAST 15 MINUTES. FORCIBLY HOLD EYELIDS APART TO ENSURE COMPLETE IRRIGATION OF EYE AND LID TISSUE. GET IMMEDIATE MEDICAL ATTENTION IF IRRITATION OCCURS. CONTACT LENSES SHOULD NOT BE WORN WHEN WORKING WITH THIS CHEMICAL.

SKIN CONTACT: IMMEDIATELY FLUSH CONTAMINATED SKIN WITH WATER. IF THE CHEMICAL PENETRATES CLOTHING IMMEDIATELY REMOVE THE CLOTHING AND FLUSH THE SKIN WITH WATER. GET IMMEDIATE MEDICAL ATTENTION IF IRRITATION OCCURS. WASH CLOTHING BEFORE REUSE.

INGESTION: IF PERSON IS CONSCIOUS, IMMEDIATELY ADMINISTER LARGE QUANTITIES OF WATER OR MILK. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. DO NOT INDUCE VOMITING. GET IMMEDIATE MEDICAL ATTENTION.

INHALATION: MOVE THE EXPOSED PERSON TO FRESH AIR AT ONCE. IF BREATHING STOPS, GIVE ARTIFICIAL RESPIRATION. IF BREATHING IS DIFFICULT, ADMINISTER OXYGEN. SEEK MEDICAL ATTENTION IF IRRITATION PERSISTS.

NOTES TO PHYSICIAN: DIRECT CONTACT WITH THE EYE IS LIKELY TO CAUSE CORNEAL DAMAGE, ESPECIALLY IF NOT WASHED AWAY IMMEDIATELY. CAREFUL OPHTHALMOLOGIC EVALUATION IS RECOMMENDED AND THE POSSIBILITY OF LOCAL CORTICOSTEROID THERAPY SHOULD BE CONSIDERED. 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 9: PREPARATION INFORMATION

EMERGENCY PHONE NO (613) 996 6666 (CANUTECH)
PREPARED BY KENCRO CHEMICALS LIMITED
(905) 827 4133
DATE JUNE 2008

LEGEND:

CAS # CHEMICAL ABSTRACTS SERVICE REGISTRY NUMBER
N.AP NOT APPLICABLE
N. AV NOT AVAILABLE
T.D.G. TRANSPORTATION OF DANGEROUS GOODS ACT/REGULATIONS
TLV THRESHOLD LIMIT VALUE
WHMIS WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM

THE INFORMATION IS, TO THE BEST OF OUR KNOWLEDGE AND BELIEF, ACCURATE AND RELIABLE AS OF THE DATE COMPILED. HOWEVER, NO REPRESENTATION, WARRANTY OR GUARANTEE IS MADE TO ITS ACCURACY, RELIABILITY OR COMPLETENESS. IT IS THE USER'S RESPONSIBILITY TO REVIEW THIS INFORMATION, SATISFY THEMSELVES AS TO ITS SUITABILITY AND COMPLETENESS AND PASS ON THE INFORMATION TO ITS EMPLOYEES OR CUSTOMERS. KENCRO CHEMICALS LIMITED DOES NOT ACCEPT RESPONSIBILITY FOR ANY LOSS OR DAMAGE WHICH MAY OCCUR FROM THE USE OF THIS INFORMATION