



# KENCRO

## CHEMICALS

### PRODUCT: SODIUM BISULPHITE SOLUTION

#### SECTION 1: PRODUCT INFORMATION

T.D.G. CLASSIFICATION	8
UN NUMBER	2693
PACKING GROUP	III
PRODUCT NAME	SODIUM BISULPHITE SOLUTION
WHMIS CLASSIFICATION	CLASS DIA - VERY TOXIC (ACUTE EFFECTS) CLASS E - CORROSIVE
CHEMICAL FORMULA	NaHSO <sub>3</sub>
CHEMICAL FAMILY	BISULPHITE, SODIUM SALT

#### SECTION 2: HAZARDOUS INGREDIENTS

HAZARDOUS INGREDIENTS	%	T.L.V.	C.A.S. #	LD/50,ROUTE,SPECIE	LC/50,ROUTE,SPECIE
SODIUM BISULPHITE	38 - 44%	5mg/m <sup>3</sup> TWA	7631-90-5	650mg/kg	115mg/m <sup>3</sup>
NON-HAZARDOUS: WATER	60 - 80%		7732-18-5	N.AP.	N.AP.

#### SECTION 3: PHYSICAL DATA

PHYSICAL APPEARANCE	CLEAR LIQUID WITH YELLOW HUE
PHYSICAL STATE	LIQUID
ODOUR	DISTINCTIVE & PUNGENT ODOUR OF SULPHUR DIOXIDE
ODOUR THRESHOLD	NO DATA
VAPOUR PRESSURE (mmHg)	32mmHg @ 20° C, 78mmHg @ 37.7° C
VAPOUR DENSITY (AIR=1)	2.2
EVAPORATION RATE	N.AP.
BOILING POINT	104 °C (220 °F)
FREEZING POINT	6° C (42.8 °F)
PH	3.8 TO 4.4
SPECIFIC GRAVITY (WATER=1)	1.33

#### SECTION 4: FIRE AND EXPLOSION DATA

FLAMMABILITY	<b>NOT FLAMMABLE</b>
IF YES, UNDER WHICH CONDITIONS? . .	
EXTINGUISHING MEDIA	FOR SMALL FIRES USE DRY CHEMICAL OR CARBON DIOXIDE. FOR LARGE FIRES, FLOOD FIRE AREA WITH WATER. DO NOT GET SOLID STREAM OF WATER ON SPILLED MATERIAL.
SPECIAL PROCEDURES (FIRE FIGHTING PROCEDURES)	OXIDES OF SULPHUR MAY BE PRESENT DURING A FIRE. USE SELF-CONTAINED BREATHING APPARATUS AND FULL PROTECTIVE CLOTHING ARE RECOMMENDED. GAS TIGHT SUITS ARE REQUIRED IN EXTREME (>1000ppm) CONCENTRATIONS OF SULPHUR DIOXIDE. EVACUATE RESIDENTS WHO ARE DOWNWIND OF FIRE. PREVENT UNAUTHORIZED ENTRY TO FIRE AREA. DIKE AREA TO CONTAIN RUNOFF AND PREVENT CONTAMINATION OF WATER SOURCES. NEUTRALIZE RUNOFF WITH LIME, SODA ASH, OR OTHER SUITABLE NEUTRALIZING AGENTS (SEE DEACTIVATING CHEMICALS-SECTION 7). COOL CONTAINERS THAT ARE EXPOSED TO FLAME WITH STREAMS OF WATER UNTIL FIRE IS OUT.
FLASH POINT(C), METHOD	N.AP.
AUTO IGNITION TEMPERATURE	NOT COMBUSTIBLE

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T.D.G. FLAM. CLASS	N.A.V.
UPPER FLAMMABLE LIMIT(UFL) (% BY VOL)	N.AP.
LOWER FLAMMABLE LIMIT(LFL) (% BY VOL)	N.AP.
HAZARDOUS COMBUSTION PRODUCTS EXPLOSION OR FIRE HAZARDS	THERMAL DECOMPOSITION PRODUCTS ARE TOXIC & MAY INCLUDE OXIDES OF SULPHUR SODIUM SULPHIDE MAY BE FORMED AFTER DRIED SOLUTION RESIDUES ARE HEATED. THIS IS AN EXPLOSIVE HAZARD AND STRONGLY ALKALINE IN CONTACT WITH WATER.

### **SECTION 5: REACTIVITY DATA**

CHEMICAL STABILITY	
YES	UNDER NORMAL CONDITIONS
NO, WHICH CONDITIONS?	UNDER FIRE CONDITIONS, DECOMPOSES TO FORM OXIDES OF SULPHUR
COMPATIBILITY WITH OTHER SUBSTANCES:	
YES	
NO, WHICH ONES?	STRONG OXIDIZERS, LEWIS OR MINERAL ACIDS
REACTIVITY CONDITIONS	N.A.V.
HAZARDOUS POLYMERIZATION CONDITIONS TO AVOID	WILL NOT OCCUR HIGH TEMPERATURES, SPARKS, OPEN FLAMES & ALL OTHER SOURCES OF IGNITION. TEMPERATURES AT OR NEAR BOILING POINT CAUSES EVOLUTION OF SULPHUR DIOXIDE. SULPHUR DIOXIDE WILL EVOLVE SLOWLY AT AMBIENT TEMPERATURES.
HAZARDOUS PRODUCTS OF DECOMPOSITION	THERMAL DECOMPOSITION PRODUCTS ARE TOXIC & MAY INCLUDE OXIDES OF SULPHUR

### **SECTION 6: TOXICOLOGICAL PROPERTIES**

ROUTE OF ENTRY	
SKIN CONTACT	SYMPTOMS OF SKIN IRRITATION SUCH AS REDDENING, SWELLING, RASH, SCALING OR BLISTERING,
EYE CONTACT	VAPOURS MAY CAUSE IRRITATION TO EYES, REDNESS AND PAIN. MAY CAUSE CORNEAL DAMAGE AND CONJUNCTIVITIS.
INHALATION INGESTION	PRODUCT IS IRRITATING TO THE NOSE, THROAT, AND RESPIRATORY TRACT. OF LARGE AMOUNTS MAY CAUSE NAUSEA, GASTROINTESTINAL UPSET AND ABDOMINAL PAIN. MAY CAUSE CENTRAL NERVOUS SYSTEM DEPRESSION, NAUSEA AND VOMITING, DIARRHEA, VIOLENT COLIC AND DEATH.
EFFECTS OF CHRONIC EXPOSURE.	BREATHING OF FUMES MAY AGGRAVATE ACUTE OR CHRONIC ASTHMA AND CHRONIC PULMONARY DISEASES SUCH AS EMPHYSEMA AND BRONCHITIS.
EFFECTS OF ACUTE EXPOSURE	NOT AVAILABLE
LD 50 MATERIAL, SPECIES & ROUTE	SEE SECTION II
LC 50 MATERIAL, SPECIES & ROUTE	SEE SECTION II
CARCINOGENICITY OF MATERIAL	INGREDIENTS OF PRODUCT ARE NOT CLASSIFIED BY NATIONAL TOXICOLOGY PROGRAM (NTP), NOT REGULATED AS CARCINOGENIC BY OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA), AND HAS NOT BEEN EVALUATED BY INTERNATIONAL AGENCY FOR RESEARCH ON CANCER (IARC) OR AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS (ACGIH).
REPRODUCTIVE EFFECTS	NO INFORMATION AVAILABLE, NO ADVERSE REPRODUCTIVE EFFECTS ARE ANTICIPATED.
SYNERGISTIC MATERIALS MUTAGENICITY	NONE KNOWN. NO INFORMATION IS AVAILABLE AND NO ADVERSE MUTAGENIC EFFECTS ARE ANTICIPATED.
TERATOGENICITY	NO INFORMATION IS AVAILABLE AND NO ADVERSE TERATOGENIC EFFECTS ARE ANTICIPATED.

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**SECTION 7 : PREVENTATIVE MEASURES**

GLOVES/TYPE	NEOPRENE, NATURAL RUBBER OR PVC
RESPIRATORY/TYPE	WHEN AIRBORNE EXPOSURE GUIDELINES &/OR COMFORT LEVELS MAY BE EXCEEDED, USE AN APPROVED AIR-PURIFYING RESPIRATOR. FOR EMERGENCY AND OTHER CONDITIONS WHERE THE EXPOSURE GUIDELINE MAY BE GREATLY EXCEEDED, USE AN APPROVED POSITIVE PRESSURE SELF-CONTAINED BREATHING APPARATUS.
EYE/TYPE	USE CHEMICAL GOGGLES. IF VAPOUR EXPOSURE CAUSES IRRITATION, USE FULL FACE RESPIRATOR. WEAR A FACE-SHIELD WHICH ALLOWS USE OF CHEMICAL GOGGLES, OR A FULL FACE RESPIRATOR, TO PROTECT FACE AND EYES WHEN THERE IS A LIKELIHOOD OF SPLASHES. EYE WASH FOUNTAIN AND SAFETY SHOWER MUST BE LOCATED IN IMMEDIATE WORK AREA.
FOOTWEAR/TYPE	DEPEND ON OPERATION. DISPOSE CONTAMINATED FOOTWEAR.
CLOTHING /TYPE	APRON OR FULL-BODY SUIT DEPENDING ON OPERATION. WASH BEFORE RE-USE.
DEACTIVATING CHEMICALS	SODIUM HYPOCHLORITE OR SODIUM HYDROXIDE WITH LIME, LIMESTONE, SODIUM CARBONATE (SODA ASH), SODIUM BICARBONATE, DILUTE SODIUM HYDROXIDE, DILUTE AQUA AMMONIA.
LEAK/SPILL	REMOVE ALL IGNITION SOURCES. VENTILATE AREA. USE APPROPRIATE PERSONAL PROTECTION EQUIPMENT. PREVENT LIQUID FROM ENTERING SEWERS OR WATERWAYS. DIKE WITH INERT MATERIAL(SAND, EARTH, ETC). STOP OR REDUCE LEAK IF SAFE TO DO SO. COLLECT INTO CONTAINERS FOR RECLAMATION OR DISPOSAL ONLY IF CONTAINER IS SUITABLE TO WITHSTAND MATERIAL. NOTIFY APPLICABLE GOVERNMENT AUTHORITY IF RELEASE IS REPORTABLE COULD ADVERSELY AFFECT THE ENVIRONMENT.
WASTE DISPOSAL	RECOVERY & REUSE RATHER THAN DISPOSAL,SHOULD BE THE ULTIMATE GOAL OF HANDLING EFFORTS. DISPOSE OF WASTE & CONTAMINATED EQUIPMENT IN ACCORDANCE WITH APPLICABLE FEDERAL, PROVINCIAL, AND LOCAL HEALTH AND ENVIRONMENTAL REGULATIONS. SHIPMENTS OF WASTE MATERIALS MAY BE SUBJECTED TO MANIFESTING REQUIREMENTS PER APPLICABLE REGULATIONS. APPROPRIATE DISPOSAL WILL DEPEND ON NATURE OF EACH WASTE MATERIAL AND SHOULD BE DONE BY A COMPETENT AND PROPERLY PERMITTED CONTRACTOR.
HANDLING PROCEDURES AND EQUIPMENT	USE ONLY WITH ADEQUATE VENTILATION. LOCAL EXHAUST VENTILATION MAY BE NECESSARY. RUBBER LINED CARBON STEEL, STAINLESS STEEL, FRP, OR POLYETHYLENE CONTAINERS ARE SUITABLE FOR USE.
STORAGE NEEDS	STORE IN A COOL, WELL VENTILATED LOCATION AWAY FROM HEAT, SPARKS, & FLAMES. SURFACE TANKS SHOULD BE PROTECTED FROM WATER INGRESS, VENTILATED TO RELEASE PRODUCTS OF DECOMPOSITION, AND MAINTAINED STRUCTURALLY IN SAFE RELIABLE CONDITION.
SPECIAL SHIPPING INSTRUCTIONS	SEE SECTION 1 TDG CLASSIFICATION

**SECTION 8: FIRST AID MEASURES**

**EMERGENCY OVERVIEW:** DANGER! PRODUCT IS IRRITATING TO SKIN, EYES, & RESPIRATORY TRACT.

**EYES:** IMMEDIATELY FLUSH EYES WITH RUNNING WATER FOR MINIMUM 20 MINUTES. HOLD EYELIDS OPEN DURING FLUSHING. OBTAIN MEDICAL ATTENTION IMMEDIATELY. DO NOT TRANSPORT UNLESS FLUSHING PERIOD IS COMPLETED OR CAN BE CONTINUED.

**SKIN:** FLUSH WITH RUNNING WATER FOR MINIMUM 20 MINUTES. START FLUSHING WHILE REMOVING CONTAMINATED CLOTHING. IF IRRITATION PERSISTS, REPEAT FLUSHING. OBTAIN MEDICAL ATTENTION IMMEDIATELY. DO NOT TRANSPORT UNLESS FLUSHING PERIOD IS COMPLETED OR CAN BE CONTINUED DURING TRANSPORT. WHILE VICTIM IS BEING TRANSPORTED, APPLY COMPRESSES OF ICE WATER. IF MEDICAL TREATMENT IS DELAYED, IMMERSE AFFECTED AREA IN ICE WATER OR CONTINUE WITH COMPRESSES OF ICE WATER. AVOID FREEZING TISSUES. DISCARD HEAVILY CONTAMINATED CLOTHING AND SHOES. OTHERWISE, WASH SEPARATELY BEFORE REUSE.

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**INGESTION:** DO NOT INDUCE VOMITING. IF VICTIM IS ALERT & NOT CONVULSING, RINSE MOUTH AND GIVE 1/2 TO 1 GLASS OF WATER TO DILUTE MATERIAL. IF SPONTANEOUS VOMITING OCCURS, HAVE VICTIM LEAN FORWARD WITH HEAD DOWN TO AVOID BREATHING IN OF VOMITUS, RINSE MOUTH, AND ADMINISTER MORE WATER. IMMEDIATELY CONTACT LOCAL POISON CONTROL CENTRE. VOMITING MAY NEED TO BE INDUCED, BUT SHOULD BE DIRECTED BY A PHYSICIAN OR POISON CONTROL CENTRE. IMMEDIATELY TRANSPORT VICTIM TO AN EMERGENCY FACILITY.

**INHALATION:** MOVE VICTIM TO FRESH AIR. GIVE ARTIFICIAL RESPIRATION ONLY IF BREATHING HAS STOPPED. GIVE CARDIOPULMONARY RESUSCITATION (CPR) IF THERE IS NO BREATHING AND NO PULSE. OBTAIN MEDICAL ATTENTION IMMEDIATELY.

**NOTES TO PHYSICIAN:** DO NOT ATTEMPT TO NEUTRALIZE WITH BASES. SINCE RE-EXPOSURE OF THE MUCOSA TO SODIUM BISULPHITE IS HARMFUL, BE CAREFUL TO AVOID FURTHER VOMITING AND LIMIT FLUID TO ONE OR TWO GLASSES IN AN ADULT. THIS PRODUCT CONTAINS MATERIALS THAT MAY CAUSE SEVERE PNEUMONITIS IF ASPIRATED. IF INGESTION HAS OCCURRED LESS THAN 2 HOURS EARLIER, CARRY OUT CAREFUL GASTRIC LAVAGE; USE ENDOTRACHEAL CUFF IF AVAILABLE, TO PREVENT ASPIRATION. OBSERVE PATIENT FOR RESPIRATORY DIFFICULTY FROM ASPIRATION PNEUMONITIS. GIVE ARTIFICIAL RESUSCITATION AND APPROPRIATE CHEMOTHERAPY IF RESPIRATION IS DEPRESSED.

### **SECTION 9: PREPARATION INFORMATION**

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DATE	JUNE 2008

#### **LEGEND:**

ACGIH	AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS
CAS #	CHEMICAL ABSTRACTS SERVICE REGISTRY NUMBER
CPR	CARDIOPULMONARY RESUSCITATION
IARC	INTERNATIONAL AGENCY FOR RESEARCH ON CANCER
LFL	LOWER FLAMMABLE LIMIT
N.AP	NOT APPLICABLE
N. AV	NOT AVAILABLE
NIOSH	NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH
NTP	NATIONAL TOXICOLOGY PROGRAM
OSHA	OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
PVC	POLYVINYL CHLORIDE
T.D.G.	TRANSPORTATION OF DANGEROUS GOODS ACT/REGULATIONS
TLV	THRESHOLD LIMIT VALUE
TWA	TIME-WEIGHTED AVERAGE
UFL	UPPER FLAMMABLE LIMIT
WHMIS	WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM

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