



CANADA COLORS AND CHEMICALS LIMITED
80 SCARSDALE ROAD
DON MILLS, ONTARIO M3B 2R7
(416)-449-7750

PRODUCT : BARDAC 208M

CODE: 224295

SECTION 01: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MANUFACTURER.....LONZA INC.
22-10 RT. 208
FAIR LAWN
NEW JERSEY, USA ; 07410
PREPARED BY.....ENVIRONMENTAL & REGULATORY AFFAIRS DEPARTMENT
PREPARATION DATE.....DEC 05/1998
PRODUCT NAME.....BARDAC 208M
PRODUCT CODE.....224295
CHEMICAL FORMULA.....MIXTURE
MOLECULAR WEIGHT.....N.AV.
CHEMICAL FAMILY.....ORGANIC
MATERIAL USE.....REFER TO TECHNICAL LITERATURE
EMERGENCY PHONE NO.....(416)-444-2112

SECTION 02: COMPOSITION/INFORMATION ON INGREDIENTS

HAZARDOUS INGREDIENTS	EXPOSURE LEVELS	LD/50, ROUTE, SPECIES	LC/50, ROUTE, SPECIES
N,N-DIALKYL(C8-10) - N,N-DIMETHYLAMMONIUM CHLORIDE % :48 CAS #:68424-95-3	--	N.AV.	N.AV.
ETHYL ALCOHOL % :10 CAS #:64-17-5	1000 ppm	N.AV.	N.AV.
N-ALKYL(C12-C16) -N,N-DIMETHYL -N-BENZYLAMMONIUM CHLORIDE % :32 CAS #:68424-85-1	--	N.AV.	N.AV.

SECTION 03: HAZARDS IDENTIFICATION

ROUTE OF ENTRY:
SKIN CONTACT.....DIRECT SKIN CONTACT MAY PRODUCE SEVERE IRRITATION AND/OR
BURNS AND POSSIBLE IRREVERSIBLE DAMAGE.
SKIN ABSORPTION.....HARMFUL IF ABSORBED THROUGH SKIN.
EYE CONTACT.....DIRECT EYE CONTACT MAY PRODUCE SEVERE EYE IRRITATION AND/OR
BURNS AND POSSIBLE IRREVERSIBLE DAMAGE.
INHALATION.....SOLVENT VAPOURS OR MISTS OF PRODUCT CAN CAUSE IRRITATION TO
MUCOUS MEMBRANES. EXPOSURE TO ETHYL ALCOHOL CONCENTRATIONS
OF OVER 1,000 PPM MAY CAUSE HEADACHE, IRRITATION OF EYES,
NOSE AND THROAT, AND, IF LONG CONTINUED, DROWSINESS AND
LASSITUDE, LOSS OF APPETITE AND INABILITY TO CONCENTRATE.
YES
INGESTION.....IMMEDIATE BURNING PAIN IN THE MOUTH, THROAT, ABDOMEN AND
SEVERE SWELLING OF THE LARYNX, SKELETAL MUSCLE PARALYSIS,
AFFECTING THE ABILITY TO BREATHE, CIRCULATORY SHOCK,
CONVULSIONS. MAY BE HARMFUL OR FATAL IF SWALLOWED.

EFFECTS OF ACUTE EXPOSURE

SECTION 04: FIRST AID MEASURES

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INSTRUCTIONS:.....FLUSH EYES WITH LARGE AMOUNTS OF RUNNING WATER FOR AT LEAST 15 MINUTES. HOLD EYELIDS APART TO ENSURE RINSING OF THE ENTIRE SURFACE OF THE EYE AND LIDS WITH WATER. GET IMMEDIATE MEDICAL ATTENTION. IF PHYSICIAN NOT AVAILABLE, FLUSH FOR ADDITIONAL 15 MINUTES AND THEN TRANSPORT TO MEDICAL CARE. WASH SKIN WITH LARGE AMOUNTS OF RUNNING WATER, AND SOAP IF AVAILABLE, FOR 15 MINUTES. REMOVE CONTAMINATED CLOTHING AND SHOES. GET IMMEDIATE MEDICAL ATTENTION. WASH CLOTHING AND DECONTAMINATE SHOES BEFORE REUSE. IN CASE OF INHALATION, REMOVE TO FRESH AIR. IF BREATHING HAS STOPPED, ADMINISTER ARTIFICIAL RESPIRATION AND SEEK MEDICAL ATTENTION. OXYGEN MAY BE GIVEN BY QUALIFIED PERSONNEL IF BREATHING IS DIFFICULT. GET IMMEDIATE MEDICAL ATTENTION. IF SWALLOWED, IMMEDIATELY GIVE 3-4 GLASSES OF MILK (IF UNAVAILABLE, GIVE WATER). DO NOT INDUCE VOMITING. IF VOMITING OCCURS, GIVE FLUIDS AGAIN. CALL A PHYSICIAN IMMEDIATELY!. HAVE PHYSICIAN DETERMINE IF PATIENT'S CONDITION ALLOWS FOR INDUCTION OF VOMITING OR EVACUATION OF THE STOMACH. DO NOT GIVE ANYTHING BY MOUTH TO A CONVULSING OR UNCONSCIOUS PERSON. NOTES TO PHYSICIAN: PROBABLE MUCOSAL DAMAGE MAY CONTRAINDICATE THE USE OF GASTRIC LAVAGE. MEASURES AGAINST CIRCULATORY SHOCK, AS WELL AS OXYGEN AND MEASURES TO SUPPORT BREATHING MANUALLY OR MECHANICALLY MAY BE NEEDED. IF PERSISTENT, CONVULSIONS MAY BE CONTROLLED BY THE CAUTIONS INTRAVENOUS OF A SHORT ACTING BARBITURATE DRUG.

SECTION 05: FIRE FIGHTING MEASURES

T.D.G. FLAM. CLASS.....NOT REGULATED
FLAMMABILITY.....SEE FLASH POINT
IF YES, UNDER WHICH
CONDITIONS?
EXTINGUISHING MEDIA.....CARBON DIOXIDE, DRY CHEMICAL, FOAM. WATER
SPECIAL PROCEDURES.....WEAR FULL PROTECTIVE EQUIPMENT INCLUDING A SELF-CONTAINED
BREATHING APPARATUS. USE WATER-SPRAY TO KEEP CONTAINERS
COOL.
FLASH POINT (C), METHOD.....116 (F). (SETAFLASH)
AUTO IGNITION TEMPERATURE.....UNKNOWN
UPPER FLAMMABLE LIMIT (% BY.....UNKNOWN
VOL.)
LOWER FLAMMABLE LIMIT (% BY.....UNKNOWN
VOL.)
EXPLOSION DATA
EXPLOSIVE POWER.....N.AV.
RATE OF BURNING.....N.AV.
SENSITIVITY TO STATIC.....N.AV.
DISCHARGE
SENSITIVITY TO IMPACT.....N.AV.
UNUSUAL FIRE AND EXPLOSION.....PRODUCTS OF COMBUSTION ARE TOXIC. HEATED SOLVENT VAPOURS
HAZARDS CAN TRAVEL TO AN IGNITION SOURCE AND FLASH BACK. EXPLOSIVE
MIXTURES CAN FORM WITH AIR.
HAZARDOUS COMBUSTION PRODUCTS....SEE HAZARDOUS DECOMPOSITION PRODUCTS.

SECTION 06: ACCIDENTAL RELEASE MEASURES

LEAK/SPILL.....DANGER! CORROSIVE MATERIAL. PRODUCT IS COMBUSTIBLE. REMOVE ALL SOURCES OF IGNITION AND GROUND ALL EQUIPMENT BEFORE USE. FLOOR MAY BECOME SLIPPERY. WEAR NIOSH/MSHA APPROVED RESPIRATOR (SELF-CONTAINED BREATHING APPARATUS PREFERRED) AND APPROPRIATE PROTECTIVE EQUIPMENT.

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SECTION 07: HANDLING AND STORAGE

HANDLING PROCEDURES AND.....AVOID ALL SKIN CONTACT. AVOID BREATHING VAPOURS. AVOID
EQUIPMENT GETTING IN EYES. EQUIPMENT MUST BE GROUNDED. GROUND
CONTAINERS WHEN POURING. KEEP CONTAINERS CLOSED OR SEALED.
MAINTAIN A GOOD PERSONAL HYGIENE.

STORAGE NEEDS.....DO NOT CONTAMINATE DRINKING WATER, FOOD OR FEED BY STORAGE
OR DISPOSAL. MAXIMUM STORAGE TEMPERATURE: 60 C. KEEP
CONTAINER CLOSED WHEN NOT IN USE.

SECTION 08: EXPOSURE CONTROLS/PERSONAL PROTECTION

GLOVES/ TYPE.....WEAR IMPERVIOUS GLOVES (IN NEOPRENE OR RUBBER).
RESPIRATORY/TYPE.....AVOID BREATHING VAPOUR AND/OR MIST. NONE NORMALLY REQUIRED.
HOWEVER, IF MIST OR VAPOURS FORMATION SHOULD OCCUR, USE A
NIOSH APPROVED RESPIRATOR.

EYE/TYPE.....WEAR CHEMICAL SPLASH GOGGLES WHERE THERE IS A POTENTIAL FOR
EYE CONTACT. USE SAFETY GLASSES WITH SIDE SHIELDS UNDER
NORMAL USE CONDITIONS.

FOOTWEAR/TYPE.....RUBBER SAFETY BOOTS
CLOTHING/TYPE.....WEAR AN APRON AND/OR AN OVERALL.
OTHER/TYPE.....EYE BATH AND SAFETY SHOWER.

ENGINEERING CONTROLS.....GENERAL AND LOCAL EXHAUST VENTILATION AS RECOMMENDED BY
GOOD MANUFACTURING PRACTICES SHOULD BE SUFFICIENT FOR
NORMAL OPERATIONS.

SECTION 09: PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE.....LIQUID
APPEARANCE.....COLOURLESS TO PALE YELLOW
ODOUR.....MILD ODOUR. ETHANOLIC
ODOUR THRESHOLD.....N.AV.
VAPOUR PRESSURE (MMHG).....UNKNOWN
VAPOUR DENSITY (AIR=1).....UNKNOWN
BY VOLUME
BY WEIGHT

EVAPORATION RATE.....UNKNOWN
BOILING POINT.....UNKNOWN
FREEZING POINT.....-20 (C)
PERCENT VOLATILE.....20
PH.....6.5 - 9.0
SPECIFIC GRAVITY (WATER=1).....0.91 (25(C))
SOLUBILITY IN WATER (% W/W).....SOLUBLE @ 60 C
VISCOSITY.....<100 CPS (25(C))
COEFFICIENT OF WATER/OIL DIST....N.AV.

SECTION 10: STABILITY AND REACTIVITY

CHEMICAL STABILITY:
YES.....YES
NO, WHICH CONDITIONS?
COMPATABILITY WITH OTHER
SUBSTANCES:
YES
NO, WHICH ONES?.....STRONG OXIDIZING AGENTS. STRONG REDUCING AGENTS.

REACTIVITY CONDITIONS?.....NONE KNOWN
HAZARDOUS PRODUCTS OF.....THERMAL DECOMPOSITION MAY YIELD:. HYDROGEN CHLORIDE GAS.
DECOMPOSITION AMINES. UNIDENTIFIED ORGANIC COMPOUNDS. OXIDES OF CARBON
(CO,CO2). OXIDES OF NITROGEN

HAZARDOUS POLYMERIZATION.....WILL NOT OCCUR

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SECTION 11: TOXICOLOGICAL INFORMATION

EXPOSURE LIMIT OF MATERIAL.....SEE SECTION 02
LC 50 OF MATERIAL, SPECIES &.....N.AV.
ROUTE
LD 50 OF MATERIAL, SPECIES &.....(80%). 204 MG/KG. 645 MG/KG. (DERMAL-RABBIT). 366 MG/KG
ROUTE (80%). (ORAL-RAT)
MUTAGENICITY.....NEGATIVE
TERATOGENICITY.....NEGATIVE
CARCINOGENICITY OF MATERIAL.....NONE KNOWN
REPRODUCTIVE EFFECTS.....NONE KNOWN
IRRITANCY OF MATERIAL.....CORROSIVE. (EYES, SKIN - RABBIT)
SENSITIZING CAPABILITY OF.....A 0.2% ACTIVE SOLUTION WAS NOT A SKIN SENSITIZER IN GUINEA
MATERIAL PIGS VIA BUEHLER TEST FOR SENSITIZATION.
SYNERGISTIC MATERIALS.....NOT DETERMINED FOR THIS PRODUCT MIXTURE.

SECTION 12: ECOLOGICAL CONSIDERATIONS

ENVIRONMENTAL TOXICITY.....96-HR LC50 BLUEGILL SUNFISH MG/L:. 0.54 MG/L. 96-HR LC50
INFORMATION RAINBOW TROUT (MG/L):. 0.92 MG/L. 48-HR EC-50 WATER FLEA
(DAPHNIA) MG/L:. 0.06 MG/L

SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL.....IN ACCORDANCE WITH MUNICIPAL, PROVINCIAL AND FEDERAL
REGULATIONS.

SECTION 14: TRANSPORT INFORMATION

UN NUMBER.....1903
T.D.G. CLASSIFICATION.....8
PACKING GROUP.....II
SPECIAL SHIPPING INSTRUCTIONS....N.AP.

SECTION 15: REGULATORY INFORMATION

WHMIS CLASSIFICATION.....B3. D1B. E
CPR COMPLIANCE.....THIS PRODUCT HAS BEEN CLASSIFIED IN ACCORDANCE WITH THE
HAZARD CRITERIA OF THE CPR AND THE MSDS CONTAINS ALL THE
INFORMATION REQUIRED BY THE CPR.

SECTION 16: OTHER INFORMATION

N.AV.=NOT AVAILABLE
N.AP.=NOT APPLICABLE