G.K. Chemical Specialties Co. Inc.
90 Barbados Blvd.
Scarborough, Ontario M1J 1K9
Tel: (416) 261-7182 Fax: (416) 261-5663

SAFETY DATA SHEET (SDS)

PRODUCT NAME: BAC-KILLER 90 Disinfectant-Cleaner-Fungicide-Deodorizer	
HEALTH HAZARD RATING:	(2)- MODERATE HAZARD NFPA Rating
FLAMMABILITY HAZARD RATING:	(0)- MINIMAL HAZARD
REACTIVITY HAZARD RATING:	(0)- MINIMAL HAZARD
PERSONAL PROTECTION:	B (GLASSES, GLOVES)
HAZARD ALERT SIGN:	Concentrate Ready to use

SECTION 1 – **IDENTIFICATION**	
PRODUCT IDENTIFIER	
PRODUCT NAME	BAC-KILLER 90
MANUFACTURER'S NAME AND ADDRESS **EMERGENCY PHONE NO.**	G.K. Chemical Specialties Co. Inc. 90 Barbados Blvd. Scarborough, Ontario M1J 1K9 (416) 261-7182 / 905 427-7605/ 416-526-4037
SUPPLIER'S NAME AND ADDRESS **EMERGENCY PHONE NO.**	
CHEMICAL NAME	N/A
CHEMICAL FAMILY	Quaternary Ammonium Chloride Germicidal Detergent
TRADE NAME AND SYNONYMS	BAC-KILLER 90
MATERIAL USE	Cleaning

G.K. Chemical Specialties Co. Inc. has compiled the information and recommendations contained in this Safety Data Sheet from sources believed to be reliable and to represent the most reasonable current opinion on the subject when the SDS was prepared. Although reasonable precautions have been taken in the preparation of the data contained herein, it is offered solely for your information, consideration and investigation.

G.K. Chemical Specialties Co. Inc. extends no warranty and assumes no responsibility as to the accuracy of the content or sufficiency of the information and expressly disclaims all liability for reliance thereon. This SDS provides guidelines for the safe handling of this product. It does not and cannot advise on all possible situations, therefore, your specific use of this product should be evaluated to determine if additional precautions are required. Individuals exposed to this product should read and understand this information and be provided pertinent training prior to working with this product.

G.K. Chemical Specialties Co. Inc. assumes no responsibility for personal injury or property damage to vendors, users or third parties caused by the material. Such vendors or users assume all risks associated with the use of the material.

INGREDIENTS. This SDS, under section of Ingredients, contains all ingredients listed under INGREDIENT DISCLOSURE LIST P.C. 1987-2719, 20/1/88 CANADA GAZETTE PART II VOL. 122, No 2 of HAZARDOUS PRODUCT ACT.
Percentage range of concentration of ingredients is expressed as percentage by weight of the total weight of the product. Ingredient List does not necessarily list all ingredients in the formulation and does not necessarily list all ingredient range of concentration, other than ingredients under the Disclosure List.

T.L.V. (units) or Threshold Limit Values refer to the limiting concentrations recommended by the Ministry of Labour. These values were adopted by the American Conference of Governmental Industrial Hygienists (A.C.G.I.H.). The figures refer to time-weighted average concentrations as P.P.M. (V/V) or mg/m^3 for a normal working day or at any time for some materials.

"C.A.S REG. No." means the identification number assigned to a chemical substance by the Chemical Abstracts Service Division of the American Chemical Society.
"LC 50" means the concentration of a substance in air that when administered by means of inhalation over a specified length of time in an animal assay, is expected to cause the death of 50 per cent of a defined animal population.
"LD 50" means the single dose of a substance that, when administered by a defined route in an animal assay, is expected to cause death of 50 per cent of a defined animal population.

FLASH POINT. The minimum temperature at which a substance gives off flammable vapors which in contact with spark or flame will ignite.

NIOSH- National institute for occupational safety and health
STEL- Short term exposure limit
TWA- Time-weighted average
PEL- Permissible exposure limit
ACGIH- American conference of governmental industrial hygienist
OSHA- Occupational safety and health act

SECTION 2 – HAZARD IDENTIFICATION

Dangerous Goods-**WHMIS:** NOT REGULATED
OSHA HAZARDS: Irritant

Concentrate

GHS CLASSIFICATION- (Product as Sold)
Acute Toxicity Oral- Category 4
Acute Toxicity Dermal- Category 4
Serious Eye Damage/Eye Irritation- Category 1
Skin Corrosion/ Irritation- Category 1A

GHS Label Elements, including precautionary statements: Hazard Statements
Signal word-DANGER

HAZARD STATEMENTS
H318- Causes serious eye damage
H315-Causes skin irritation
H302- Harmful if swallowed

PREVENTION (see also section 4 –First aid and measures)
P280: Wear protective gloves and eye protection
P264: Wash skin thoroughly after handling
P270: Do not eat, drink or smoke when using this product
P405: Store locked up

RESPONSE:
P305 + P351 + P338- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313: If eye irritation persists: Get medical advice/ attention
P303 + P361 +P353: IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water. Shower.
P301 + P310: IF SWALLOWED: Immediately call a POISON CENTER or doctor / physician.
P301 + P330 + P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting

POTENTIAL HEALTH EFFECTS
EYE: Will cause irritation
SKIN: May cause skin irritation
INGESTION: May be harmful if swallowed

At use Dilution

GHS CLASSIFICATION (Product at Use Dilution)
Acute Toxicity (Dermal)- Category 5
Eye Irritation- Category 2B

HAZARD STATEMENTS	**PREVENTION**
H316-Causes mild skin irritation	P280: Wear protective gloves and eye protection
H320- Causes eye irritation	P264: Wash skin thoroughly after handling

SECTION 3 – **COMPOSITION/INFORMATION ON INGREDIENTS**				
HAZARDOUS INGREDIENTS	**APPROXIMATE CONCENTRATION %**	**C.A.S., N.A. OR U.N. NUMBERS**	**LD50 {SPECIFY SPECIES & ROUTE}**	**LC 50 {SPECIFY SPECIES & ROUTE}**
Quaternary ammonium compounds, benzyl-C12-C16-alkyldimethyl, chlorides	9.0	68424-85-1	Oral(Rat): 344 mg/kg Dermal (Rabbit): 3,340 mg/kg	
Alcohols, C9-C11, Ethoxylated	5 - 10	68439-46-3	Oral (Rat): 1,400 mg/kg Dermal(Rabbit):>2,000 mg/kg	
Sodium Carbonate Anhydrous	3 - 7	497-19-8	Oral (Rat): 4,090 mg/kg Dermal(mouse): 2,210mg/kg	
Tetrasodium ethylenediamine Tetraacetate	1 - 3	64-02-8	Oral (Rat): 3,030 mg/kg Dermal (Rabbit): >5,000mg/kg	
Water, Perfume, inert and other non -hazardous ingredients	Balance			
Product at Use Dilution (Based at the highest Dilution for Hospital Disinfection at 9 ml/ litre) **will contain** CAS 68424-85-1: 0.0816 % CAS 68439-46-3: 0.0816 % CAS 497-19-8: 0.0360 % CAS 64-02-8: 0.0198 %				

SECTION 4 – **FIRST AID MEASURES**	
SKIN CONTACT	For product as sold contact will cause severe irritation. In case of contact rinse with plenty of water. For product at use dilution contact may cause mild irritation to some people, but no specific risk when handled in accordance with safety practice. In case of contact rinse with plenty water.
EYE CONTACT	For product as sold contact will cause very serious corneal damage. Immediately hold eyelids open and flush with water for at least 15 minutes. Seek medical attention if required. Product at use dilution can cause mild discomfort. Immediately hold eyelids open and flush with water for at least 15 minutes.
INHALATION	No known significant effects or critical hazards
INGESTION	May be harmful if swallowed. Do not induce vomiting. Drink 1 or 2 glasses of water. Seek immediate medical attention. Never give anything by mouth to an unconscious or convulsing person. If vomiting occur spontaneously, keep head below hips to prevent aspiration of liquid into the lungs. Take container, label or product name and Drug Identification Number with you when seeking medical attention

NOTES TO PHYSICIAN	Treatment based on sound judgment of physician and individual reaction of patient. EYE CONTACT: Symptoms may include stinging, tearing, redness, swelling, blurred vision and serious corneal damage. INGESTION: For product as sold symptoms may include nausea, vomiting and diarrhea. Probable Mucosal damage contraindicate the use of gastric lavage. Measures against circulatory shock, respiratory depression and convulsion may be required.

SECTION 5 – FIRE-FIGHTING MEASURES	
FLASH POINT (^{0}C)	Not applicable
FLASH POINT METHOD	Not applicable
AUTOIGNITION TEMPERATURE (^{0}C)	Not applicable
UPPER FLAMMABLE LIMIT (% VOL.)	Not applicable
LOWER FLAMMABLE LIMIT (% VOL.)	Not applicable
HAZARDOUS COMBUSTION PRODUCTS	Carbon Dioxide (CO_2), Carbon monoxide (CO) and other toxic gasses or vapors
UNUSUAL FIRE/ EXPLOSION HAZARDS	None known
SENSITIVITY TO MECHANICAL IMPACT	Not sensitive
SENSITIVITY TO STATIC DISCHARGE	Not sensitive
EXTINGUISHING MEDIA	Water spray, foam, dry powder or Carbon Dioxide. Use media appropriate for surrounding fire. Product does not support combustion.
SPECIAL FIRE FIGHTING PROCEDURES	Fire fighters should wear full protective clothing, including self-contained breathing equipment

SECTION 6 – ACCIDENTAL RELEASE MEASURES	
LEAK AND SPILL PROCEDURE	Stop leak. Move containers from spill area. Dilute with water and mop up. Material can create slippery conditions. Use non-slip safety shoes in areas where spills or leaks can occur
ENVIRONMENTAL PRECAUTIONARY	Prevent entry into sewers or streams. Do not rinse spill onto the ground, into storm sewers or bodies of water.
PERSONAL PRECAUTIONARY MEASURES	Wear protective clothing during cleanup. Avoid contact with skin, eyes or clothing.

SECTION 7 – HANDLING AND STORAGE	
HANDLING PROCETURES	Avoid contact with eyes and skin. Avoid ingestion. Use good industrial hygiene practices in handling this product. Wash thoroughly after handling. Keep container closed when not in use.
STORAGE NEEDS	Keep container tightly closed. Keep away from children. Do not store in unlabeled containers. Do not store with strong oxidizing agents.

SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION	
VENTILATION REQUIREMENTS	General ventilation is recommended.
PROTECTIVE EQUIPMENT	Ensure that eyewash stations are proximal to the work-station location
EYE/TYPE	Safety glasses
RESPIRATORY/TYPE	None required with expected use.
GLOVE/TYPE	Nitrile, Vinyl, latex, Butyl impervious gloves
FOOTWEAR/TYPE	No special footwear is required
BODY/TYPE	No special protective clothing is required

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES	
APPEARANCE – PHYSICAL STATE	Clear blue liquid
ODOUR	Pleasant floral/fresh
ODOUR THRESHOLD (PPM)	Not available
PH	11.35 ±0.50 in water concentrate, 9.75 ± 0.5 2% solution in water
MELTING POINT (^{0}C)	Not applicable
BOILING POINT (^{0}C)	100^{0}C
FREEZING POINT (^{0}C)	0^{0}C
EVAPORATION RATE	As water
FLAMMABILITY	Not applicable
FLASH POINT (^{0}C)	Not applicable
AUTO IGNITION TEMPERATURE	Not applicable
DECOMPOSITION TEMPERATURE	Not available
VAPOUR DENSITY	17.3 gm / m^3 @ 20^0 C
VAPOUR PRESSURE	17.54 mmHg @ 20^0 C
SOLUBILITY	Soluble in water
VISCOSITY	Thin liquid
% VOLATILE BY VOLUME	78 ± 1
SPECIFIC GRAVITY	1.02 ± 0.02 gm / cm^3

SECTION 10 – STABILITY AND REACTIVITY	
REACTIVITY	The product is stable
CHEMICAL STABILITY	Stable
POSSIBILITY OF HAZARDOUS REACTIONS	Not applicable
CONDITIONS TO AVOID	No specific data
INCOMPATIBLE MATERIALS	Strong Oxidizing agents, Acids, Chlorinated products
HAZARDOUS DECOMPOSITION PRODUCTS	Carbon Dioxide ($C0_2$), Carbon Monoxide (CO), Oxides of Nitrogen

SECTION 11 –TOXICOLOGICAL INFORMATION	
TOXICITY EFFECTS ON ANIMALS	**For Quaternary ammonium compounds, benzyl- C12-C16- Alkyldimethyl, chlorides (68424-85-1):** Acute Oral Toxicity LD50 (Rat): 344 mg/kg. Acute Dermal Toxicity LD50 (Rabbit): 3,340 mg/kg. **For Alcohols, C9-C11, Ethoxylated (68439-46-3):** Acute Oral Toxicity LD50 (Rat): 1,400 mg/kg. LD50 Dermal (Rabbit): >2,000 mg/kg.

	For Sodium Carbonate Anhydrous (497-19-8): Acute Oral Toxicity LD50 (Rat): 4,090 mg/kg. Acute Dermal Toxicity LD50 (mouse): 2,210 mg/kg. **For Tetrasodium ethylenediamine Tetraacetate (64-02-8):** Acute Oral Toxicity LD50 (Rat): 3,030 mg/kg. LD50 Dermal (Rabbit): >5,000 mg/kg **For the mix** estimated Acute Oral Toxicity is much >5,000 mg/kg. Therefore product is classified as non-toxic. Acute Dermal Toxicity for the mix is also estimated to be much >5,000 mg/ kg. Therefore the product is not toxic.
TOXIC EFFECTS ON HUMANS	Product as sold will cause severe irritation of eyes, may cause serious corneal damage. May cause severe skin irritation upon contact. No specific risk for product at use dilution when handled in accordance with safety practice.
CHRONIC EFFECTS ON HUMANS	No known significant effects
CARCINOGENICITY	No evidence
TERATOGENICITY	No evidence
MUTAGENICITY	No evidence
REPRODUCTIVE EFFECTS	No evidence

SECTION 12 –ECOLOGICAL INFORMATION	
ECOTOXICITY DATA	**For Quaternary ammonium compounds, benzyl-C12-C16- Alkyldimethyl, chlorides (68424-85-1):** Acute Toxicity to fish: LC50, Fathead minnow (Pimephales promelas): 0.28 mg /L /96 h. Acute Toxicity to aquatic invertebrates EC50 Daphnia magna (Water flea): <1.00 mg /L / 48 h. Biodegradability >99 %. **For Alcohols, C9-C11, Ethoxylated (68439-46-3):** Acute Toxicity to fish LC50, Fathead minnow (Pimephales promelas): 8.5 mg / L /96 h. EC50, Daphnia magna (Water flea): 5.3 mg /L /48 h. Ingredient readily BIODEGRADABLE. **For Sodium Carbonate Anhydrous (497-19-8):** Acute Toxicity to fish LC50, L. macrochius: 300 mg / L / 96 h. LC50, Pimephales promelas (Fathead minnow) (various age groups): 310- 1220 mg/ L /96 h. Acute Toxicity to aquatic invertebrates, EC50, Daphnia magna (Water flea): 265 mg / L / /48 h. This ingredient is readily degradable in the environment. Not bioaccumulative. **For Tetrasodium ethylenediamine Tetraacetate (64-02-8):** Acute Toxicity to fish LC50, Lepomis macrochirus (bluegill sunfish): 1,592 mg / L /96 h./ static test. Acute Toxicity to aquatic invertebrates: EC50, Daphnia magna (Water flea): 610-1,033 mg /L / 24 H, immobilization. Ingredient is practically non-toxic to fish.
BIODEGRADABILITY	Readily biodegradable
PRODUCTS OF DEGRADATION	No data available

SECTION 13 – DISPOSAL CONSIDERATIONS	
WASTE DISPOSAL	Disposal of all wastes must be done in accordance with municipal, provincial and federal regulations
INFORMATION ON SAFE HANDLING FOR DISPOSAL INCLUDING ANY CONTAMINATED PACKAGING	Suitable waste facility

SECTION 14 – TRANSPORT INFORMATION	
UN NUMBER	1903
UN PROPER SHIPPING NAME	Disinfectants, liquid, corrosive n.o.s. (Quaternary Ammonium Compound)
TRANSPORT HAZARD CLASS	8
PACKAGING GROUP	III
ENVIRONMENTAL HAZARDS	Nil
TRANSPORT IN BULK, if applicable	Not applicable
SPECIAL PRECAUTIONS	Emergency Response Guide (ERG): # 153

SECTION 15 – REGULATORY INFORMATION	
SAFETY HEALTH & ENVIRONMENTAL REGULATIONS SPECIFIC TO THE PRODUCT	U.S. TSCA inventory Status: All components of this product are either on the Toxic Substances Control Act (TSCA) INVENTORY List or exempt. Canadian DSL Inventory Status: All components of this product are either on the Domestic Substances List (DSL) or the Non-Domestic Substances List (NDSL) or exempt.

SECTION 16 – OTHER INFORMATION	
PREPARED BY:	Gus Kaklamanos - Chemist
TELEPHONE NO.:	416-261-7182
DATE OF THE LATEST REVISION OF SDS:	October 5, 2017

NOTE: This controlled product by Health Canada is to be used in accordance with the directions on the label.

Drug Identification No.: 02279029