MATERIAL SAFETY DATA SHEET

Prepared to U.S. OSHA, CMA, ANSI and Canadian WHMIS Standards

BASIC CHEMICAL SOLUTIONS

PART I *What is the material and what do I need to know in an emergency?*

1. PRODUCT IDENTIFICATION

TRADE NAME (AS LABELED): **BCS LIQUID CLEANER**

CHEMICAL NAME/CLASS: Aqueous Cleaning Solution

PRODUCT USE: Cleaner

SUPPLIER/MANUFACTURER'S NAME: **BASIC CHEMICAL SOLUTIONS, L.L.C.**

ADDRESS: **Corporate Office**
525 Seaport Blvd.
Redwood City, CA 94063

BUSINESS PHONE: 1-800-411-4227

EMERGENCY PHONE: **CHEMTREC**: 1-800-424-9300

DATE OF PREPARATION: February 25, 2004

DATE OF REVISION: April 23, 2009

2. COMPOSITION and INFORMATION ON INGREDIENTS

CHEMICAL NAME	CAS #	%w/w	EXPOSURE LIMITS IN AIR					
			ACGIH		OSHA			
			TLV mg/m^3	STEL mg/m^3	PEL mg/m^3	STEL mg/m^3	IDLH	OTHER mg/m^3
2-(2-Butoxethoxy) ethanol	112-34-5	2 - 7%						
Tetrasodium ethylenediaminetetraacetate	64-02-8	1 - 6%						
Disodium Trioxosilicate Pentahydrate	6834-92-0, 7732-18-5	1 - 6%	NE	NE	NE	NE	NE	NE
Dodecylbenzene Sulfonate	25155-30-0	1.5 - 4.5%						
Sodium Lauryl Sulfate	9004-82-4	1 - 5%						
Water	-	70 - 90%						

NE = Not Established. C = Ceiling Limit. See Section 16 for Definitions of Terms Used.

NOTE: All WHMIS required information is included. It is located in appropriate sections based on the ANSI Z400.1-1993 format.

3. HAZARD IDENTIFICATION

EMERGENCY OVERVIEW: This product is a Clear to Slightly Hazy Liquid. Emergency responders must wear the proper personal protective equipment suitable for the situation to which they are responding.

SYMPTOMS OF OVER-EXPOSURE BY ROUTE OF EXPOSURE: The most significant routes of occupational overexposure are contact with skin and eyes. The symptoms of overexposure to this product are as follows:
INHALATION: If mists or sprays of this solution are inhaled, this product may cause irritation to the respiratory tract and irritation to the nose and throat.
CONTACT WITH SKIN or EYES: Contact with the eyes will cause irritation, pain, reddening and burning. Skin contact may result in reddening, discomfort, irritation and burning.
INGESTION: If ingestion does occur, there will be possible nausea, abdominal discomfort and diarrhea.

HEALTH EFFECTS OR RISKS FROM EXPOSURE: An Explanation in **Lay Terms**.

ACUTE: None

CHRONIC: Repeated skin contact with this product may result in redness of the skin or dermatitis.

HAZARDOUS MATERIAL INFORMATION SYSTEM

HEALTH	(BLUE)	1
FLAMMABILITY	(RED)	0
REACTIVITY	(YELLOW)	0
PROTECTIVE EQUIPMENT		D

EYES	RESPIRATORY	HANDS	BODY
	SEE SECTION 8		

For routine industrial applications

PART II *What should I do if a hazardous situation occurs?*

4. FIRST-AID MEASURES

SKIN EXPOSURE: Flush area thoroughly with water - then soap and water for at least 15 minutes. Contaminated clothing should be washed before re-use. If irritation or redness persists, seek medical attention.
EYE EXPOSURE: If this product enters the eyes, open victim's eyes while under gentle running water. Remove any contact lenses. Use sufficient force to open eyelids. Have victim "roll" eyes. Minimum flushing is for 30 minutes. Victim must seek immediate medical attention.
INHALATION: If vapors, mists, or sprays of this product are inhaled, remove victim to fresh air. If not breathing, give artificial respiration. If breathing is difficult, trained personnel should administer oxygen. Seek immediate medical attention.
INGESTION: Do not induce vomiting. Drink several glasses of water. Never induce vomiting or give diluents (milk or water) to someone who is unconscious, having convulsions, or who cannot swallow. Seek immediate medical attention.

Victims of chemical exposure must be taken for medical attention. Rescuers should be taken for medical attention, if necessary. Take copy of label and MSDS to health professional with victim.

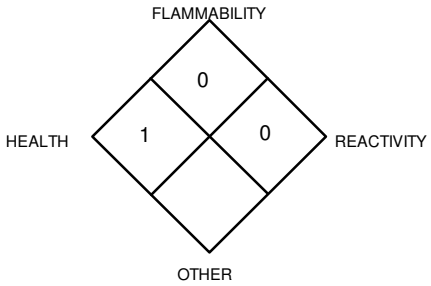
5. FIRE-FIGHTING MEASURES

FLASH POINT, ℃ (method): None to boiling

AUTOIGNITION TEMPERATURE, ℃: Not Available

FLAMMABLE LIMITS (in air by volume, %): Lower (LEL): Not applicable.
Upper (UEL): Not applicable.

NFPA RATING



FLAMMABLE CLASS: Not Flammable

FIRE EXTINGUISHING MATERIALS:

Water Fog: YES
Chemical Type Foam: YES
Halon: NO
Carbon Dioxide: YES
Dry Chemical: YES
Other: WATER SPRAY

UNUSUAL FIRE AND EXPLOSION HAZARDS: None known.

Explosion Sensitivity to Mechanical Impact: Not Available.
Explosion Sensitivity to Static Discharge: Not Available.

SPECIAL FIRE-FIGHTING PROCEDURES: Acrid smoke and fumes emitted when heated to decomposition. Carbon Monoxide, Carbon Dioxide and Oxides of Sulfur may be present in small quantities.

FIRE-FIGHTING EQUIPMENT: Respiratory and Eye Protection are required for Fire Fighting Personnel. Full Protective Equipment (Bunker Gear) and self-contained breathing apparatus (SCBA) should be used for all indoor fires and any significant outdoor fires. For small outdoor fires, which may easily be extinguished with a portable fire extinguisher, use of a SCBA may not be required.

6. ACCIDENTAL RELEASE MEASURES

SPILL AND LEAK RESPONSE: Uncontrolled releases should be responded to by trained personnel using pre-planned procedures. Proper protective equipment should be used. In case of a spill, clear the affected area, protect people, and respond with trained personnel.

SMALL SPILL: Personal Protective Equipment worn should be rubber gloves, safety goggles, face shield and appropriate body protection. Move the leaking container to a containment area or rotate the container so that the opening is above the liquid level. Clean up with non-combustible absorbent (such as sand, soil, etc.). Shovel up and dispose of at an appropriate waste disposal facility according to current applicable laws and regulations and product characteristics at time of disposal. Wash residue with water.

LARGE SPILL: Personal Protective Equipment should be Level B: triple gloves (rubber gloves and nitrile gloves over latex gloves), chemical resistant suit and boots, hard hat and Self-Contained Breathing Apparatus. Construct temporary dikes of dirt, sand or any appropriate readily available material to prevent spreading of the material. Close or cap Valves and/or block or plug hole in leaking container and transfer to another container. Contain material as described above and call the local fire or police department for immediate emergency assistance.

7. HANDLING and STORAGE

WORK PRACTICES AND HYGIENE PRACTICES: As with all chemicals, avoid getting this product ON YOU or IN YOU. Wash hands after handling this product. Do not eat or drink while handling this material. Remove contaminated clothing immediately. Use ventilation and other engineering controls to minimize potential exposure to this product.

STORAGE AND HANDLING PRACTICES: All employees who handle this material should be trained to handle it safely. Avoid breathing mists or sprays generated by this product. Use in a well-ventilated location. Unopened containers should be stored in cool, dry conditions.

For Non-Bulk Containers: Open containers slowly, on a stable surface. Containers of this product must be properly labeled. Store containers in a cool, dry location, away from direct sunlight, sources of intense heat, or where freezing is possible. Material should be stored in secondary containers, or in a diked area, as appropriate. Store containers away from incompatible chemicals. Keep container tightly closed when not in use. Wash thoroughly after using this material. Storage areas should be made of fire-resistant materials. If appropriate, post warning signs in storage and use areas. Inspect all incoming containers before storage, to ensure containers are properly labeled and not damaged.

Empty containers may contain residual liquid. Therefore, empty containers should be handled with care.

Bulk Containers: All tanks and pipelines which contain this material must be labeled. Perform routine maintenance on tanks or pipelines which contain this product. Report all leaks promptly.

Tank Car Shipments: Tank cars carrying this product should be loaded and unloaded in strict accordance with tank-car manufacturer's recommendation and all established on-site safety procedures. Appropriate personal protective equipment must be used (see Section 8, Engineering Controls and Personal Protective Equipment.). All loading and unloading equipment must be inspected, prior to each use. Loading and unloading operations must be attended, at all times. Tank cars must be level and wheels must be locked or blocked prior to loading or unloading. Tank car (for loading) or storage tank (for unloading) must be verified to be correct for receiving this product and be properly prepared, prior to starting the transfer operations. Hoses must be verified to be clean and free of incompatible chemicals, prior to connection to the tank car or vessel. Valves and hoses must be verified to be in the correct positions, before starting transfer operations. A sample (if required) must be taken and verified (if required) prior to starting transfer operations. All lines must be blown-down and purged before disconnecting them from the tank car or vessel.

PROTECTIVE PRACTICES DURING MAINTENANCE OF CONTAMINATED EQUIPMENT: Follow practices indicated in Section 6 (Accidental Release Measures). Make certain application equipment is locked and tagged-out safely. Always use this product in areas where adequate ventilation is provided. Decontaminate equipment using acid neutralizing agent, followed by a triple-rinse with water, before maintenance begins. Collect all rinsates and dispose of according to applicable Federal, State, or local procedures.

8. EXPOSURE CONTROLS - PERSONAL PROTECTION

VENTILATION AND ENGINEERING CONTROLS: Use a corrosion-resistant ventilation system separate from other exhaust ventilation systems to ensure that there is no potential for overexposure to sprays, or mists of this product and that exposures are below those in section 2 (Composition and Information on Ingredients). Ensure eyewash/safety shower stations are available near areas where this product is used.

RESPIRATORY PROTECTION: Maintain airborne contaminant concentrations below exposure limits listed in Section 2 (Composition and Information on Ingredients). If respiratory protection is needed, use only protection authorized in 29 CFR 1910.134, or applicable State regulations. Use supplied air respiration protection if oxygen levels are below 19.5% or are unknown. Respiratory protection guidelines are as follows:

EMERGENCY OR PLANNED ENTRY INTO UNKNOWN CONCENTRATIONS OR IDLH CONDITIONS:
Positive pressure, full-facepiece Self Contained Breathing Apparatus; or positive pressure, full-facepiece Self Contained Breathing Apparatus with an auxiliary positive pressure Self Contained Breathing Apparatus.

ESCAPE:
Air-purifying Full-facepiece respirator or escape-type Self Contained Breathing Apparatus.

NOTE: Recommendations apply only to NIOSH and MSHA (Mine Safety and Health Administration) approved respirators.
Air-purifying respirators do not protect against oxygen-deficient atmospheres.

8. EXPOSURE CONTROLS - PERSONAL PROTECTION -- CONTINUED

EYE PROTECTION: Splash goggles or safety glasses. Face-shields are recommended when working with more than one-gallon

of this product, or when the operation can generate splashes, sprays or mists.

HAND PROTECTION: Wear neoprene gloves for routine industrial use.

BODY PROTECTION: Use body protection appropriate for task. Cover-all, rubber aprons, or chemical protective clothing made from natural rubber are generally acceptable, depending upon the task.

9. PHYSICAL and CHEMICAL PROPERTIES

Physical and chemical properties for this product, are as follows:

RELATIVE VAPOR DENSITY (air = 1): Not Available.

SPECIFIC GRAVITY (water = 1): 1.044

SOLUBILITY IN WATER: Soluble.

VAPOR PRESSURE: Not available.

ODOR THRESHOLD: Not available.

EVAPORATION RATE (n-BuAc=1): Not Available

MELTING/FREEZING POINT: Not Available

BOILING POINT: 100 Degrees Celsius

pH: Approximately 10.

LOG WATER/OIL DISTRIBUTION COEFFICIENT: Not available.

APPEARANCE AND COLOR: This is a clear to hazy Liquid Material.

10. STABILITY and REACTIVITY

STABILITY: Stable.
DECOMPOSITION PRODUCTS: Acrid Smoke and Fumes; Carbon Monoxide, Carbon Dioxide, Hydrogen Gas, Ammonia and Oxides of Sulfur (from burning).
MATERIALS WITH WHICH SUBSTANCE IS INCOMPATIBLE: This product reacts with Strong Oxidizing Agents, Hypochlorite Bleach, Concentrated Acids and Strong Alkalies.
HAZARDOUS POLYMERIZATION: Will not occur.
CONDITIONS TO AVOID: Incompatible chemicals.

PART IV *Is there any other useful information about this material?*

11. TOXICOLOGICAL INFORMATION

TOXICITY DATA: None available at this time.

IRRITANCY OF PRODUCT: This product is irritating to contaminated tissue.

PART IV *Is there any other useful information about this material?*

11. TOXICOLOGICAL INFORMATION -- CONTINUED

SENSITIZATION TO THE PRODUCT: No component of this product is known to be a sensitizer.

REPRODUCTIVE TOXICITY INFORMATION: Listed below is information concerning the effects of this product and its components on the human reproductive system.

Mutagenicity: Not Available.
Reproductive Toxicity: Not Available.

A mutagen is a chemical which causes permanent changes to genetic material (DNA) such that the changes will propagate through generational lines. A reproductive toxin is any substance which interferes in any way with the reproductive process.

BIOLOGICAL EXPOSURE INDICES: Currently there are no Biological Exposure Indices (BEIs) associated with the components of this product.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE Skin disorders can be aggravated by over-exposure to this product. Inhalation of this products mists may aggravate respiratory conditions.

RECOMMENDATIONS TO PHYSICIANS: Treat symptoms and eliminate over-exposure to this product.

12. ECOLOGICAL INFORMATION

ALL WORK PRACTICES MUST BE AIMED AT ELIMINATING ENVIRONMENTAL CONTAMINATION.

ENVIRONMENTAL DATA: No Bio-Concentration is expected because of the relatively high water solubility.

ECOTOXICOLOGICAL INFORMATION: Non-Toxic to fish on an acute basis (LC50 greater than 100 mg/L).

DISTRIBUTION: Not Available.

CHEMICAL FATE INFORMATION: Not Available.

13. DISPOSAL CONSIDERATIONS

PREPARING WASTES FOR DISPOSAL: Waste disposal must be in accordance with appropriate Federal, State, and local regulations. This product, if unaltered by use, may be disposed of by treatment at a permitted facility or as advised by your local hazardous waste regulatory authority.

14. TRANSPORTATION INFORMATION

THIS MATERIAL IS NOT HAZARDOUS AS DEFINED BY 49 CFR 172.101 BY THE U.S. DEPARTMENT OF TRANSPORTATION.

PROPER SHIPPING NAME: NOT REGULATED
HAZARD CLASS NUMBER and DESCRIPTION: NOT REGULATED
UN IDENTIFICATION NUMBER: NOT REGULATED
PACKING GROUP: NOT REGULATED
DOT LABEL(S) REQUIRED: NOT REGULATED
NORTH AMERICAN EMERGENCY RESPONSE GUIDEBOOK NUMBER (1996): 154

MARINE POLLUTANT: This product does not contain any components which are designated by the Department of Transportation to be Marine Pollutants. (49 CFR 172.101, Appendix B).

TRANSPORT CANADA TRANSPORTATION OF DANGEROUS GOODS REGULATIONS: THIS MATERIAL IS NOT CONSIDERED AS DANGEROUS GOODS. Use the above information for the preparation of Canadian Shipments.

15. REGULATORY INFORMATION

SARA REPORTING REQUIREMENTS: The components of this product are NOT subject to the reporting requirements of Section 302, 304 and 313 of Title III of the Superfund Amendments and Reauthorization Act are as follows.

COMPONENT	SARA 302	SARA 304	SARA 313

TSCA INVENTORY STATUS: The components of this product are listed on the TSCA Inventory.
CERCLA REPORTABLE QUANTITY (RQ): Not Applicable.
OTHER FEDERAL REGULATIONS: Not applicable.
STATE REGULATORY INFORMATION: Components of this product are covered under specific State regulations, as denoted below: Noner

CALIFORNIA PROPOSITION 65: No component of this product is on the California Proposition 65 lists.

LABELING (Precautionary Statements): Do not get into eyes, on skin or clothing. Avoid breathing spray or mist. Do not take internally. Use with adequate ventilation and employ respiratory protection when exposed to the mist or spray. When handling, wear chemical splash goggles, face shield, rubber gloves and protective clothing. Do not transfer to unlabeled containers. Wash thoroughly after handling, Keep container closed when not in use. FIRST AID: In case of contact, immediately flush skin or eyes for at least 15 minutes. For Eyes - seek medical attention. If inhaled, move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Do not induce vomiting. IN CASE OF FIRE: Use CO_2 - Dry Chemicals if water evaporated. IN CASE OF SPILL: Absorb spill with dirt, sand or other absorbent material. Dispose of in manner consistent with State, Local and Federal Regulations.

TARGET ORGANS: Eyes, Skin.

WHMIS SYMBOLS:

Nonel

16. OTHER INFORMATION

DATE OF PRINTING:

THIS INFORMATION IS DRAWN FROM RECOGNIZED SOURCES BELIEVED TO BE RELIABLE. BASIC CHEMICAL SOLUTIONS MAKES NO GUARANTEES NOR ASSUMES ANY LIABILITY IN CONNECTION WITH THIS INFORMATION. THE USER SHOULD BE AWARE OF CHANGING TECHNOLOGY, RESEARCH, REGULATIONS AND ANALYTICAL PROCEDURES THAT MAY REQUIRE CHANGES HEREIN. THE ABOVE DATA IS SUPPLIED UPON THE CONDITION THAT PERSONS WILL EVALUATE THIS INFORMATION AND THEN DETERMINE ITS SUITABILITY FOR THEIR USE.

DEFINITIONS OF TERMS

A large number of abbreviations and acronyms appear on a MSDS. Some of these which are commonly used include the following:

CAS #: This is the Chemical Abstract Service Number which uniquely identifies each constituent. It is used for computer-related searching.

EXPOSURE LIMITS IN AIR:
ACGIH - American Conference of Governmental Industrial Hygienists, a professional association which establishes exposure limits.
TLV - Threshold Limit Value - an airborne concentration of a substance which represents conditions under which it is generally believed that nearly all workers may be repeatedly exposed without adverse effect. The duration must be considered, including the 8-hour **Time Weighted Average (TWA)**, the 15-minute **Short Term Exposure Limit**, and the instantaneous **Ceiling Level**. Skin adsorption effects must also be considered.
OSHA - U.S. Occupational Safety and Health Administration.
PEL - Permissible Exposure Limit - This exposure value means exactly the same as a TLV, except that it is enforceable by OSHA. The OSHA Permissible Exposure Limits are based in the 1989 PELs and the June, 1993 Air Contaminants Rule (Federal Register: 58: 35338-35351 and 58: 40191). Both the current PELs and the vacated PELs are indicated. The phrase, "Vacated 1989 PEL," is placed next to the PEL which was vacated by Court Order.
IDLH - Immediately Dangerous to Life and Health - This level represents a concentration from which one can escape within 30-minutes without suffering escape-preventing or permanent injury. **The DFG - MAK** is the Republic of Germany's Maximum Exposure Level, similar to the U.S. PEL. **NIOSH** is the National Institute of Occupational Safety and Health, which is the research arm of the U.S. **O**ccupational **S**afety and **H**ealth **A**dministration (**OSHA**). NIOSH issues exposure guidelines called **R**ecommended **E**xposure **L**evels (**REL**s). When no exposure guidelines are established, an entry of **NE** is made for reference.

FLAMMABILITY LIMITS IN AIR:
Much of the information related to fire and explosion is derived from the **N**ational **F**ire **P**rotection **A**ssociation (**NFPA**). LEL - the lowest percent of vapor in air, by volume, that will explode or ignite in the presence of an ignition source. UEL - the highest percent of vapor in air, by volume, that will explode or ignite in the presence of an ignition source.

TOXICOLOGICAL INFORMATION:
Possible health hazards as derived from human data, animal studies, or from the results of studies with similar compounds are presented. Definitions of some terms used in this section are: **LD_{50}** - Lethal Dose (solids & liquids) which kills 50% of the exposed animals; **LC_{50}** - Lethal Concentration (gases) which kills 50% of the exposed animals; **ppm** concentration expressed in parts of material per million parts of air or water; **mg/m^3** concentration expressed in weight of substance per volume of air; **mg/kg** quantity of material, by weight, administered to a test subject, based on their body weight in kg. Data from several sources are used to evaluate the cancer-causing potential of the material. The sources are: **IARC** - the International Agency for Research on Cancer; **NTP** - the National Toxicology Program, **RTECS** - the Registry of Toxic Effects of Chemical Substances, **OSHA** and **CAL/OSHA**. IARC and NTP rate chemicals on a scale of decreasing potential to cause human cancer with rankings from 1 to 4. Subrankings (2A, 2B, etc.) are also used. Other measures of toxicity include **TDLo**, the lowest dose to cause a symptom and **TCLo** the lowest concentration to cause a symptom; **TDo**, **LDLo**, and **LDo**, or **TC**, **TCo**, **LCLo**, and **LCo**, the lowest dose (or concentration) to cause death. **BEI** - Biological Exposure Indices, represent the levels of determinants which are most likely to be observed in specimens collected from a healthy worker who has been exposed to chemicals to the same extent as a worker with inhalation exposure to the TLV.

REGULATORY INFORMATION:
This section explains the impact of various laws and regulations on the material. **EPA** is the U.S. Environmental Protection Agency. **WHMIS** is the Canadian Workplace Hazardous Materials Information System. **DOT** and **TC** are the U.S. Department of Transportation and the Transport Canada, respectively. Other acronyms used are: **Superfund Amendments and Reauthorization Act (SARA)**; the **Toxic Substance Control Act (TSCA)**; Marine Pollutant status according to the **DOT**; California's Safe Drinking Water Act (**Proposition 65**); the **Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA or Superfund)**; and various state regulations. This section also includes information on the precautionary warnings which appear on the materials package label.