SAFETY DATA SHEET

NOTICE: Judgment may be based on indirect test and technical literature. The OSHA Hazard Communication Standard only requires SDS's and special labeling for materials defined as "HAZARDOUS"; see 29 CFR 1910.1200 (c). This document may be about a product which is NOT hazardous but is provided as information for our customers. See references for information.

SECTION 1. IDENTIFICATION

Product Identifier: Bolt
Product Use: Chlorinated Machine Warewashing Detergent
Manufactured by: Kor-Chem, Inc.
5800 Bucknell Drive
Atlanta, GA 30336

Product Identification # (PIF): 00248
Emergency Telephone #: 1-800-255-3924
General Information #: 404-344-9580
Date Prepared: February 25, 2012
Date Revised: December 9, 2015

SECTION 2. HAZARD(S) IDENTIFICATION

GHS Hazard Codification:

Signal Word: DANGER

Hazard Class	Category	Code	Hazard Statement
Corrosive to Metals	1	H290	May be corrosive to metals
Acute Toxicity, Oral	4	H302	Harmful if swallowed
Aspiration Hazard	2	H305	May be harmful if swallowed and enters airways
Skin Corrosion	1C	H314	Causes severe skin burns and eye damage
Skin Sensitization	1	H317	May cause an allergic skin reaction
Serious Eye Damage	1	H318	Causes serious eye damage
Acute Toxicity, Inhalation	4	H332	Harmful if inhaled
Hazardous to the Aquatic Environment, Acute Hazard	1	H400	Very toxic to aquatic life

Precautionary	Code	Statement
Prevention	P234	Keep only in original container.
	P260	Do not breathe fumes/mists/ vapors/sprays.
	P264	Wash thoroughly after handling.
	P270	Do not eat, drink or smoke or smoke when using this product.
	P272	Contaminated work clothing should not be allowed out of the workplace.
	P273	Avoid release to the environment.
	P280	Wear protective gloves/protective clothing/eye protection/face protection.
Response	P301+P310	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
	P330+P331	Rinse mouth. Do NOT induce vomiting.
	P303+P361+P353	IF ON SKIN (or hair): Remove immediately all contaminated clothing. Rinse skin with water/shower.
	P363	Wash contaminated clothing before reuse.
	P304+P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
	P310	Immediately call a POISON CENTER or doctor/physician.
	P321	Specific treatments: See section 4 First Aid Measures.
	P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
	P390	Absorb spillage to prevent material damage.
	P391	Collect spillage.
Storage	P404	Store in a closed container.
	P405	Store locked up.
Disposal	P501	Dispose of contents/container in compliance with all Federal, State/Provincial and local laws and regulations.

Description of any hazards not otherwise classified: Repeated exposure may cause drying and flaking of the skin (dermatitis). Vapors harmful - severe respiratory tract irritation may occur. Mists are corrosive to respiratory tract and may cause pulmonary edema (shortness of breath and tightness of chest). Harmful or fatal if swallowed.

SECTION 3. COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient		CAS #	Max. %
Potassium hydroxide	Caustic potash	1310-58-3	11 – 15
Sodium hypochlorite	Chlorine bleach	7681-52-9	2 – 4

SECTION 4. FIRST AID MEASURES

Eyes: Immediately flush well with water for at least 15 minutes, holding eyelids open. Remove any contact lenses and continue rinsing. Seek medical attention if irritation persists.
Skin: Remove immediately all contaminated clothing and launder before reuse. Contaminated work clothing should not be allowed out of the workplace. Rinse with water/shower, then wash with soap and water. If irritation develops and persists, seek medical attention.

Inhalation: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician. If breathing is difficult, have a trained person administer oxygen. If respiration stops, have a trained person administer artificial respiration by way of pocket mask equipped with one-way valve or other proper respiratory device – Do NOT use mouth-to-mouth method if victim inhaled material. Call a physician.
Ingestion: DO NOT INDUCE VOMITING. Call a physician immediately. Rinse mouth. Never give anything by mouth to an unconscious person. If vomiting occurs spontaneously, keep head below hips to prevent aspiration.

SECTION 5. FIRE-FIGHTING MEASURES

Flammability: Not flammable
Flash Point: Not flammable
Extinguishing Media: Use media appropriate for surrounding fire.
Specific hazards arising from chemical: Hazardous gases may be formed.
Hazardous combustion products: Hydrogen chloride, phosgene, potassium oxide and hydroxide.
Firefighting protective equipment: Wear a self-contained breathing apparatus with a full face piece operated in the positive pressure demand mode with acid gas cartridge with appropriate turn-out gear and chemical resistant personal protective equipment.
Sensitivity to static discharge: This product is not sensitive to static discharge.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Use personal protective equipment (Section 8). Ventilate area. Do not breathe fumes/mists/ vapors/sprays. Absorb spillage to prevent material damage. Avoid release to the environment – collect spillage. Wash thoroughly after handling. Do not eat, drink or smoke or smoke when using this product.
For Small Spills: Spilled material may be slippery. Avoid dispersal of material and runoff into soil, waterways, drains and sewers. Use water fog to suppress vapors. Neutralize spill with citric acid or other weak acid neutralizing agent. Litmus paper may be used to confirm neutralization. Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. Wash walking surfaces with water. Dispose of contaminated absorbent material in accordance with local, state and federal regulations.
For Large Spills: Large spills cannot occur due to packaging.

SECTION 7. HANDLING AND STORAGE

Handling: Wear personal protection equipment (Section 8). Use with adequate ventilation. Do not breathe fumes/mists/ vapors/sprays. Do not premix with other chemicals. Absorb spillage to prevent material damage. Empty containers may contain residue and can be dangerous. Do not eat, drink or smoke in work areas. Wash thoroughly after handling.
Storage: Keep away from heat, flame, or sunlight. Keep from freezing. Keep only in original container. Keep container closed when not in use. Store locked up. Protect from physical damage. Store away from acids, combustible/reducing materials, ammonia salts, plastics, rubber coatings and metals such as aluminum, zinc, tin and lead.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Ingredient	CAS #	OSHA/PEL	ACGIH/TLV	OSHA/STEL
Potassium hydroxide	1310-58-3	2mg/m3	2mg/m3	Not established
Sodium hypochlorite	7681-52-9	1ppm	0.5ppm	3ppm

Engineering Controls: Provide adequate ventilation. Observe occupational exposure limits and keep the risk of exposure to a minimum.
Personal protective equipment:

Eye: Safety glasses with side shields or splash proof goggles and face shield.
Skin: Chemical resistant gloves. Normal materials handling clothing and apron.
Respirator: Use NIOSH approved protection with acid gas cartridge if PEL is exceeded or if vapors are causing irritation.
Other: Use only in a well ventilated area. Do not eat, drink or smoke while handling. Wash thoroughly after handling.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Light straw, clear liquid	Upper/Lower flammability limits	Not determined
Odor	Chlorine	Vapor pressure	Not determined
Odor threshold	Not determined	Vapor density (Air = 1)	<1
pH	13 – 14	Specific gravity (water = 1.0)	1.210 g/ml
Melting point	Not determined	Solubility	Complete in water
Freezing point	Not determined	Partition coefficient	Not determined
Boiling point	Not determined	Auto-ignition temperature	Not determined
Flash point	Not flammable	Decomposition temperature	Not determined
Evaporation rate (n-butyl acetate=1)	<1	Viscosity	Not determined
Flammability	Not flammable	%Volatile/Volume	77

SECTION 10. STABILITY AND REACTIVITY

Reactivity: Product may react violently with combustible and reducing materials and acids. Slowly attacks glass at room temperature. Corrosive to metals. Can react with metals to form flammable hydrogen gas.
Chemical stability: Stable under normal, ambient temperature and conditions.
Possibility of hazardous reactions: Will not occur, but can induce hazardous polymerization of acetaldehyde, acrolein and acrylonitrile.
Conditions to avoid: Heat, flame, sparks and ultra-violet light sources. Do not mix with other chemicals.
Incompatible materials: Avoid acids, combustible/reducing materials, ammonia salts, organic halogen and nitro compounds, plastics, rubber coatings and metals such as aluminum, zinc, tin and lead, and but can induce hazardous polymerization of acetaldehyde, acrolein and acrylonitrile. Acid contact will produce toxic chlorine gas.
Hazardous combustion products: Hydrogen chloride, phosgene, potassium oxide and hydroxide.

SECTION 11. TOXICOLOGICAL INFORMATION

Toxicity:

Oral (LD50 Rat): 3000-5000mg/kg
Dermal (LD50 Rabbit): >2000mg/kg
Inhalation (LC50 Rat): Not determined

Skin corrosion/irritation: Corrosive to skin. Symptoms may include burns, ulceration and scarring. Prolonged/repeated skin exposures can result in dermatitis.
Serious eye damage/irritation: Corrosive to eyes. Symptoms may include severe irritation, disintegration, scarring and clouding.
Respiratory or skin sensitization: Vapors harmful. Severe respiratory tract irritation may occur. Mists are corrosive to respiratory tract and may cause pulmonary edema (shortness of breath and tightness of chest).
Germ cell mutagenicity: Not available
Carcinocenicity: NTP/IARC/OSHA Carcinogen: Not listed
Reproductive toxicity: Not available
STOT-single exposure: Not classified
STOT-repeated exposure: Not classified
Aspiration hazard: Not available
Ingestion: Corrosive to digestive tract. May cause severe pain, burning, vomiting and diarrhea. Lung aspiration may result in chemical pneumonitis, pulmonary edema, damage to lung tissue, and in extreme cases death.
Likely routes of exposure: Eyes, skin
Interactive effects: Not available

SECTION 12. ECOLOGICAL INFORMATION

Aquatic Effects:

96h LC-50 (Bluegill): 5.2 mg/L
96h EC-50 (invertebrates): Not determined
48h LC-50 (algae): Not determined
Aquatic toxicity: Very toxic to aquatic organisms. Avoid release to the environment. Collect spillage.

Biodegradability: Expected to be readily biodegradable
Bioaccumulation: No data available
Mobility: This product is soluble in water and may spread in water systems. Soil mobility not determined.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal of Wastes: Do not dump into sewers, on the ground or into any waterways. All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations.
Contaminated Packaging: Since emptied containers retain product residue, follow label warnings even after container is emptied. Do not cut, drill, grind or weld on or near the container.
RCRA: A waste containing this product may have the RCRA hazardous waste no. D002 (Corrosive) (40 CFR 261.22).

SECTION 14. TRANSPORT INFORMATION

United States DOT:

UN/ID No.: UN1760
Proper Shipping Name: Corrosive Liquid, n.o.s., (Potassium hydroxide, Sodium hypochlorite)
Hazard Class: 8
Packing Group: II
49 CFR §173.154 (b) (3) (Exemption): This product can ship as “Limited Quantity” in inner packaging not over 0.3 gallons. (Non Hazardous)

IATA and IMDG:

UN/ID No.: UN1760
Proper Shipping Name: Corrosive Liquid, n.o.s., (Potassium hydroxide, Sodium hypochlorite)
Hazard Class: 8
Packing Group: II
Marine Pollutant (IMDG Code): Listed - Chlorine
Transportation in bulk (IMDG - Annex II of MARPOL 73/78 and IBC Code): Not offered in bulk for transport overseas.

SECTION 15. REGULATORY INFORMATION

TSCA: All components of this product are on the TSCA inventory or are exempt from TSCA inventory requirements under 40 CFR 720.30.
SARA Section 302: The components of this product are either not regulated or regulated, but present in negligible concentrations.
SARA TITLE III Section 311/312:

Immediate (Acute) Health	Yes	Fire Hazard	No
Delayed (Chronic) Health	No	Reactive Hazard	Yes

SARA Title 313: This material does not contain any chemical components with known CAS numbers that exceed the De Minimis reporting levels (40 CFR 372).
CERCLA: Sodium Hypochlorite (CAS# 7681-52-9) has a reportable quantity of 100 lbs. at 100% concentration, however, this product is not considered a Hazardous Substance since the quantity does not equal or exceed the RQ in one package (49 CFR 171.8, definition of “Hazardous Substance”).
United States Right-To-Know: Sodium Hypochlorite CAS# 7681-52-9 – Illinois, New Jersey and North Dakota.
Proposition 65: This material does not contain any chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.
RCRA: A waste containing this product may have the RCRA hazardous waste no. D002 (Corrosive) (40 CFR 261.22).

SECTION 16. OTHER INFORMATION

Date Prepared: December 9, 2015 – SDS revised to meet GHS requirements.
Hazard Ratings (HMIS): Health 3, Flammability 0, Reactivity 2 (Scale 0 – 4). Personal Protection Rating to be supplied by user based on use conditions.
Product VOC: 0%
Carefully read all instructions on label before handling this product.
Keep out of reach of children.
"FOR INDUSTRIAL USE ONLY"

Abbreviation	Full Name/Explanation
ACGIH	American Conference of Government Industrial Hygienists
CAS	Chemical Abstract Service
CERCLA	Comprehensive Environmental Response Compensation and Liability Act
CNS	Central Nervous System
CFR	Code of Federal Regulations
DOT	Department of Transportation
EC	Effective Concentration
GHS	Globally Harmonized System
HMIS	Hazardous Material Information System
LC	Lethal Concentration
LD	Lethal Dose
NA	Not Applicable
ND	Not Determined
NE	Not Established
NIOSH	National Institute for Occupational Safety and Health
OSHA	Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
RCRA	Resource Conservation Recovery Act
SARA	Superfund Amendments and Reauthorization Act
STEL	Short-Term Exposure Limit
STOT	Specific Target Organ Toxicity
TLV	Threshold Limit Value
TSCA	Toxic Substance Control Act
VOC	Volitile Organic Compound

The information contained herein is based on data available to us and is believed to be correct. We make no warranty, however, expressed or implied regarding the accuracy of these data or the results obtained from the use thereof.
Regulatory Standards: DOT TITLE 49, Code of Federal Regulations 172.101: Parts 100 to 177, Revised 10/1/92.
SUPER FUND AMENDMENTS REAUTHORIZATION ACT OF 1986, TITLE III TOXIC SUBSTANCE CONTROL ACT LIST (TSCA)- INGREDIENTS LISTED. REGISTRY OF TOXIC EFFECTS OF CHEMICAL SUBSTANCES NATIONAL TOXICOLOGICAL PROGRAM (NTP) REPORT OF CARCINOGENS INTERNATIONAL AGENCY FOR RESEARCH ON CANCER (IARC) MONOGRAPHS, OCCUPATIONAL SAFETY & HEALTH REGULATIONS. CODE OF FED. REGS. FOOD & DRUG, 21 PARTS 170 to 199, Revised 4/1/91, 173.310.