



# MATERIAL SAFETY DATA SHEET

CWT-306A

Revision Date: 11/28/12

## SECTION 1 - COMPANY IDENTIFICATION

**Product Name:** CWT-306A  
**Company Name:** KML, Incorporated  
**Company Address:** P.O. Box 380  
 108 South Main Street  
 LaOtto, IN 46763-0380  
**Company Phone:** (800) 423-1879  
**Company FAX:** (260) 897-3433  
**Company Website:** www.kmlinc.com  
**24 Hour Emergency:** (800) 424-9300

Health	2
Flammability	1
Reactivity	1
Protection	C

## SECTION 2 - PRODUCT IDENTIFICATION

Primary Hazards	CAS #	% BY WT	ACGIH TLV	OSHA PEL
Sodium Hydroxide	1310-73-2	< 7.8%	2 mg/m3 (STEL) C	2 mg/m3 C
1-Hydroxyethylidene, diphosphonic acid	2809-21-4	< 5.1%		

\* All other components of this product are considered proprietary information.

## SECTION 3 - HAZARDS IDENTIFICATION

**Inhalation:** May cause irritation or corrosion of mucous membranes and the lungs. Exposed individuals should be monitored for respiratory distress, bronchitis or pneumonia.  
**Eyes:** Corrosive. Effects may range from moderate to severe (corrosion) depending on the length of exposure, solution concentration and first aid measures.  
**Skin:** Irritant to skin. Moderate to severe skin irritation depending on the length of exposure, solution strength and first aid measures.  
**Ingestion:** Ingestion is not expected to be a primary route of exposure. Expected effects would be severe burns and possible perforation of mucous membranes.  
**Chronic Effects:** The effects from chronic exposure to this product have not been fully evaluated.  
**Carcinogenicity:** IARC, NTP, and OSHA do not list product ingredients as carcinogenic.

## SECTION 4 - FIRST AID MEASURES

**Inhalation:** If exposure by inhalation is suspected, immediately move to fresh air. If individual experiences nausea, headache, dizziness, difficulty in breathing or is cyanotic, seek a health care professional immediately. If breathing stops, administer artificial respiration. If breathing is difficult, administer oxygen.  
**Eyes:** Do not rub eyes. With eyelids open, flush eyes immediately with water/saline for a minimum of 15 minutes. Take exposed individual to a health care professional.  
**Skin:** Remove contaminated clothing. Wash area with soap & water for 15 min. If irritation persists, get medical assistance. Wash contaminated clothing.  
**Ingestion:** DO NOT INDUCE VOMITING. Do not give anything by mouth to an unconscious, semi-comatose, comatose or convulsing person. First rinse mouth with copious amounts of water or milk. Irrigate the esophagus and dilute stomach contents by slowly giving one (1) to two (2) glasses of water or milk. Avoid giving alcohol or related products. In the case of intentional ingestion seek immediate medical assistance or contact the Poison Control Center; take to nearest medical facility. Note to Physicians: No specific antidote is known. Probable mucosal damage may contraindicate the use of gastric lavage. Treat symptoms.

## SECTION 5 - FIRE AND EXPLOSION HAZARD DATA

**Flash Point:** > 212 F  
**Method Used:** TCC  
**Flammable Limits:** Lower: N/A Upper: N/A  
**Extinguishing Media:** Water fog, foam, dry chemical, carbon dioxide.  
**Fire-Fighting Procedures:** Do not release runoff from fire control methods to sewers or waterways.  
**Hazardous Combustion Products:** Oxides of carbon, nitrogen or phosphorous.  
**Unusual Fire/Explosion Hazards:** Closed containers may rupture due to steam pressure if exposed to extreme heat. Use water spray to cool containers.  
**Fire-Fighting Equipment:** Self-contained breathing apparatus (SCBA) with a full face-piece operated in pressure-demand or positive-pressure mode. Full protective clothing.

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## SECTION 6 - ACCIDENTAL RELEASE MEASURES

**Small Spills:** Wear PPE. Neutralize small spills and residues with a dilute inorganic acid. Soak up with an absorbent material and place in an approved waste disposal container.  
**Large Spills:** For large spills sweep up or vacuum as much material as possible into a suitable labeled container for reuse or disposal. Do not release into sewers or waterways. Cleanup: Determine if waste containing this product may be handled by available industrial effluent system other on-site waste management unit. If off-site management is required, contact a licensed company experienced in industrial waste management. This product is not specifically listed in 40 CFR 261 as a RCRA hazardous waste. However, spill or leak residuals may meet the criteria of a characteristic hazardous waste under this Act. Empty containers contain product waste and should be disposed of in a proper manner.  
**Regulatory Requirements:** Follow applicable federal, state, and local regulations governing disposal of waste materials and OSHA regulations (29 CFR 1910.120).

## SECTION 7 - HANDLING AND STORAGE

**Handling:** Use proper PPE and wash thoroughly after handling. Eyewash and safety showers are recommended in the immediate work area. For industrial use only.  
**Storage:** This material is safe to store in well ventilated areas at ambient temperatures. Keep containers closed when not in use.

## SECTION 8 - CONTROL MEASURES

**Respiratory Protection:** Respiratory protection is required for work areas where misting may occur. If necessary, wear MSHA/NIOSH-approved respirator, following OSHA respirator regulations (29 CFR 1910.134).  
**Ventilation:** Provide general or local exhaust ventilation systems to maintain airborne concentrations below OSHA PELs (Sec. 2). Local exhaust ventilation is preferred because it prevents contaminant dispersion into the work area by controlling it at its source.  
**Protective Gloves:** Rubber, butyl, neoprene, or plastic gloves should be worn when using this material to avoid skin contact.  
**Eye Protection:** Wear protective eyeglasses or chemical safety goggles, per OSHA eye- and face-protection regulations (29 CFR 1910.133). Do not wear contact lenses.  
**Other Protective Equipment:** Not required under normal working conditions. End user must determine if the process or methods involved require other PPE.  
**Hygienic Practices:** Never eat, drink, or smoke in work areas. Practice good personal hygiene after using this material, especially before eating, drinking, smoking, using the toilet, or applying cosmetics. Do not wash contaminate clothing with street clothing.

**SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES**

<b>Physical State:</b>	Clear Liquid	<b>pH:</b>	11.0 - 13.0
<b>Appearance and Odor:</b>	Yellow to Lt. Amber - Slight Odor	<b>Water Solubility:</b>	Complete
<b>Vapor Density (Air=1):</b>	N/D	<b>Boiling Point:</b>	> 212 F
<b>Specific Gravity:</b>	1.09 - 1.11	<b>Evaporation Rate (BuAc=1):</b>	LT 1
<b>Freeze Point:</b>	32 F	<b>VOC (lbs/gal):</b>	N/A

**SECTION 10 - STABILITY AND REACTIVITY**

**Stability:** Product is stable at room temperature in closed containers under normal storage and handling conditions.

**Polymerization:** Hazardous polymerization cannot occur.

**Chemical Incompatibilities:** Strong acids and strong oxidizers.

**Conditions to Avoid:** Do not overheat containers.

**Hazardous Byproducts:** Thermal decomposition products may include: Oxides of carbon, nitrogen or phosphorous.

**SECTION 11 - TOXICOLOGICAL INFORMATION**

**Acute Effects:** Not tested. Expected to be toxic by ingestion. No dermal exposure toxicity expected.

**Irritant Effects:** Corrosive to eyes. Irritating to skin. Mist will irritate respiratory tract.

**Sensitization Effects:** Not tested. Not expected to cause sensitization.

**Carcinogenic Potential:** IARC, NTP, and OSHA do not list product ingredients as carcinogenic.

**Other Health Effects:** Chronic respiratory and skin problems may be aggravated by repeat exposure.

**SECTION 12 - ECOLOGICAL INFORMATION**

**Environmental Impact:** The environmental fate and ecological toxicity are not known.

**SECTION 13 - DISPOSAL CONSIDERATIONS**

**Disposal:** Material that cannot be used or chemically reprocessed and empty containers should be disposed of in accordance with all applicable regulations. Product containers should be thoroughly emptied before disposal. Generators of waste material are required to evaluate all waste for compliance with RCRA and any local disposal procedures and/or regulations. NOTE: State and local regulations may be more stringent than federal regulations. Empty Containers: Since empty containers retain material residues, all labeled hazard precautions must be observed.

**SECTION 14 - TRANSPORTATION INFORMATION**

**This material is regulated by the DOT?** Yes

**DOT Description from Hazardous Materials Table 49 CFR 172.101:** UN1760, Corrosive liquids, n.o.s., 8, III, (Contains sodium hydroxide)

**In Case of Transportation Emergency Call CHEMTREC:** (800) 424-9300

**SECTION 15 - REGULATORY INFORMATION**

<b>RCRA Hazardous Waste Number (40 CFR 261.33):</b>	No components of this product are listed or are above the de minimus levels.
<b>RCRA Hazardous Waste Classification (40 CFR 261):</b>	No components of this product are listed or are above the de minimus levels.
<b>CERCLA Hazardous Substance (40 CFR 302.4):</b>	Sodium Hydroxide,
<b>CERCLA Reportable Quantity (RQ):</b>	1,000 lbs - Sodium Hydroxide,
<b>SARA 312 Hazard Category:</b>	Immediate (Acute) Health Hazard
<b>SARA 313 Toxic Chemical:</b>	No components of this product are listed or are above the de minimus levels.
<b>SARA 302 Extremely Hazardous Substances List:</b>	No components of this product are listed or are above the de minimus levels.
<b>EPA Clean Air Act - Hazardous Air Pollutants:</b>	No components of this product are listed or are above the de minimus levels.

FDA (Food & Drug Administration)

**SECTION 16 - OTHER INFORMATION**

**Prepared By:** Ed Hodges **Date Prepared:** November 28, 2012 **Supersedes:** November 4, 2009

**Title:** General Manager

<u>ABBREVIATION</u>	<u>DEFINITION</u>	<u>ABBREVIATION</u>	<u>DEFINITION</u>
N/A	Not Applicable	TLV	Threshold Limit Value
N/E	Not Established	PEL	Personal Exposure Limit
N/D	Not Determined	STEL	Short Term Exposure Limit
UNK	Unknown	C	Ceiling Limit
EHS	Environmental, Health, and Safety Department	TCC	Tag Closed Cup
OSHA	Occupational Safety and Health Administration	PNOR	Particulates Not Otherwise Regulated
ACGIH	American Conference of Governmental Industrial Hygienists	PNOC	Particulates Not Otherwise Classified
IARC	International Agency for Research on Cancer	NTP	National Toxicology Program

**\* Please Note:** The Hazardous Material Information System (HMIS) is a voluntary, subjective alpha-numeric symbolic system for recommending hazard risk and personal protection equipment information. It is a subjective rating system based on the evaluator's understanding of the chemical associated risks. The end-user must determine if the code is appropriate for their use. The regulatory listings provided herein are not all inclusive of possible regulation affecting this material. It is the end-user's responsibility to determine all local, state, federal, or international regulation/restrictions that may apply.

**SECTION 17 - DISCLAIMER**

The information on this Material Safety Data Sheet reflects the latest information and data that we have on the hazards, properties, and handling of this product under the recommended conditions of use. Any use of this product or method of application which is not described in the Product Bulletin is the responsibility of the user. This Material Safety Data Sheet was prepared to comply with the OSHA Hazard Communication regulations.





# SAFETY DATA SHEET

KML-35

Revision Date: 5/2/12

## SECTION 1 - COMPANY IDENTIFICATION

**Product Name:** KML-35  
**Company Name:** KML, Incorporated  
**Company Address:** P.O. Box 380  
 108 South Main Street  
 LaOtto, IN 46763-0380

**Company Phone:** (800) 423-1879  
**Company FAX:** (260) 897-3433  
**Company Website:** www.kmlinc.com  
**24 Hour Emergency:** (800) 424-9300

<b>Health</b>	<b>3</b>
<b>Flammability</b>	<b>0</b>
<b>Reactivity</b>	<b>1</b>
<b>Protection</b>	<b>C</b>

## SECTION 2 - PRODUCT IDENTIFICATION

Primary Hazards	CAS #	% BY WT	ACGIH TLV	OSHA PEL
Sodium Hypochlorite	7681-52-9	< 10.0%	2 mg/m3 (STEL) C	2 mg/m3 C
Sodium Hydroxide	1310-73-2	< 10.0%		
Sodium Bromide	7647-15-6	< 4.0%		

\* All other components of this product are considered proprietary information.

## SECTION 3 - HAZARDS IDENTIFICATION

**Inhalation:** Irritating via inhalation in high concentrations to the eyes, nose, throat, and lungs. Do not breathe spray mists of the undiluted product. Effects will depend upon solution strength and length of time of exposure.

**Eyes:** Corrosive. Will cause eye burns and may cause permanent tissue damage.

**Skin:** May cause severe irritation or tissue damage depending on the length of exposure and the type of first aid administered.

**Ingestion:** Corrosive. Causes chemical burns to the mouth, Ingestion: throat, and stomach.

**Chronic Effects:** No data available.

**Carcinogenicity:** IARC, NTP, and OSHA do not list product ingredients as carcinogenic.

## SECTION 4 - FIRST AID MEASURES

**Inhalation:** Remove victim immediately from source of exposure. Provide rest, warmth, and fresh air. If breathing stops, provide artificial respiration. Get medical attention.

**Eyes:** Rinse the eye with water immediately. Continue to rinse for at least 15 minutes. Contact physician if irritation persists.

**Skin:** Remove contaminated clothing. Wash area with soap & water for 15 min. If irritation persists, get medical assistance. Wash contaminated clothing.

**Ingestion:** DO NOT INDUCE VOMITING. Do not give anything by mouth to an unconscious, semi-comatose, comatose or convulsing person. First rinse mouth with copious amounts of water. Irrigate the esophagus and dilute stomach contents by giving lots of water. Get immediate medical assistance or contact the Poison Control Center, take to nearest medical facility.

## SECTION 5 - FIRE AND EXPLOSION HAZARD DATA

**Flash Point:** Does Not Flash    **Method Used:** N/A    **Flammable Limits:** Lower: N/A    Upper: N/A

**Extinguishing Media:** Use extinguishing media suitable for surrounding materials.

**Fire-Fighting Procedures:** Closed containers exposed to extreme temperatures may rupture forcefully. If possible, cool containers to prevent sudden release of pressure build-up.

**Hazardous Combustion Products:** Toxic gases /vapors/ fumes of: Chlorine.

**Unusual Fire/Explosion Hazards:** Closed containers may rupture due to steam pressure if exposed to extreme heat. Use water spray to cool containers.

**Fire-Fighting Equipment:** Self-contained breathing apparatus (SCBA) with a full face-piece operated in pressure-demand or positive-pressure mode. Full protective clothing.

## SECTION 6 - ACCIDENTAL RELEASE MEASURES

**Small Spills:** WEAR PROPER PERSONAL PROTECTIVE EQUIPMENT. Absorb in vermiculite, dry sand or earth and place into containers.

**Large Spills:** Restrict access to area as appropriate until clean-up operations are complete. Wear protective clothing as described in section 8 of this safety data sheet. Absorb in vermiculite, dry sand or earth and place into containers. Containers with collected spillage must be properly labeled with correct contents and hazard symbol. Dispose of waste and residues in accordance with local authority requirements. Empty containers contain product waste and should be disposed of in a proper manner.

**Regulatory Requirements:** Follow applicable federal, state, and local regulations governing disposal of waste materials and OSHA regulations (29 CFR 1910.120).

## SECTION 7 - HANDLING AND STORAGE

**Handling:** Use proper PPE and wash thoroughly after handling. Eyewash and safety showers are recommended in the immediate work area. For industrial use only.

**Storage:** This material is safe to store in well ventilated areas at ambient temperatures. Keep containers closed when not in use. Keep out of direct sunlight.

## SECTION 8 - CONTROL MEASURES

**Respiratory Protection:** Respiratory protection is required for work areas where misting may occur. If necessary, wear MSHA/NIOSH-approved respirator, following OSHA respirator regulations (29 CFR 1910.134).

**Ventilation:** Provide general or local exhaust ventilation systems to maintain airborne concentrations below OSHA PELs (Sec. 2). Local exhaust ventilation is preferred because it prevents contaminant dispersion into the work area by controlling it at its source.

**Protective Gloves:** Rubber, butyl, neoprene, or plastic gloves should be worn when using this material to avoid skin contact.

**Eye Protection:** Wear protective face shield and eyeglasses or chemical safety goggles and face shield, per OSHA eye- and face-protection regulations (29 CFR 1910.133). Do not wear contact lenses. Appropriate eye protection must be worn instead of contact lenses.

**Other Protective Equipment:** Not required under normal working conditions. End user must determine if the process or methods involved require other PPE.

**Hygienic Practices:** Never eat, drink, or smoke in work areas. Practice good personal hygiene after using this material, especially before eating, drinking, smoking, using the toilet, or applying cosmetics. Do not wash contaminate clothing with street clothing.

*Requested*  
6/19/14

**SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES**

<b>Physical State:</b>	Clear Liquid	<b>pH:</b>	12.5 - 13.7
<b>Appearance and Odor:</b>	Yellow - Slight Chlorine Odor	<b>Water Solubility:</b>	Complete
<b>Vapor Density (Air=1):</b>	N/D	<b>Boiling Point:</b>	> 212 F
<b>Specific Gravity:</b>	1.20 - 1.30	<b>Evaporation Rate (BuAc=1):</b>	LT 1
<b>Freeze Point:</b>	32 F	<b>VOC (lbs/gal):</b>	N/D

**SECTION 10 - STABILITY AND REACTIVITY**

<b>Stability:</b>	Product is stable at room temperature in closed containers under normal storage and handling conditions.
<b>Polymerization:</b>	Hazardous polymerization cannot occur.
<b>Chemical Incompatibilities:</b>	Strong reducing agents and acids.
<b>Conditions to Avoid:</b>	Product should never be mixed with any amount of bleach. The resulting reaction is violently exothermic.
<b>Hazardous Byproducts:</b>	Thermal decomposition products may include: Toxic gases /vapors/ fumes of: Chlorine.

**SECTION 11 - TOXICOLOGICAL INFORMATION**

<b>Acute Effects:</b>	Oral (LD50) = >2500 mg/kg Albino Rat; Dermal (LD50) = >5000 mg/kg Albino Rat; Inhalation (LC50) = >2.13 mg/l Rat
<b>Irritant Effects:</b>	Corrosive. Will cause eye burns and may cause permanent tissue damage. Irritating via inhalation in high concentrations.
<b>Sensitization Effects:</b>	Not tested but not expected to be a sensitizer.
<b>Carcinogenic Potential:</b>	IARC, NTP, and OSHA do not list product ingredients as carcinogenic.
<b>Other Health Effects:</b>	None known.

**SECTION 12 - ECOLOGICAL INFORMATION**

<b>Environmental Impact:</b>	No information available.
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**SECTION 13 - DISPOSAL CONSIDERATIONS**

<b>Disposal:</b>	Material that cannot be used or chemically reprocessed and empty containers should be disposed of in accordance with all applicable regulations. Product containers should be thoroughly emptied before disposal. Generators of waste material are required to evaluate all waste for compliance with RCRA and any local disposal procedures and/or regulations. NOTE: State and local regulations may be more stringent than federal regulations. Empty Containers: Since empty containers retain material residues, all labeled hazard precautions must be observed.
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**SECTION 14 - TRANSPORTATION INFORMATION**

<b>This material is regulated by the DOT?</b>	Yes
<b>DOT Description from Hazardous Materials Table 49 CFR 172.101:</b>	UN1791, Hypochlorite solution., 8, II
<b>In Case of Transportation Emergency Call CHEMTREC:</b>	(800) 424-9300

**SECTION 15 - REGULATORY INFORMATION**

<b>RCRA Hazardous Waste Number (40 CFR 261.33):</b>	No components of this product are listed or are above the de minimus levels.
<b>RCRA Hazardous Waste Classification (40 CFR 261):</b>	No components of this product are listed or are above the de minimus levels.
<b>CERCLA Hazardous Substance (40 CFR 302.4):</b>	Sodium Hypochlorite, Sodium Hydroxide,
<b>CERCLA Reportable Quantity (RQ):</b>	100 lbs - Sodium Hypochlorite, 1,000 lbs - Sodium Hydroxide,
<b>SARA 312 Hazard Category:</b>	Immediate (Acute) Health Hazard
<b>SARA 313 Toxic Chemical:</b>	No components of this product are listed or are above the de minimus levels.
<b>SARA 302 Extremely Hazardous Substances List:</b>	No components of this product are listed or are above the de minimus levels.
<b>EPA Clean Air Act - Hazardous Air Pollutants:</b>	No components of this product are listed or are above the de minimus levels.

**FDA (Food & Drug Administration)** This product is not allowed for food contact uses.

**SECTION 16 - OTHER INFORMATION**

<b>Prepared By:</b>	Ed Hodges	<b>Date Prepared:</b>	May 2, 2012	<b>Supersedes:</b>	April 25, 2011
<b>Title:</b>	General Manager				

<b>ABBREVIATION</b>	<b>DEFINITION</b>	<b>ABBREVIATION</b>	<b>DEFINITION</b>
N/A	Not Applicable	TLV	Threshold Limit Value
N/E	Not Established	PEL	Personal Exposure Limit
N/D	Not Determined	STEL	Short Term Exposure Limit
UNK	Unknown	C	Ceiling Limit
EHS	Environmental, Health, and Safety Department	TCC	Tag Closed Cup
OSHA	Occupational Safety and Health Administration	PNOR	Particulates Not Otherwise Regulated
ACGIH	American Conference of Governmental Industrial Hygienists	PNOC	Particulates Not Otherwise Classified
IARC	International Agency for Research on Cancer	NTP	National Toxicology Program

**\* Please Note:** The Hazardous Material Information System (HMIS) is a voluntary, subjective alpha-numeric symbolic system for recommending hazard risk and personal protection equipment information. It is a subjective rating system based on the evaluator's understanding of the chemical associated risks. The end-user must determine if the code is appropriate for their use. The regulatory listings provided herein are not all inclusive of possible regulation affecting this material. It is the end-user's responsibility to determine all local, state, federal, or international regulation/restrictions that may apply.

**SECTION 17 - DISCLAIMER**

The information on this Material Safety Data Sheet reflects the latest information and data that we have on the hazards, properties, and handling of this product under the recommended conditions of use. Any use of this product or method of application which is not described in the Product Bulletin is the responsibility of the user. This Material Safety Data Sheet was prepared to comply with the OSHA Hazard Communication regulations.



# MATERIAL SAFETY DATA SHEET

BWT-22

Revision Date: 2/6/12

## SECTION 1 - COMPANY IDENTIFICATION

**Product Name:** BWT-22  
**Company Name:** KML, Incorporated  
**Company Address:** P.O. Box 380  
 108 South Main Street  
 LaOtto, IN 46763-0380

**Company Phone:** (800) 423-1879  
**Company FAX:** (260) 897-3433  
**Company Website:** www.kmlinc.com  
**24 Hour Emergency:** (800) 424-9300

Health	2
Flammability	1
Reactivity	1
Protection	C

## SECTION 2 - PRODUCT IDENTIFICATION

Primary Hazards	CAS #	% BY WT	ACGIH TLV	OSHA PEL
Sodium Nitrite	7632-00-0	< 17.6%		
Sodium Hydroxide	1310-73-2	< 4.1%	2 mg/m3 (STEL) C	2 mg/m3 C
Sodium Tetraborate Decahydrate	1303-96-4	< 4.9%	5 mg/m3 (TWA)	

\* All other components of this product are considered proprietary information.

## SECTION 3 - HAZARDS IDENTIFICATION

**Inhalation:** Inhalation of mist may cause irritation or corrosion of respiratory tract. Product is a severe irritant to mucous membranes. Large amounts may cause systemic effects (see ingestion).

**Eyes:** Corrosive. Effects may range from moderate to severe (corrosion) depending on the length of exposure, solution concentration and first aid measures.

**Skin:** Irritant. Irritation will depend on solution strength, length of exposure and first aid measures.

**Ingestion:** Not expected to be a primary route of exposure. Intentional ingestion may lead to drop in blood pressure, collapse, coma and possibly death.

**Chronic Effects:** The effects from chronic exposure to this product have not been fully evaluated.

**Carcinogenicity:** IARC, NTP, and OSHA do not list product ingredients as carcinogenic.

## SECTION 4 - FIRST AID MEASURES

**Inhalation:** If exposure by inhalation is suspected, immediately move to fresh air. If individual experiences nausea, headache, dizziness, difficulty in breathing or is cyanotic, seek a health care professional immediately. If breathing stops, administer artificial respiration. If breathing is difficult, administer oxygen.

**Eyes:** Do not rub eyes. With eyelids open, flush eyes immediately with water for 15 minutes. Take exposed individual to a health care professional.

**Skin:** Remove contaminated clothing and footwear. Wash thoroughly with soap and water, and do not reuse clothing until properly cleaned.

**Ingestion:** DO NOT INDUCE VOMITING. Do not give anything by mouth to an unconscious, semi-comatose, comatose or convulsing person. First rinse mouth with copious amounts of water or milk. Irrigate the esophagus and dilute stomach contents by slowly giving one (1) to two (2) glasses of water or milk. Avoid giving alcohol or related products. In the case of intentional ingestion seek immediate medical assistance or contact the Poison Control Center; take to nearest medical facility. After first aid, get appropriate in-plant, paramedic, or community medical support. Note to Physicians: No specific antidote is known. Probable mucosal damage may contraindicate the use of gastric lavage. Treat symptoms.

## SECTION 5 - FIRE AND EXPLOSION HAZARD DATA

**Flash Point:** N/A      **Method Used:** N/A      **Flammable Limits:** Lower: N/A      Upper: N/A

**Extinguishing Media:** Use water fog, carbon dioxide, dry chemicals, or foam.

**Fire-Fighting Procedures:** Use water spray to cool containers to prevent rupture. If spill is ignited, use water spray to disperse vapors. Water may be used to flush spills away from a fire and dilute spills. Do not flush into a storm drain or public sewer.

**Hazardous Combustion Products:** Oxides of carbon and nitrogen. Hydrogen cyanide is possible in reducing atmospheres.

**Unusual Fire/Explosion Hazards:** Closed containers may rupture due to steam pressure build-up if exposed to extreme heat.

**Fire-Fighting Equipment:** Self-contained breathing apparatus (SCBA) with a full face-piece operated in pressure-demand or positive-pressure mode. Full protective clothing.

## SECTION 6 - ACCIDENTAL RELEASE MEASURES

**Small Spills:** WEAR PROPER PERSONAL PROTECTIVE EQUIPMENT. Soak up with an absorbent material and place in an approved waste disposal container.

**Large Spills:** Containment: For large spills, contain spill by diking with inert material. If practical, transfer to labeled container for reuse or disposal. Otherwise, solidify spill with absorbent material or sand. Cleanup: Determine if waste containing this product may be handled by available industrial effluent system other on-site waste management unit. If off-site management is required, contact a licensed company experienced in industrial waste management. This product is not specifically listed in 40 CFR 261 as a RCRA hazardous waste. However, spill or leak residuals may meet the criteria of a characteristic hazardous waste under Subpart A of Part 261. Contact your state or local environmental agency for more information.

**Regulatory Requirements:** Follow applicable OSHA regulations (29 CFR 1910.120).

## SECTION 7 - HANDLING AND STORAGE

**Handling:** Use proper PPE and wash thoroughly after handling. Eyewash and safety showers are recommended in the immediate work area. For industrial use only.

**Storage:** This material is safe to store in well ventilated areas at ambient temperatures. Keep containers closed when not in use. Protect product from freezing.

## SECTION 8 - CONTROL MEASURES

**Respiratory Protection:** Respiratory protection is required for work areas where misting may occur. If necessary, wear MSHA/NIOSH-approved respirator, following OSHA respirator regulations (29 CFR 1910.134).

**Ventilation:** Provide general or local exhaust ventilation systems to maintain airborne concentrations below OSHA PELs (Sec. 2). Local exhaust ventilation is preferred because it prevents contaminant dispersion into the work area by controlling it at its source.

**Protective Gloves:** Rubber, butyl, neoprene, or plastic gloves should be worn when using this material to avoid skin contact.

**Eye Protection:** Wear protective eyeglasses or chemical safety goggles, per OSHA eye- and face-protection regulations (29 CFR 1910.133). Do not wear contact lenses. Appropriate eye protection must be worn instead of contact lenses.

**Other Protective Equipment:** Not required under normal working conditions. End user must determine if the process or methods involved require other PPE.

**Hygienic Practices:** Never eat, drink, or smoke in work areas. Practice good personal hygiene after using this material, especially before eating, drinking, smoking, using the toilet, or applying cosmetics.

Requested  
2/11/12  
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**SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES**

<b>Physical State:</b>	Slightly Hazy Liquid	<b>pH:</b>	12.0 - 14.0
<b>Appearance and Odor:</b>	Lt Yellow to Amber - Nearly Odorless	<b>Water Solubility:</b>	Miscible
<b>Vapor Density (Air=1):</b>	N/D	<b>Boiling Point:</b>	212 F
<b>Specific Gravity:</b>	1.11 - 1.13	<b>Evaporation Rate (BuAc=1):</b>	< 1
<b>Freeze Point:</b>	-3 C	<b>VOC (lbs/gal):</b>	N/D but expected to be zero

**SECTION 10 - STABILITY AND REACTIVITY**

**Stability:** Product is stable at room temperature in closed containers under normal storage and handling conditions.

**Polymerization:** Hazardous polymerization cannot occur.

**Chemical Incompatibilities:** Strong acids, strong oxidizers, amines, ammonium salts, combustible materials, cyanides, reducing agents, especially thiocyanates and thiosulfates.

**Conditions to Avoid:** Do not overheat containers. Temperatures above 320oC will produce toxic oxides of nitrogen, which are also oxidizers.

**Hazardous Byproducts:** Thermal decomposition products may include: Oxides of carbon and nitrogen. Hydrogen cyanide is possible in reducing atmospheres.

**SECTION 11 - TOXICOLOGICAL INFORMATION**

**Acute Effects:** Product not tested. Toxic by ingestion and inhalation of mist. TDLO Human: 14mg/kg (sodium nitrite), LDLO Man: 709 mg/kg (sodium tetraborate)

**Irritant Effects:** Corrosive to eyes. Irritating to skin.

**Sensitization Effects:** Not tested, but not expected.

**Carcinogenic Potential:** IARC, NTP, and OSHA do not list product ingredients as carcinogenic.

**Other Health Effects:** Pre-existing skin problems may be aggravated by repeated or prolonged exposure.

**SECTION 12 - ECOLOGICAL INFORMATION**

**Environmental Impact:** The environmental fate and ecological toxicity are not known.

**SECTION 13 - DISPOSAL CONSIDERATIONS**

**Disposal:** Material that cannot be used or chemically reprocessed and empty containers should be disposed of in accordance with all applicable regulations. Product containers should be thoroughly emptied before disposal. Generators of waste material are required to evaluate all waste for compliance with RCRA and any local disposal procedures and/or regulations. NOTE: State and local regulations may be more stringent than federal regulations. Empty Containers: Since empty containers retain material residues, all labeled hazard precautions must be observed.

**SECTION 14 - TRANSPORTATION INFORMATION**

**This material is regulated by the DOT?** Yes

**DOT Description from Hazardous Materials Table 49 CFR 172.101:** UN3219, Nitrites, inorganic, aqueous solution, n.o.s., 5.1, III, (Contains sodium nitrite)

**In Case of Transportation Emergency Call CHEMTREC:** (800) 424-9300

**SECTION 15 - REGULATORY INFORMATION**

<b>RCRA Hazardous Waste Number (40 CFR 261.33):</b>	No components of this product are listed or are above the de minimus levels.
<b>RCRA Hazardous Waste Classification (40 CFR 261):</b>	No components of this product are listed or are above the de minimus levels.
<b>CERCLA Hazardous Substance (40 CFR 302.4):</b>	Sodium Nitrite, Sodium Hydroxide,
<b>CERCLA Reportable Quantity (RQ):</b>	100 lbs - Sodium Nitrite, 1,000 lbs - Sodium Hydroxide,
<b>SARA 312 Hazard Category:</b>	Immediate (Acute) Health Hazard
<b>SARA 313 Toxic Chemical:</b>	Sodium Nitrite,
<b>SARA 302 Extremely Hazardous Substances List:</b>	No components of this product are listed or are above the de minimus levels.
<b>EPA Clean Air Act - Hazardous Air Pollutants:</b>	No components of this product are listed or are above the de minimus levels.

**FDA (Food & Drug Administration)** Please contact KML for more information.

**SECTION 16 - OTHER INFORMATION**

**Prepared By:** Ed Hodges **Date Prepared:** February 6, 2012 **Supersedes:** March 27, 2006

**Title:** General Manager

ABBREVIATION	DEFINITION	ABBREVIATION	DEFINITION
N/A	Not Applicable	TLV	Threshold Limit Value
N/E	Not Established	PEL	Personal Exposure Limit
N/D	Not Determined	STEL	Short Term Exposure Limit
UNK	Unknown	C	Ceiling Limit
EHS	Environmental, Health, and Safety Department	TCC	Tag Closed Cup
OSHA	Occupational Safety and Health Administration	PNOR	Particulates Not Otherwise Regulated
ACGIH	American Conference of Governmental Industrial Hygienists	PNOC	Particulates Not Otherwise Classified
IARC	International Agency for Research on Cancer	NTP	National Toxicology Program

**\* Please Note:** The Hazardous Material Information System (HMIS) is a voluntary, subjective alpha-numeric symbolic system for recommending hazard risk and personal protection equipment information. It is a subjective rating system based on the evaluator's understanding of the chemical associated risks. The end-user must determine if the code is appropriate for their use. The regulatory listings provided herein are not all inclusive of possible regulation affecting this material. It is the end-user's responsibility to determine all local, state, federal, or international regulation/restrictions that may apply.

**SECTION 17 - DISCLAIMER**

The information on this Material Safety Data Sheet reflects the latest information and data that we have on the hazards, properties, and handling of this product under the recommended conditions of use. Any use of this product or method of application which is not described in the Product Bulletin is the responsibility of the user. This Material Safety Data Sheet was prepared to comply with the OSHA Hazard Communication regulations.