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SAFETY DATA SHEET

Product Name : ChemWorld ALK AL

Date Issued : June 4, 2015

SECTION 1 : PRODUCT AND COMPANY IDENTIFICATION

Product Name: ChemWorld ALK AL
Formula : Multi-component mixture

Chemical Synonym / C# : c650
Chemical Family: Mild alkaline detergent

Supplier : ChemWorld.com 885 Woodstock Road, Ste 430-111 Rosewell, GA 30075
Information Telephone : (800)658-7716 or **Emergency Telephone :** 1-855-347-8203

SECTION 2 : HAZARD IDENTIFICATION

Form : Powder **Color :** White

Emergency Overview : Solutions and powders are severe eye irritants, and prolonged or repeated contact may cause skin irritation. Dusts and mists are irritating to the skin, mucous membranes, and upper respiratory tract. Read the entire SDS for a more thorough evaluation of the hazards.

OSHA Hazard Communication Standard : This product has been evaluated and classified as defined by OSHA Hazard Communication Standard, 29CFR 1910.1200.

GHS Classification :

- Eye Irritant (Category 2A)
- Acute toxicity (Category 5, oral and dermal)
- Acute toxicity (Category 4, Inhalation, dust)

Label Elements :

Signal Word : Warning



GHS Hazard Pictograms :

Exclamation Mark

Hazard Statements :

- H319: Causes serious eye irritation.
- H303: May be harmful if swallowed.
- H313: May be harmful in contact with skin.
- H332: Harmful if inhaled (dust).

Precautionary Statements :

- P260 Do not breathe dust/fume/gas/mist/vapors/spray.
- P262 Do not get in eyes, on skin, or on clothing.
- P264 Wash hands thoroughly after handling.
- P270 Do not eat, drink or smoke when using this product.
- P280 Wear eye protection/face protection.
- 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.
- P301 + P330 + P331 + P310 : IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor/physician.
- P303 + P361 + P353 IF ON SKIN (or hair): Remove/Take off Immediately all contaminated clothing. Rinse SKIN with water/shower.
- P333 + P313 IF SKIN irritation or rash occurs: Get medical advice/attention.
- P304 + P341 IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
- P342 + P313 : If experiencing respiratory symptoms: Get medical advice/attention.

Other hazards which do not result in classification :

None known. See Section 11 for Potential Health Hazards

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SECTION 3 : COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous Ingredient(s)	CAS #	% (w/w)
Sodium Tetraborate Decahydrate	1303-96-4	20 - 40
Sodium Carbonate	497-19-8	30 - 50
Sodium Tripolyphosphate	7758-29-4	1 - 10
Diethylene glycol n-butyl ether	112-34-5	1 - 5

Unlisted components are considered non-hazardous as per 29CFR1910.1200g2C. See section 15 for specific state right-to-know information if applicable.

SECTION 4 : FIRST AID MEASURES

Inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Ingestion: Rinse mouth with water. If swallowed, DO NOT INDUCE VOMITING. Give large quantities of water. Never give anything by mouth to an unconscious person. Get medical attention immediately.

Skin Contact: Immediately flush skin with plenty of soap and water for at least 15 minutes. Remove contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.

Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

Note to Physician: Consider endoscopy in all suspected cases of sodium carbonate poisoning. Perform blood analysis to determine if dehydration, acidosis, or other electrolyte imbalances occurred.

SECTION 5 : FIRE FIGHTING MEASURES

Extinguishing Media: None required.

Fire Fighting Procedures: Not considered to be a fire hazard. Use caution when fighting any fire. Adequate respiratory protection is essential.

Unusual Fire and Explosion Hazards: Not considered an explosion hazard, but sodium carbonate may explode when applied to red-hot aluminum. Upon combustion: CO and CO₂ are formed. Reacts on exposure to water (moisture) with (some) metals.

SECTION 6 : ACCIDENTAL RELEASE MEASURES

Personal precautions :

Steps to be taken in case material is released or spilled:

Small or Large Spills: Stop leak at source and contain spill with dike made of inert material such as sand or diatomaceous earth. Prevent dust cloud formation. Knock down/dilute dust cloud with water spray. Sweep material to suitable container for possible reuse or disposal. Vacuuming or wet sweeping may be used to avoid dust dispersal. Violent exothermic reaction with (some) acids: release of harmful gases/vapours (carbon dioxide). Carbon dioxide is heavier than air and will collect in ducts, drains and low lying areas.

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SECTION 7 : HANDLING AND STORAGE

Handling: Avoid raising dust. Keep away from naked flames/heat. Observe normal hygiene standards. Handle with care. Wash thoroughly after handling. Launder contaminated clothing before reuse.

Storage Requirements: Keep container closed and stored in a cool, dry, ventilated area. Protect against physical damage. Isolate from incompatible substances. Keep away from heat sources, (strong) acids, metals, water/moisture. Containers of this material may be hazardous when empty since they retain product residues (dust, solids); observe all warnings and precautions listed for the product. Do not store in aluminum or zinc containers. Maintain eye wash fountain and quick-drench facilities in work area. For Industrial and commercial use only!

SECTION 8 : EXPOSURE CONTROLS / PERSONAL PROTECTION

Hazardous Ingredient	ACGIH TLV (mg/m3) TWA	ACGIH TLV (mg/m3) STEL
Sodium Tetraborate Decahydrate	5	-
Sodium Carbonate	-	-
Sodium Tripolyphosphate	-	-
Diethylene glycol n-butyl ether	-	-

Engineering measures :

Ventilation / Local Exhaust : A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area.

Ventilation / Mechanical Recommendations: If necessary.

Personal protective equipment :

Respiratory Protection: Dust production: dust mask with filter type P1. For conditions of use where exposure to the dust or mist is apparent, a half-face dust/mist respirator may be worn. For emergencies or instances where the exposure levels are not known, use a full-face positive-pressure, air-supplied respirator. WARNING: Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.

Skin Protection: Wear vinyl or rubber protective gloves and clean body-covering clothing.

Eye Protection: Use chemical safety goggles and/or full face shield where dusting or splashing of solutions is possible.

Other Protective Equipment: Vinyl apron (optional).

SECTION 9 : PHYSICAL AND CHEMICAL PROPERTIES

Appearance / Odor: White granular powder, odor nil.

Water Solubility: Complete

Specific Gravity: N/A

Evaporation Rate(water=1): N/A

Vapor Density(air=1) : N/A

Flash Point : N/A

Flammable Limits: LEL = N/A **UEL =** N/A

pH (1%): 9 - 10

Boiling Point (°F) : N/A

% Volatile: N/A

Vapor Pressure(mmHg): N/A

Flash Point Method Used: N/A

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SECTION 10 : STABILITY AND REACTIVITY

Hazardous Decomposition Products: Violent exothermic reaction with (some) acids: release of harmful gases/vapours (carbon dioxide). Upon combustion: CO and CO₂ are formed.

Chemical Stability: Hygroscopic.

Conditions to Avoid: Avoid raising dust. Keep away from naked flames/heat.

Incompatibility with other Substances: (strong) acids, metals, water/moisture, aluminium, zinc.

Possibility of Hazardous Reactions: Reacts on exposure to water (moisture) with (some) metals. Violent exothermic reaction with (some) metals. Reacts with (strong) oxidizers.

Hazardous Polymerization: Will not occur.

SECTION 11 : TOXICOLOGICAL INFORMATION

Potential Health Hazards (as mild alkaline blend) :

Inhalation: Inhalation of mists or dusts may cause irritation to respiratory tract. Symptoms from excessive inhalation or of concentrated product may include gasping or coughing and difficulty breathing. Excessive contact may cause damage to the nasal septum.

Skin Contact: May cause mild irritation. Concentrated or prolonged contact may cause irritation with redness and blistering.

Eye Contact: May cause mild irritation. Concentrated or prolonged contact may cause conjunctival edema and corneal destruction.

Ingestion: Swallowing may produce gastrointestinal upset. Symptoms from ingestion of large doses may include severe abdominal pain, vomiting, and diarrhea.

Toxicological Data (for sodium tetraborate decahydrate):

LD50 (oral, rat) = 4500 - 5000 mg/kg

LD50 (skin, rabbit) = > 10,000 mg/kg Sodium tetraborate decahydrate is not absorbed through intact skin.

Toxicological Data (as Sodium Carbonate):

Oral LD50 (rat) = 2800 mg/kg

Dermal LD50 = >2000 mg/kg (rabbit)

Inhalation LC50 (rat, 2 hr) = 2.3 mg/l

Toxicokinetics (as Sodium Carbonate): summary

Toxicokinetics (absorption, metabolism, distribution and elimination)

The toxicokinetics of sodium carbonate are well understood. When sodium carbonate comes into contact with body fluids it will dissociate into carbonate and sodium. The carbonate could potentially increase the pH of the blood.

The major extracellular buffer in the blood and the interstitial fluid of vertebrates is the bicarbonate buffer system, described by the following equation: $H_2O + CO_2 \rightleftharpoons H_2CO_3 \rightleftharpoons H^+ + HCO_3^-$

Carbon dioxide from the tissues diffuses rapidly into red blood cells, where it is hydrated with water to form carbonic acid. This reaction is accelerated by carbonic anhydrase, an enzyme present in high concentrations in red blood cells. The carbonic acid formed dissociates into bicarbonate and hydrogen ions.

Most of the bicarbonate ions diffuse into the plasma. Since the ratio of H₂CO₃ to dissolved CO₂ is constant at equilibrium, pH may be expressed in terms of bicarbonate ion concentration and partial pressure of CO₂ by means of the Henderson-Hasselbach equation:

$pH = pK + \log [HCO_3^-]/aPCO_2$

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Toxicokinetics (as Sodium Carbonate) : summary, continued

The blood plasma of man normally has a pH of 7.40. Should the pH fall below 7.0 or rise above 7.8, irreversible damage may occur. Compensatory mechanisms for acid-base disturbances function to alter the ratio of HCO₃ to PCO₂, returning the pH of the blood to normal. Thus, metabolic acidosis may be compensated for by hyperventilation and increased renal absorption of HCO₃. Metabolic alkalosis may be compensated for by hypoventilation and the excess of HCO₃⁻ in the urine (Johnson and Swanson, 1987). Renal mechanisms are usually sufficient to restore the acid-base balance (McEvoy, 1994). The uptake of sodium, via exposure to sodium carbonate, is much less than the uptake of sodium via food. Therefore, sodium carbonate is not expected to be systemically available in the body. Furthermore it should be realised that an oral uptake of sodium carbonate will result in a neutralisation in the stomach due to the gastric acid.

Toxicological Data (as Sodium Tripolyphosphate) :

Acute Dermal LD50 : Not available

Oral LD50 (rat) = 4100 mg/kg

Inhalation LC50 : Not available

Toxicological Data (as Diethylene glycol n-butyl ether) :

Skin : LD50 (rabbits) = 4000 mg/kg

Ingestion : oral LD50 (rats) = 5660 mg/kg

Carcinogenicity: This product does not contain any materials considered to be carcinogenous according to OSHA, NTP, IARC, or ACGIH.

SECTION 12 : ECOLOGICAL INFORMATION

Exotoxicological Information: No data found for the blended product.

Exotoxicological Information (for sodium tetraborate decahydrate):

phytotoxicity :Although boron is an essential micronutrient for healthy growth of plants, it can be harmful to boron-sensitive plants in higher quantities.

fish toxicity : LC50 (coho salmon, 96hr) = 40mg B/L in seawater

LC50 (rainbow trout, 24 day) = 150.0 mg B/L in fresh water.

NOEC-LOEC (rainbow trout, 36 day) = 0.75 - 1 mg B/L

invertebrate toxicity : LC50 (Daphnids, 48 hr) = 133 mg B/L

NOEC-LOEC (daphnids, 21 day) = 6 - 13 mg B/L

Environmental Effects : No information found for sodium tetraborate decahydrate.

Persistence and Degradation : Boron is naturally occurring and ubiquitous in the environment. Sodium tetraborate decahydrate decomposes in the environment to natural borate.

Note : Boron (B) is the element in sodium tetraborate decahydrate which is used to characterize borate product ecological effects. To convert sodium tetraborate decahydrate data to Boron (B), multiply by 0.1134.

Ecological Information (as Sodium Carbonate) :

Acute toxicity fishes = 300 mg/l (LC50, 96hr, Lepomis macrochirus)

Acute toxicity invertebrates = 200 - 227 mg/l (EC50, 48hr, Ceriodaphnia sp.)

Toxicity algae and other aquatic plants = 242 mg/l (EC50, 5 days, Algae)

Persistence and degradability: N/A

Bioaccumulative potential: Low potential for bioaccumulation (Log Kow < 4)

Ecological Information (as Sodium Tripolyphosphate) : No data.

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Exotoxicological Information (as Diethylene glycol n-butyl ether) :

Movement & Partitioning : Bioconcentration potential is low (BCF < 100 or Log Pow < 3). Log octanol/water partition coefficient (log Pow) is 0.56. Potential for mobility in soil is high (Koc between 50 and 150). Log soil organic carbon partition coefficient (log Koc) is estimated to be 1.52E-9 atm.m³/mol.

Degradation & Persistence : Biodegradation under aerobic static laboratory conditions is high (BOD₂₀ or BOD₂₈/ThOD greater than 40%). Degradation is expected in the atmospheric environment within minutes to hours. Biochemical oxygen demand : 5 day = 0.05 p/p; 10 day = 0.39 p/p; 20 day = 1.08 p/p. ThOD (theoretical Oxygen Demand) is calculated to be 2.17 p/p. Biodegradation rate may increase in soil and/or water with acclimation.

Ecotoxicity : Material is practically non-toxic to aquatic organisms on an acute basis (LC₅₀ > 100 mg/l in most sensitive species).

SECTION 13 : DISPOSAL CONSIDERATIONS

Waste Disposal Method: Recycle, recovery and reuse of materials, where permitted, is encouraged as an alternate to disposal as a waste. Hazardous waste classification under federal regulations (40 CFR Part 261 et seq) is dependent upon whether a material is a RCRA listed hazardous waste or has any of the four RCRA hazardous waste characteristics. Refer to 40 CFR Part 261.33 to determine if a given material to be disposed of is a RCRA listed hazardous waste. RCRA Hazardous Waste Characteristics: There are four characteristics defined in 40 CFR Section 261.21-61.24: *Ignitability, Corrosivity, Reactivity, and Toxicity*. To determine Ignitability, see Section 9 of this SDS (flash point). For Corrosivity, see Sections 9 and 14 (pH and DOT corrosivity). For Reactivity, see Section 10 (incompatible materials). For Toxicity, see Section 2 (composition). Federal regulations are subject to change. State and local requirements, which may differ from or be more stringent than the federal regulations, may also apply to the classification of the material if it is to be disposed.

Is the unused product a RCRA hazardous waste (40CFR261.33) if discarded?

If yes, the RCRA ID number is :

SECTION 14 : TRANSPORTATION INFORMATION

Transportation Emergency Telephone Number: 3E 24 hour number : (855) 347-8203

UN Number / DOT Proper Shipping Name / DOT Hazard Class /Packing Group / DOT Label & other information: NOT REGULATED BY DOT (mildly alkaline compound cleaning powder NOIBN)

SECTION 15 : REGULATORY INFORMATION

US FEDERAL REGULATIONS :

TSCA (Toxic Substances Control Act) Status : TSCA (United States) The intentional ingredients of this product are listed.

CERCLA RQ - 40 CFR 302.4(a) :

<u>Component</u>	<u>RQ (lbs)</u>
none	

Spills or releases resulting in the loss of any ingredient at or above its RQ requires immediate notification to the National Response Center (800) 424-8802 and to your Local Emergency Planning Committee.

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SARA 302 Components - 40 CFR 355 Appendix A

Section 302 Component(s) TPQ (lbs) RQ (lbs)

none

SARA 311/312 Classification - 40 CFR 370.2 :

acute

SARA 313 Components - 40 CFR 372.65:

<u>Section 313 Component(s)</u>	<u>CAS #</u>	<u>%</u>
Glycol Ether	None	1 - 5

INTERNATIONAL REGULATIONS :

Sodium Carbonate is listed on the following inventories : EC, Japan, Australia, Korea, Canada (DSL), Philippines.

STATE REGULATIONS :

California Safe Drinking Water Act (Prop. 65) Listing : Not listed

Other Regulations / Legislation which apply to this product:

(as glycol ethers) : Pennsylvania (Worker & Community Right To Know Act), Pennsylvania Hazardous Substances List and/or Pennsylvania Environmental Hazardous Substance List.

SECTION 16 : OTHER INFORMATION

NFPA Rating : HEALTH: 2 FLAMMABILITY: 0 REACTIVITY: 0

NFPA hazard degree designation 704: 4 = extreme, 3 = high, 2 = moderate, 1 = slight, 0 = none.

Revision Date : 6/4/2015

Information and data compiled to compose this SDS is correct to the best of our knowledge as of the printed date, and is offered solely for your consideration, investigation, and verification.