Safety Data Sheet:

KL-7

Date of issue: 1 Nov 2020

Version: 1

1. Product and Company Identification

Product Name	:KL-7, AOP, H2O-360
Synonym	:Mineral Oxychloride, Mineral Oxychloride Hydrate, liquid ozone,
Supplier	: ARANA Group, LLC, 1001 Waldron Rd. Corpus Christi, Texas 78418
Manufacturer	: ARANA Group LLC, 1001 Waldron RD., Corpus Christi, Texas 78418
Emergency	: (361) 945-5211
Technical support	: (361) 945-5211
Product Code	: KL-7
Product Use	: Water/Waste water disinfectant, Produce/ Agriculture disinfectant, Industrial Stream oxidant, coagulant aid.
Physical description	: Lavender

2. Hazards Identification

Physical Hazards : CORROSIVE TO METALS

Emergency overview : DANGER

STRONG OXIDIZER. CONTACT WITH OTHER CHEMICALS MAY CAUSE LIBERATION OF HAZARDOUS GASSES. DO NOT MIX WITH OTHER CHEMICALS. Combination with acids, organic matter, cleaning chemicals, petroleum or paint products mat start chemical reaction with liberations of hazardous gasses.

CAUSES EYE BURNS. CAUSE RESPIRATORY TRACT IRRITATION. HARMFUL IF INHALED. HARMFUL IF SWALLOWED.

Keep away from heat, flame, direct sunlight, and other sources of heat. Keep away from incompatible materials. Do not swallow. Do not get in eyes or clothing. Use only in with adequate ventilation. Keep container closed. If possible, isolate container in well ventilated area. Wash thoroughly after handling.

Potential acute health effects

Inhalation	: Harmful if inhaled. Severely irritating to respiratory system.
Ingestion	: Harmful if swallowed. May cause burns to mouth, throat and stomach.
Skin	: May be irritating to the skin. May cause skin dryness.
Eyes	: Is mildly irritating to the eyes. Causes iridic irritation and conjunctival irritation.

Over Exposure Signs

Inhalation	: Adverse symptoms may include respiratory tract irritation, coughing, breathing difficulty or shortness of breath.
Ingestion	: Adverse symptoms may include stomach pains, nausea or vomiting.
Skin	: Adverse symptoms may include skin dryness, redness or skin irritation.
Eyes	: Adverse symptoms may include watering, redness or pain.

Medical conditions aggravated by over-exposure

: Pre-existing disorders involving any target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product.

This Material Data Sheet has been prepared in accordance with Canada's Workplace Hazardous Materials Information System (WHMIS) and the OSHA Hazard Communication Standard (29 CFR 1910.1200).

See Toxicology information (section 11)

3. Composition/information on ingredients

Name	CAS number	%
Sodium Hypochlorite	7681-52-9	10.5
Other		Balance

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as to hazardous to health or to the environment and hence require reporting in this section.

4. First Aid Measures

If ingestion, irritation, any type of over-exposure or symptoms of over-exposure during or persists after use of this product, contact a POISON CONTROL CENTER, EMERGENCY ROOM OR PHYSICIAN immediately; have Material Data Sheet information available. Never give anything by mouth to an unconscious or convulsing person.

Eye Contact : Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Continue rinsing until medical attention can be obtained.

Skin Contact : In case of contact, flush skin with water. Remove contaminated clothing and shoes.

Inhalation : Remove to fresh air. Keep person warm and at rest. If breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. If not breathing, provide artificial respiration and get medical attention.

Ingestion : If swallowed, seek medical advice immediately and show this container label. Keep person warm and at rest. Do not induce vomiting. Get medical attention immediately.

Notes to Physician : No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately of large quantities have been ingested or inhaled.

5. Fire Fighting Measures

Flammability : Product is not known to be flammable, combustible or pyrophoric. Contact with combustible material may cause fire. This product is a strong oxidizer which is capable of intensifying a fire once started. Container may rupture.

Autoignition Temperature : Not applicable

Extinguishing Media

Suitable : Drench with large quantities of water only.

Not Suitable : Do not use dry chemicals or foams. Product supplies own oxygen, therefore attempts to smother fire with a wet blanket, carbon dioxide, dry chemical extinguisher or other means are not effective. Product has potential to cause violent reaction if dry chemical fire extinguishers are used.

Exposure Hazards : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Emits toxic fumes under fire conditions. Chlorine gas may be generated. Fire water does not need to be contained or prevented from being discharged to any waterway, sewer or drain.

Hazardous Combustion : Decomposition products may include carbon oxides, halogenated compounds, mineral oxide/oxides, chlorine, hydrogen chloride.

Protective Equipment : Fire fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with full face piece operated pressure mode.

6. Accidental release measures

Personal precautions : No action shall be taken involving personal risk without suitable training. Keep unnecessary personnel from entering. Do not walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazardous area. Provide adequate ventilation. Put on appropriate personal protective equipment.

Environmental precaution : None known.

Large spills : STRONG OXIDIZER. CONTACT WITH OTHER CHEMICALS MAY CAUSE LIBERATION OF HAZARDOUS GASSES. DO NOT MIX WITH OTHER CHEMICALS. Combination with acids, organic matter, cleaning chemicals, petroleum or paint products mat start chemical reaction with liberations of hazardous gasses. Otherwise wash down spill with copious amount of water.

Small spill : STRONG OXIDIZER. CONTACT WITH OTHER CHEMICALS MAY CAUSE LIBERATION OF HAZARDOUS GASSES. DO NOT MIX WITH OTHER CHEMICALS. Combination with acids, organic matter, cleaning chemicals, petroleum or paint products mat start chemical reaction with liberations of hazardous gasses. Otherwise wash down spill with plenty of water.

Reference : See section 1 for emergency contact information
See section 8 for information on appropriate personal protective equipment.
See section 13 for additional waste treatment information.

7. Handling and storage

Handling : Use caution in handling spilled material. Eating, drinking and smoking should be prohibited in areas where the material is handled, stored and processed. Do not swallow. Do not get in eyes. Contact with clothing will cause spot bleaching. Keep in the original container with the lid closed. Keep away from heat, flame, direct sunlight or other heat sources. Keep away from combustible materials. Do not mix with other chemicals. Combination with acids, organic matter, cleaning chemicals, petroleum or paint products mat start chemical reaction with liberations of hazardous gasses. Do not add this product to any dispersing device containing remnants of any other product. Such use may cause liberation of hazardous gasses. Flush empty container with water and either reuse with same chemistry or recycle appropriately.

Storage : Store in accordance with local regulations. Store in original container protected drom direct sunlight or heat sources in a dry cool and well ventilated area away from incompatible materials (see section 10) and food and drink. Separate from reducing agents and combustible materials See NFPA 400. Hazardous Materials Code for further information. (Please note that NFPA 400, Hazardous Materials Code recently replaced NFPA 430, Code for storage of liquid and solid oxidizers.) Keep container closed. Containers that have been opend must be carefully resealed and kept upright to prevent leakage. If product becomes contaminated or decomposes do not reseal container. Isolate container in open air or well ventilated area. Do not store in unlabeled containers.

8. Exposure controls/personal protection

Name	Result	ACGIH	OSHA	ONTARIO	MEXICO	KLS
Sodium Hypochlorite	TWA	Not established	Not established	Not established	Not established	60g/M^3
	STEL	Not established	Not established	Not established	Not established	

A = Acceptable Maximum Peak
ACGIH = American Conference of Governmental Industrial Hygienists
C = Ceiling limit
F = Fume
IPEL = Internal Permissible Exposure Limit
OSHA = Occupational Safety and Health Association
R = Respirable
Z = OSHA 29CFR1910.1200 Subpart Z- Toxic and hazardous substances
S = Potential Skin absorption
SR = Respiratory Sensitization
SS =Skin Sensitization
STEL = Short Term Exposure Limit Values
TD = Total Dust
TLV = Threshold Limit Value
TWA = Time Weighted Value

Consult local authorities for acceptable exposure limits.

Recommended Monitoring : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use protective equipment.

Engineering Measures : Use only with adequate ventilation. If user operations generate fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below recommended or statutory limits. Engineering controls may be required to control the primary or secondary risks associated with this product.

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating and using the lavatory and at the end of a work period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated cloths before reusing. Ensure that eyewash stations and safety showers are close to the work station location.

Personal Protection

Eyes : Chemical splash goggles or face shield.

Hands : Chemical resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Respiratory : If workers are exposed to concentrations above exposure limits, they must use appropriate, certified respirators. Use a fitted, air purifying or air fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated levels, the hazards of the product and the safe working limits of the selected respirator.

Skin : Personal protection equipment for the body should be selected based on the task being performed and the risk involved and should be approved by a specialist before handling this product.

Environmental Exposure Controls

: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

9. Physical and Chemical properties

Physical State	: Liquid
Color	: Lavender
Odor	: Chlorine odor
Odor Threshold(ppm)	: 0.3 ppm (0.9 mg/m^3)
Flash Point	: Not Flammable
Auto ignition Temp	: Not Flammable
Decomposition Temp	: 90°F (32.2° C)
Boiling Point	: 230°F (110° C)
Freezing Pt Range	: -3 to -14°F (-19.4 to -25.6°C)
Melting Point	: Not applicable to liquids
Specific gravity	: 1.09-1.27 @ 60 deg F
Vapor pressure	: 12-17 mmHg
Vapor density	: 2.6
Volatility	: 0% (v/v) 0% (w/w)
Evaporation Rate	: Not applicable
Water Solubility	: 100%
Viscosity	: No data available
% Volatile	: Not applicable
pH	: 12-12.5
Bulk Density	: 9.08- 9.8 lb/gal

The physical data above are typical values and should not be construed as a specification

10. Stability and reactivity

Reactivity : May decompose upon heating and exposure to sunlight

Stability : Stable under recommended storage and handling conditions (see section 7). Product begins to decompose at approximately above 90°F (32.2° C) releasing oxygen gas and hydrogen chloride.

Conditions to avoid : Heating will cause decomposition resulting in the release of oxygen and monoxide gasses.

Material to avoid : Highly reactive or incompatible with the following materials: organic materials, metals, acids, alkalis, oxidizing materials, reducing materials, ammonia, petroleum products, paint products. Acid or ammonia contamination will release hazardous gasses.

Decomposition Products : Product slowly releases oxygen, chlorine, hydrogen chloride.

Hazardous Reactions : Under normal conditions of storage and uses, hazardous polymerization will not occur.

11. Toxicology information

Acute Toxicity

Ingredient	Test	Species	Dose	Exposure
Sodium Hypochlorite	OSCPP 870.1100/ LD50 OSCPP 870.1200/LD50 OSCPP 870.1300/LC50 OSCPP 870.2400 OSCPP 870.2500 OSCPP 870.2600	Rat Rat Rat Rabbit Rabbit Guinea Pig	>5000 mg/Kg 5050 mg/Kg >2.26mg/L Score: 10.7 Index of 0.3 Score: 0.0	

Conclusive summary : Irritating to the eyes with direct contact. Irritating to the respiratory system if inhaled. Irritating to the digestive system if swallowed. With skin contact, may cause dryness.

Chronic toxicity : Not available.

Irritation

Eyes : Direct contact is irritating to the cornea and conjunctiva. Full recovery expected.

Respiratory : Above exposure limit is irritating to the respiratory system. Full recovery expected.

Skin : No observable negative effect. May cause skin dryness.

Sensitization

Skin : Not observed

Respiratory : Not observed

Potential chronic health effect: Irritating to eyes, respiratory system and digestive tract.

Target Organs : Contains material which may cause irritation to the lungs, mucus membranes, gastrointestinal tract, upper respiratory system and eyes.

Carcinogenicity

Ingredient	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
Sodium Hypochlorite	-	-	-	-	-	-

12. Ecological information

Environmental effect : Toxic above exposure limits

Aquatic ecotoxicity

Ingredient	Result	Species	Exposure
Chlorine	Acute LC50 57 to 60 ug/L Fresh water	Fish: Bluegill-Lepomis macrochirus	96 hr
	Acute LC50 37 ug/L Marine water	Fish: Atlantic silverside-Menidia manidia	96 Hr
	Acute EC50 0.073 to 0.079 ppm Fresh water	Dapnia: Water Flea-Daphnea magna	48 Hr

Biodegradability: Degrades slowly to sodium chloride, sodium chlorate, mineral oxides and oxygen

13. Disposal considerations

Waste disposal : The generation of waste should be avoided or minimized whenever possible. This product and its container must be disposed of in a safe way. Spilled material should be washed away/diluted

with plenty of water and/or, if possible, used immediately in the normal application for which this product is being consumed. If this is not possible, material may be neutralized by flushing with plenty of water, exposed sun light and/or to the organics in a sewer system. For additional information, contact your supplier. Un neutralized material can cause temporary ecological damage to surface water systems. Care must be taken when using or disposing of chemical materials and/or their containers to prevent environmental contamination. Empty containers should be thoroughly flushed for either reuse for the same product or for recycle interests. Disposal of this product should at all times comply with requirements of environmental protection and waste disposal legislation and any regional local authority requirements.

Disposal should be in accordance with applicable regional, national and local laws and regulations. Refer to section 7: HANDLING AND STORAGE and section 8:Exposure controls/personal protection FOR ADDITIONAL HANDLING INFORMATION AND PROTECTION OF EMPLOYEES. Section 6, Accidental release measures.

14. Transportation information

Regulation	UN Number	Shipping Name	Classes	PG	Additional Info
UN	1760	Sodium Hypochlorite	8	III	-
IMDG	1760	Sodium Hypochlorite, Hydrate	8	III	-
DOT	1760	Sodium Hypochlorite, Hydrate	8	III	-

PG : Packing Group

Reportable quantity (RQ): CERCLA Hazardous substance: Mineral Oxychloride: 35 gal (100 lb)

15. Regulatory information

United States Inventory (TSCA 8b)	All components are listed or exempt
Australia Inventory (AICS)	All components are listed or exempt
Canada Inventory (DSL)	All components are listed or exempt
China Inventory (TECSC)	All components are listed or exempt
Europe Inventory (REEACH)	Check with supplier for status
Japan Inventory (ENCS)	All components are listed or exempt
Korea Inventory (KECI)	All components are listed or exempt
New Zealand Inventory (NZIoC)	All components are listed or exempt
Phillippines Inventory (PICCS)	All components are listed or exempt

United States

EPA ID No. –Pesticide : Check with supplier for information

SARA 302/304/311/312 extremely hazardous substance: NO products were found.

SARA 302/304 emergency planning and notification: NO products were found.

SARA 302/304/311/312 hazardous chemicals: calcium dihydroxide

CERCLA: Hazardous substances: mineral oxychlorides 35 gal/100 lbs

Ingredient	CAS #	Acute	Chronic	Fire	Reactive	Pressure
Sodium Hypochlorite	7681-52-9	Y	N	N	Y	N
Product as Supplied		Y	N	N	Y	N

California : Prop 65

Canada : Class C, Oxidizing Material

Mexico Flammability: 0 , Health: 1, Reactivity : 2

16. Other information

Hazardous Material Information System (USA)

Health: 1, Flammability: 0, Physical hazards: 2

Caution: HMIS ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risk, and 4 representing significant hazard or risk. Although HMIS ratings are not required on MSDS under 29CFR1910.1200, the preparer may choose to provide them. HMIS ratings are to be used with fully implemented HMIS program. HMIS is a registered mark of the National Paint & Coatings Association (NPCA).

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (USA)
Health: 1, Flammability: 0, Instability: 2

Other Considerations : NSF Drinking water Treatment Chemicals Listing: JC 9455, (10.5% nominal product) is certified for maximum use at 80 mg/L under NSF/ANSI Standard 60.

: U.S. EPA pesticide registration is pending.

Organization that prepared the MSDS: KLS

Disclaimer: *The information contained in this data sheet is based on present scientific and technical knowledge. The purpose of this information is to draw attention to the health and safety aspects concerning the product supplied by ARANA Group, LLC, and to recommend precautionary measures for the storage and handling of this product. No warranty or guarantee is given on respect of the properties of this product. No liability can be accepted for any failure to observe the precautionary measures described in this data sheet or for any misuse of this product.*