Safety Data Sheet - 15 Sections

SECTION 1 - IDENTIFICATION

Product Identifier / Name

KeyPlex 445 DP

Product Use

Plant Nutrition

Product Code: N/A

Manufacturer	**Details of the supplier of the safety sheet**
KeyPlex Manufacturing	N/A

Street Address

2239 Commerce Ct.

City	**Province**
Bowling Green	Florida
Postal Code	**Emergency Telephone**
33834	ChemTrac 1-800-424-9300
Telephone (General)	**Recommended uses:** To prevent and correct micronutrient deficiencies when used as directed.
407-682-6500	Refer to the label.

SECTION 2 - Hazard Identification

United States (US): According to OSHA 29 CFR 1910.1200 HCS

Classification of the substances or mixtures: OSHA HCS 2012

Label Elements:

Hazard statements:	• KeyPlex 445 DP is a low pH (acidic) water soluble liquid. • KeyPlex 445 DP can corrode metals after prolonged exposure, always use acid resistant, corrosion resistant equipment when using or handling KeyPlex 445 DP.
Precautionary Statements:	• For use in Agricultural production, to alleviate micronutrient deficiencies. • Use as directed on the label. • Follow all local and federal regulations regarding agrochemical use. • Keep out of reach of children.

continuation of section 2

Response:	• N/A
Storage / Disposal:	• Store in a well ventilated and secure storage facility • Ventilation system should be corrosive resistant. • The product should not be stored at temperatures below 5°C. or above 50°C. • Keep out of direct sunlight.
Other Hazards:	• OSHA HCS 2012

Canada

According to WHMIS
Classification of the substance or mixture: WHMIS
Label elements: WHMIS
Other hazards: WHMIS
Other information: N/A

SECTION 3 - Composition / Information on Ingredients

Chemical Name	% (weight)	CAS No.	LD_{50} Ingredient (specify species and route)	LD_{50} Ingredient (specify species)
Sodium Glucoheptonate	0-46	31138-65-5	N/A	N/A
Potassium Nitrate	2.7-3.3	7757-79-1	N/A	N/A
Manganese Nitrate	24.0-30.0	10377-66-9	N/A	N/A
Zinc Nitrate	20.0-26.0	7779-88-6	N/A	N/A
Iron Sulfate Heptahydrate	2.25-2.75	7728-63-0	N/A	N/A
Fulvic Acid	0.25-0.30	308066-67-3	N/A	N/A
Humic Acid	0.85-1.07	68514-28-3	N/A	N/A
Yeast Extract(containing Alpha Keto Acids)	0.057-0.069	Mixture	N/A	N/A

SECTION 4 - First Measures

Inhalation:	• Move victim to fresh air. • If persons is NOT breathing call Emergency Services, perform artificial respiration if necessary. • Call Physician if symptoms persist.
Skin:	• Remove all contaminated clothing.

continuation of section 4

	• Wash skin with soap and clean water thoroughly for at least 20 minutes. • Seek Medical attention of irritation develops and persists.
Eye:	• Flush eyes with clean running water for a minimum of 15-20 minutes. • Make certain the water thoroughly rinses the eyes by periodically lifting the upper and lower lids. • Get medical attention if irritation persists.
Ingestion:	• Call Physician . • Have person sip a glass of clean water to rinse mouth and spit. • Do not induce vomiting unless instructed by a physician. • Contact physician if person is unconscious. Do not give anything by mouth.
Most important symptoms and effects. Both acute and delayed:	• Upset stomach • Vomiting
Indication of any immediate medical attention and special treatment needed:	• Notes to physician

SECTION 5 - Fire - Fighting Measures

Suitable Extinguishing Media:	• Water
Unsuitable Extinguishing Media	• N/A
Flash Point:	• N/A
Upper Flammable Limit	• N/A
Auto Ignition:	• N/A
Method Used:	• N/A

Special hazards arising from the substance or mixture:

Unusual Fire and Explosion:	• N/A
Hazards:	• N/A
Hazardous Combustion Products	• If this product is heated to an anhydrous state it will emit Nitrogen Oxide vapors which are hazardous if inhaled
Advice for firefighters	• KeyPlex 445 DP is not a flammable liquid and is very water-soluble. • In case of fire, use sufficient water to dilute the product to avoid production of Nitrogen Oxide.

SECTION 6 - Accidental Release Measures

Personal Precautions:	• Always wear acid resistant protective clothing when handling this product. • Always wear Gloves and Eye Protection.

continuation of section 6

	• Handle in well ventilated area. • Wear respiratory equipment.
Environmental Precautions:	• Take all spill control measures necessary to avoid contamination of ground water and storm run-off drains.
Methods and Material for containment and cleaning up:	• Wear acid resistant, protective clothing, respiratory equipment and eye protection. • Isolate the spill area and restrict access to non-essential personnel. • Stop the flow of the material at the source. **Spill on Non-Absorbent Surfaces:** • Use Dry absorbent material such as Towels or Diatomaceous earth. • Use sufficient quantity to fully contain and absorb the spilled liquid. • Collect the contaminated material and place in a secure ventilated vessel. • Dispose of in compliance to local laws and regulations. **Spill on Soil:** • Remove the contaminated soil to a depth where no residue is present, place contaminated soil in a secure ventilated vessel and dispose of in compliance to local laws and regulations.

SECTION 7 - Handling and Storage

Precautions for safe handling:	• Always wear acid resistant protective clothing, gloves and eye protection while handling the material.
Conditions for safe storage:	• Store in a well ventilated and secure storage facility. • Ventilation system should be corrosive resistant. • The product should be stored at ambient temperature. • The product should not be stored at temperatures below 5°C or above 50°C. • Keep out of direct sunlight.
Incompatible Materials for ignition Sources:	N/A

SECTION 8 - Exposure Controls / Personal Protection

Control Parameters

Exposure Limits/ Guidelines

	Result	ACGIH	Canada Ontario	Canada Quebec	China	NIOSH
N/A	N/A	N/A	N/A	N/A	N/A	N/A

continuation of section 8

	N/A	N/A	N/A	N/A	N/A	N/A
			Result	**OSHA**		
			N/A	N/A		

key to abbreviations:

ACGIH= American Conference of Governmental Industrial Hygiene

TWA= Time-Weighted Averages are based on 8d/day exposures

NIOSH= National Institute of Occupational Safety and Health

STEL= Short Term Exposure Limits are based on 15-minute exposures

OSHA= Occupational Safety and Health Administration

STEV = Short Term Exposure Value

MSHA= Mine Safety and Health Administration

Exposure Controls

Engineering:	Use Corrosion Resistant Ventilation System in Storage facility, and equipment used in handling this product.
Measures/Controls:	N/A
Personal Protective Equipment Pictograms:	
Respiratory:	Handle this product wearing a facemask or in a well ventilated area
Eye/Face:	Handle this product wearing eye protection glasses, goggles or a face shield.
Hands:	When handling this product wear appropriate work gloves.
Skin/Body	When handling this product wear long sleeve shirt and pants.
General Industrial Hygiene:	When handling chemicals, follow all local and federal regulations.
Considerations:	N/A

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Environmental Exposure:	N/A
Controls:	N/A

SECTION 9 - Physical and Chemical Properties

Information on Physical and Chemical Properties

Material Description

Physical Form	Liquid	**Appearance/Description**	Opaque with sweet smell
Color	Dark Brown	N/A	N/A
Taste	N/A	N/A	N/A
Particular Size	N/A	N/A	N/A

continuation of section 9

Odor threshold	Data lacking	**Physical and Chemical Properties**	Data lacking

General Properties

Boiling Point:	100° C.	**Melting Point**	N/A
Decomposition Temperature:	N/A	**Heat of Decomposition**	N/A
pH:	4.0-4.5	**Specific Gravity, Relative Density**	1.37-1.41
Density	11-4-11.8lbs/gal	**Bulk Density**	N/A
Water Solubility:	Soluble	**Solvent Solubility**	N/A
Viscosity:	N/A	**Explosive Properties**	Classification criteria not met
Oxidizing Properties:	N/A	N/A	N/A

Volatility

Vapor Pressure	N/A	**Vapor Density**	N/A
Evaporation Rate	N/A		
VOC (Vol.)	N/A	**Volatiles (Wt.)**	N/A
Volatiles (Vol.)	N/A		

Flammability

Flash Point	N/A	**UEL**	N/A
LEL	N/A	**Autoignition**	N/A
Self Accelerating	N/A	**Heat of Combustion**	N/A
Decomposition Temperature (SADT)	N/A		N/A
Burning Time	N/A	**Flame Duration**	N/A
Flame Height	N/A	**Flame Extension**	N/A
Ignition Distance	N/A	**Flammability (solid, gas)**	N/A

Environmental

Half-life	N/A	**Octano/Water Partition**	N/A
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		Coefficient	
Coefficient of water/oil distribution	N/A	**Bioaccumulation Factor**	N/A
Bioconcentration Factor	N/A	**Biochemical Oxygen**	N/A
		Demand BOD/Bod5	
Chemical Oxygen Demand	N/A	**Persistence**	N/A
Degradation	N/A		

SECTION 10 - Stability and Reactivity

Reactivity:	• Yes
Chemical Stability:	• Under normal temperatures and atmospheric pressure this product is stable

continuation of section 10

Possibility of hazardous reactions:	• N/A
Conditions to avoid:	• Use a jar compatibility test with unfamiliar mixtures and phosphorus containing products.
Incompatible materials:	• Use a jar compatibility test with unfamiliar mixtures and phosphorus containing products.
Hazardous decomposition materials:	• Nitrogen oxide vapors at high temperatures.

SECTION 11 - Toxilogical Information

Information on toxicological effects

Component Name	CAS	Data
Keyplex 445 DP	Mixture	**Acute Toxicity** **Oral (ATE): N/A** **Irritation:** N/A **Dermal (ATE): N/A** **Eye (ATE): N/A** **Reproductive: N/A**

GHS Properties	**OSHA HCA 2012** • Classification Criteria not met
Acute toxicity	N/A
Aspiration Hazard	N/A
Carcinogenicity	N/A
Germ Cell Mutagenicity	N/A
Respiratory sensitization	N/A

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Serious eye damage/irritation	N/A
Skin corrosion/Irritation	N/A
Skin sensitization	N/A
STOT-RE	N/A
STOT-RE	N/A
Toxicity for Reproduction	N/A

Target Organs

Route[s] of entry exposure		
skin:	Wear acid resistant work gloves and clothing. Avoid skin contact.	**Acute(Immediate)**-Possible redness and localize irritation **Chronic(Delayed)** - N/A

continuation of section 11

Eyes:	Wear goggles or glasses with side shields If not available wear face shield. Avoid splashes.	**Acute(Immediate)** - Burning sensation, Redness **Chronic(Delayed)** - N/A
Oral (Ingestion):	Do not swallow or taste.	**Acute(Immediate)** - Nausea, Vomiting **Chronic(Delayed)** - N/A

SECTION 12- Ecological Information

Toxicity:	Not toxic to bees.
Persistence and Degradability:	N/A
Bioaccumulative potential:	None.
Mobility in soil:	Mobile in soil.
other adverse effects:	N/A
other information:	N/A

SECTION 13 -Disposal Considerations

Waste treatment methods

Product waste	Dispose of following local and federal laws.
Packaging waste	Rinse with water, recycle if possible. Follow local and federal laws and regulations.

SECTION 14 -Regulatory Information

Safety, health and environmental regulation/legislation specific for the substance or mixture SARA hazard classifications:	• **Acute, Fire**

Inventory

Component	CAS	Canada DSL	Canada NDSL	TSCA
N/A	N/A	N/A	N/A	N/A

State Right To Know

Component	CAS	M/A	N/J	pa
N/A	N/A	N/A	N/A	N/A

SECTION 15 - other Information

Last Revision Date:	N/A
Preparation Date :	23-Jun-15
Disclaimer/Statement of Liability:	Seller warrants that the product conforms to its chemical description and is reasonably fit for the purpose stated on the label when used in accordance with directions under normal conditions of use. Neither this warranty nor any other warranty of merchantability or fitness of a particular product expressed or implied extends to the use of this product contrary to label instructions or under abnormal conditions not reasonably foreseeable by the seller, and buyer assumes the risk of any such use.