

# Safety Data Sheet – 15 Sections

## SECTION 1– Identification

**Product Identifier/Name**

KeyPlex 1000 DP

**Product Use**

Plant Nutrition

**Product Code:** N/A**Manufacturer**

KeyPlex Manufacturing

**Details of the supplier of the safety sheet**

N/A

**Street Address**

2239 Commerce Ct.

**City**

Bowling Green

**Province**

Florida

**Postal Code**

33834

**Emergency Telephone**

ChemTrac 1-800-424-9300

**Telephone (General)**

(407)682-6500

**Recommended uses:** To prevent and correct micronutrient deficiencies when used as directed. 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 1000 DP is a low pH (acidic) water soluble liquid.
- KeyPlex 1000 DP can corrode metals after prolonged exposure, always use acid resistant, corrosion resistant equipment when using or handling KeyPlex 1000 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.

**Prevention:** Keep out of reach of children.

<b>Response:</b> N/A	
<b>Storage/Disposal:</b>	<ul style="list-style-type: none"> <li>• Store in a well-ventilated and secure storage facility.</li> <li>• Ventilation system should be corrosive resistant.</li> <li>• The product should be stored at ambient temperature.</li> <li>• The product should not be stored at temperatures below 5 degrees centigrade or above 50 degrees centigrade.</li> <li>• Keep out of direct sunlight.</li> </ul>
<b>Other hazards:</b> OSHA HCS 2012	

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

<b>SECTION 3 – Composition / Information on Ingredients</b>				
<b>Chemical Name</b>	<b>% (Weight)</b>	<b>CASS Number</b>	<b>LD<sub>50</sub> of Ingredient (specify species and route)</b>	<b>LC<sub>50</sub> of Ingredient (specify species)</b>
Magnesium Sulfate Heptahydrate	14.0-17.0	10034-99-8	N/A	N/A
Manganese Sulfate Monohydrate	2.1-2.6	10034-96-5	N/A	N/A
Iron Sulfate Heptahydrate	13.5-16.5	7782-63-0	N/A	N/A
Zinc Sulfate Monohydrate	1.9-2.3	7446-19-7	N/A	N/A
Sodium Molybdate Dihydrate	0.007-0.009	10102-40-6	N/A	N/A
Disodium Octaborate Tetrahydrate	0.7-0.9	12280-03-4	N/A	N/A
Sodium Glucoheptonate	57.0-69.0	31138-65-5	N/A	N/A
Humic Acid	0.25-0.30	308066-67-3	N/A	N/A
Fulvic Acid	0.25-0.30	308066-67-3	N/A	N/A
Yeast Extract (Containing Alpha-Keto Acids)	0.057-0.069	Mixture	N/A	N/A

## SECTION 4: First-Aid Measures

<b>Inhalation:</b>	<ul style="list-style-type: none"><li>• Move victim to fresh air.</li><li>• If person is NOT Breathing Call Emergency Services, perform artificial respiration if necessary.</li><li>• Call Physician if symptoms persist.</li></ul>
<b>Skin:</b>	<ul style="list-style-type: none"><li>• Remove all contaminated clothing.</li><li>• Wash skin with soap and clean water thoroughly for at least 20 minutes.</li><li>• Seek Medical attention if irritation develops and persists.</li></ul>
<b>Eye:</b>	<ul style="list-style-type: none"><li>• Flush eyes with clean running water for a minimum of 15-20 minutes.</li><li>• Make certain the water rinses the eye by periodically lifting the lower and upper lids for thorough rinsing.</li><li>• Get medical attention if irritation persists.</li></ul>
<b>Ingestion:</b>	<ul style="list-style-type: none"><li>• Call a physician.</li><li>• Have person sip a glass of clean water to rinse mouth and spit.</li><li>• Do Not Induce Vomiting unless instructed by a physician.</li><li>• Contact physician if person is unconscious do not give anything my mouth.</li></ul>
<b>Most important symptoms and effects. Both acute and delayed:</b>	<ul style="list-style-type: none"><li>• Upset Stomach.</li><li>• Vomiting.</li></ul>
<b>Indication of any immediate medical attention and special treatment needed:</b>	<ul style="list-style-type: none"><li>• Notes to Physician.</li></ul>

## SECTION 5 – Fire-Fighting Measures

<b>Suitable Extinguishing Media:</b>	<ul style="list-style-type: none"><li>• Water</li></ul>
<b>Unsuitable Extinguishing Media:</b>	<ul style="list-style-type: none"><li>• N/A</li></ul>
<b>Flash Point:</b>	<ul style="list-style-type: none"><li>• N/A</li></ul>
<b>Upper Flammable Limit:</b>	<ul style="list-style-type: none"><li>• N/A</li></ul>
<b>Auto Ignition:</b>	<ul style="list-style-type: none"><li>• N/A</li></ul>
<b>Method Used:</b>	<ul style="list-style-type: none"><li>• N/A</li></ul>
<b>Special hazards arising from the substance or mixture:</b>	
<b>Unusual fire and Exploitation:</b>	<ul style="list-style-type: none"><li>• N/A</li></ul>
<b>Hazards:</b>	<ul style="list-style-type: none"><li>• N/A</li></ul>
<b>Hazardous Combustion Products:</b>	<ul style="list-style-type: none"><li>• If this product is heated to an anhydrous state it will omit Sulfur Dioxide vapors which is hazardous if inhaled.</li><li>• Exposure to high heat can emit toxic vapors.</li></ul>
<b>Advice for firefighters:</b>	<ul style="list-style-type: none"><li>• KeyPlex 1000 DP is not a flammable liquid and is very water-soluble.</li><li>• In case of fire, use sufficient water to dilute the product to avoid production of Sulfur Dioxide.</li></ul>

## SECTION 6 – Accidental Release Measures

<b>Personal Precautions:</b>	<ul style="list-style-type: none"><li>• Always wear acid resistant protective clothing when handling this product.</li><li>• Always wear Gloves and Eye Protection.</li><li>• Handle in well ventilated area.</li><li>• Wear respiratory equipment.</li></ul>
<b>Environmental Precautions:</b>	<ul style="list-style-type: none"><li>• Take all spill control measures necessary to avoid contamination of ground water and storm run-off drains.</li></ul>
<b>Methods and Material for containment and cleaning up:</b>	<ul style="list-style-type: none"><li>• Wear acid resistant, protective clothing, respiratory equipment and eye protection.</li><li>• Isolate the spill area and restrict access to non-essential personnel.</li><li>• Stop the flow of the material at the source.</li></ul> <p><b>Spill on Non-Absorbent Surfaces:</b></p> <ul style="list-style-type: none"><li>• Use Dry absorbent material such as Towels or Diatomaceous Earth.</li><li>• Use sufficient quantity to fully contain and absorb the spilt liquid.</li><li>• Collect the contaminated material and place in a secure ventilated vessel.</li><li>• Dispose of in compliance to local laws and regulations.</li></ul> <p><b>Spill on Soil:</b></p> <ul style="list-style-type: none"><li>• 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.</li></ul>

## SECTION 7 – Handling and Storage

<b>Precautions for safe handling:</b>	<ul style="list-style-type: none"><li>• Always wear acid resistant protective clothing, gloves and eye protection before you handle the material.</li></ul>
<b>Conditions for safe storage:</b>	<ul style="list-style-type: none"><li>• Store in a well ventilated and secure storage facility.</li><li>• Ventilation system should be corrosive resistant.</li><li>• The product should be stored at ambient temperature.</li><li>• The product should not be stored at temperatures below 5 degrees centigrade or above 50 degrees centigrade.</li><li>• Keep out of direct sunlight.</li></ul>
<b>Incompatible Materials or Ignition Sources:</b>	<ul style="list-style-type: none"><li>• The product should not come into contact with Methomyl (S-methyl-N-[(methycarbamoyl)oxy] thioacetimidate. Will cause evolution of Hydrogen Sulfide.</li><li>• Use a jar compatibility test with unfamiliar mixtures and phosphorus containing products.</li></ul>

## 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
N/A	N/A	N/A	N/A	N/A	N/A	N/A

#### Exposure Limits/Guidelines (Cont.)

	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

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

<b>Considerations:</b>	N/A
<b>Environmental Exposure:</b>	N/A
<b>Controls:</b>	N/A

## SECTION 9: Physical and Chemical Properties

### Information on Physical and Chemical Properties:

#### Material Description

<b>Physical Form</b>	Liquid	<b>Appearance/Description</b>	Dark Opaque with sweet smell
<b>Color</b>	Dark Opaque	N/A	N/A
<b>Taste</b>	N/A	N/A	N/A
<b>Particular Size</b>	N/A	N/A	N/A
<b>Odor Threshold</b>	Data lacking	<b>Physical and Chemical Properties</b>	Data lacking

#### General Properties

<b>Boiling Point</b>	100 degrees centigrade	<b>Melting Point</b>	N/A
<b>Decomposition Temperature</b>	N/A	<b>Heat of Decomposition</b>	N/A
<b>pH</b>	4.3-4.7	<b>Specific Gravity/Relative Density</b>	1.29-1.33
<b>Density</b>	10.8-11.2 lbs/gal	<b>Bulk Density</b>	N/A
<b>Water Solubility</b>	Soluble	<b>Solvent Solubility</b>	N/A
<b>Viscosity</b>	N/A	<b>Explosive Properties</b>	Classification criteria not met
<b>Oxidizing Properties:</b>	N/A	N/A	N/A

#### Volatility

<b>Vapor Pressure</b>	N/A	<b>Vapor Density</b>	N/A
<b>Evaporation Rate</b>	N/A		
<b>VOC (Vol.)</b>	N/A	<b>Volatiles (Wt.)</b>	N/A
<b>Volatiles (Vol.)</b>	N/A		

#### Flammability

<b>Flash Point</b>	N/A	<b>UEL</b>	N/A
<b>LEL</b>	N/A	<b>Autoignition</b>	N/A
<b>Self-Accelerating Decomposition Temperature (SADT)</b>	N/A	<b>Heat of Combustion</b>	N/A
<b>Burning Time</b>	N/A	<b>Flame Duration</b>	N/A

Flame Height	N/A	Flame Extension	N/A
Ignition Distance	N/A	Flammability (solid, gas)	N/A
<b>Environmental</b>			
Half-Life	N/A	Octano/Water Partition Coefficient	N/A
Coefficient of water/oil distribution	N/A	Bioaccumulation Factor	N/A
Bioconcentration Factor	N/A	Biochemical Oxygen Demand BOD/BOD <sub>5</sub>	N/A
Chemical Oxygen Demand	N/A	Persistence	N/A
Degradation	N/A		N/A

## SECTION 10 – Stability and Reactivity

Reactivity:	Yes
Chemical Stability:	Under normal temperatures and atmospheric pressure this product is stable.
Possibility of hazardous reactions:	Yes
Conditions to avoid:	<ul style="list-style-type: none"> <li>Avoid mixing with Methomyl (S-methyl-N-[(methycarbamoyl)oxy] thioacetimidate.</li> <li>Use a jar compatibility test with unfamiliar mixtures and phosphorus containing products.</li> </ul>
Incompatible materials:	<ul style="list-style-type: none"> <li>Avoid mixing with Methomyl (S-methyl-N-[(methycarbamoyl)oxy] thioacetimidate. Use a jar compatibility test with unfamiliar mixtures and phosphorus containing products.</li> </ul>
Hazardous decomposition materials:	Sulfur Dioxide (SO <sub>2</sub> ) Vapors

## SECTION 11 – Toxicological Information

### Information on toxicological effects

Component Name	CAS	Data
KeyPlex 1000 DP	Mixture	<b>Acute Toxicity</b> Oral (ATE): Category III <b>Irritation:</b> Dermal (ATE): Category IV Eye (ATE): Category III <b>Reproductive:</b> N/A

<b>GHS Properties</b>	OSHA HCS 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
Serious eye damage/Irritation	N/A
Skin corrosion/Irritation	N/A
Skin sensitization	N/A
STOT-RE	N/A
STOT-SE	N/A
Toxicity for Reproduction	N/A

<b>Target Organs</b>		
<b>Route(s) of entry/exposure:</b>		
<b>Skin:</b>	Wear acid resistant work gloves and clothing. Avoid Skin Contact.	<b>Acute (Immediate)</b> –Possible redness and localized irritation. <b>Chronic (Delayed)</b> – N/A
<b>Eyes:</b>	Wear goggles or glasses with side shields, If not available wear face shield. Avoid Splashes.	<b>Acute (Immediate)</b> - Burning Sensation, Redness <b>Chronic (Delayed)</b> - N/A
<b>Oral (Ingestion):</b>	Do not swallow or taste.	<b>Acute (Immediate)</b> - Nausea, Vomiting <b>Chronic (Delayed)</b> - N/A

<b>SECTION 12: Ecological Information</b>	
<b>Toxicity:</b>	Not toxic to Bees
<b>Persistence and Degradability:</b>	N/A
<b>Bioaccumulative potential:</b>	None
<b>Mobility in Soil:</b>	Mobile in Soil
<b>Other adverse effects:</b>	N/A
<b>Other information:</b>	N/A

<b>SECTION 13: Disposal Considerations</b>	
<b>Waste treatment methods</b>	
<b>Product waste:</b>	Dispose of following Local and Federal Laws.
<b>Packaging waste:</b>	Rinse with water, recycle if possible. Follow local and Federal Laws and regulations.

**SECTION 14: Regulatory Information**

Safety, health and environmental regulations/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
N/A	N/A	N/A	N/A	N/A

**State Right To Know**

Component	CAS	MA	NJ	PA
N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A

**SECTION 15: Other Information**

<b>Last Revision Date:</b>	N/A
<b>Preparation Date:</b>	June 23, 2015
<b>Disclaimer/Statement of Liability:</b>	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 the directions under normal conditions of use, but neither this warranty nor any other warranty of merchantability of 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.