wilchem
SIGNATURE RANGE

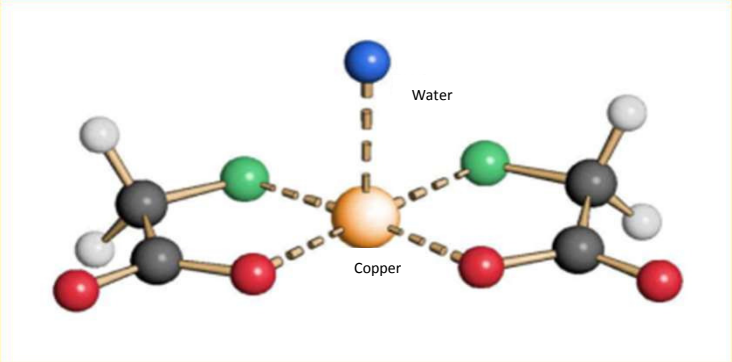
COPPER

Analysis (w/v)
Copper (Cu) – 50 g/L
Amino Acid (AA) – 150 g/L
Sulfate (S) – 25 g/L
Nitrogen (N) – 45 g/L
pH – 7.5 to 8.0
Specific gravity (SG) – 1.20

COPPER AMINO ACID CHELATE
Cu 50 g/L : S 25 g/L : N 45 g/L : AA 150 g/L

Signature Amino Acid Chelates

Wilchem Signature is a range of amino acid chelates. Amino acids are *bidentate chelants* – they form two bonds to the nutrient to form a "chelate ring". The chelate ring is stronger than a single ionic bond, which protects the nutrient and maintains it in solution. Amino acid chelates increase nutrient uptake efficiency, leading to increase yield and quality.



Uses:

Wilchem Signature Copper is used to correct and prevent copper deficiency in a wide range of crops. Signature Copper can be applied via fertigation, furrow injection or foliar applications for broadacre, viticultural and horticultural production where copper deficiency may occur.

Crop	Rate L/Ha	Timing	Water L/Ha
Cereal	0.5 - 1	Early to mid-tillering	50 - 80
Beans/Peas/Lupins	0.5 - 1	5 to 8 weeks after sowing	50 - 80
Canola	0.5 - 1	4 to 8 leaf stage	50 - 80
Citrus	0.3 - 1	Spring flush, repeat applications may be necessary for severe deficiencies.	500 - 1000
Grapevines	0.15 - 0.3	Apply after deficiency is identified	200 - 800
Pasture	0.5 - 1	Sufficient foliage	50 - 80
Lucerne	0.5 - 1	10 to 14 days before flowering	50 - 80

Directions for use:

Foliar sprays are the most effective way of applying Signature Copper however, it is also suitable for fertigation and furrow injection as chelates reduce reactions in the soil solution making the nutrients more available and for a longer period.

Copper Deficiency:

Copper deficiency occurs mainly in low pH soils, lateritic ironstone soils, sandy soils that are low in organic matter and in organic soils (peats). Uptake of copper decreases with increased soil pH and is adversely affected by high levels of available iron (Fe). Cereal crops, potatoes, and fruit crops grown on acidic sandy soils are particularly sensitive to copper deficiency. Symptoms are generally difficult to see and are referred to as "hidden hunger".

Deficiency Symptoms:

- Twisting of the flag leaf in cereals
- Yellowing of the new growth in severe deficiencies
- Patchy appearance of the crop
- Poor seed set

The Function:

Copper plays a key role in chlorophyll production and photosynthesis. It is important for cell wall metabolism, oxidative stress protection, water movement, seed production and biogenesis of molybdenum cofactor. Cereals, Lucerne, tree crops and vegetables are particularly sensitive to copper deficiency.

Compatibility with Agricultural Chemicals:

Signature Copper is compatible with a wide range of agricultural herbicides, insecticides, fungacides and pesticides. Check the Compatibility Guide as a reference. Always do a small jar test before preparing a full tank mix.

Other Details:

Liquid fertilizers can be corrosive to metals so flush equipment clean after use. Avoid inhaling fumes. Avoid contact with eyes and skin. Wash thoroughly with soap and water after handling. Protect from frost. Amino acids are an organic substance and over time some slight precipitation may occur. Do not store for extended periods in direct sunlight.

Wilchem takes your crop as seriously as you do!

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