



MC

Analysis (w/v)
 Manganese (Mn) – 60 g/L
 Copper (Cu) – 20 g/L
 Amino Acid (AA) – 172 g/L
 Sulfate (S) – 45 g/L
 Nitrogen (N) – 28 g/L
 pH – 5.5 to 6.0
 Specific gravity (SG) – 1.28

Mn - Cu AA | Mn 60g/L : Cu 20g/L : AA 172g/L
 AMINO ACID CHELATE

Signature Amino Acid Chelates

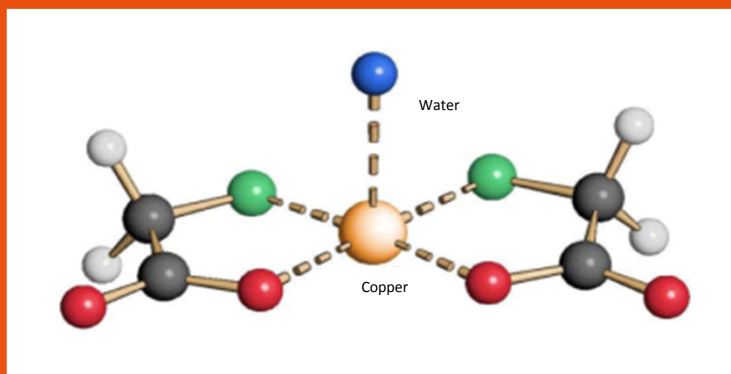
Wilchem Signature is a range of amino acid chelates. Amino acids are *bidentate chelates* – they form two bonds to the nutrient to form a “chelate ring”. The double bond is stronger than a single ionic bond, which protects the nutrient and maintains it in solution. Amino acid chelates increase nutrient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

Uses:

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

Manganese Copper Deficiency:

For information on manganese and copper deficiencies please refer to the manganese and copper flyers.



Crop	Rate L/Ha	Timing	Water L/Ha
Cereal	2-4	3 Leaf to early tillering	50 - 80
Beans/Peas/Lupins	2-4	10 - 14 days before flowering, earlier if known deficiency	50 - 80
Canola	2-4	4 - 9 true leaves	50 - 80
Citrus	3-5	Spring - Summer-Autumn flush	500 - 1000
Grapevines	3-5	Flower bud visible and flower buds seperated	200 - 800
Pasture	3-4	Sufficient foliage	50 - 80
Lucerne	3-4	10 to 14 days before flowering	50 - 80

Directions for use:

Foliar sprays are the most effective way of applying Signature Manganese 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.

Nutrient removal by crop:

The table on the left shows approximately the grams per tonne of grain that indicative crops remove from the soil. This will vary depending on soil fertility, varieties and seasons. This can be used as a guide for trace element applications.

Compatibility with Agricultural Chemicals:

Signature Manganese Copper is compatible with a wide range of agricultural herbicides 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.

Nutrient Removal by the Crop

Grams per tonne of grain removed			
	Zn	Mn	Cu
Barley	14	11	3
Oats	17	40	3
Wheat	20	40	5
Chickpeas	34	34	7
Faba Beans	28	30	10
Lentils	28	14	7
Lupins	30	60	5
Peas	35	14	5
Soy Beans	25	30	7
Canola	40	40	4
Cereal Hay	25	50	7
Lucerne Hay	21	56	6
Lucerne Seed	43	17	11

Wilchem takes your crop as seriously as you do!

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