Signature Manganese

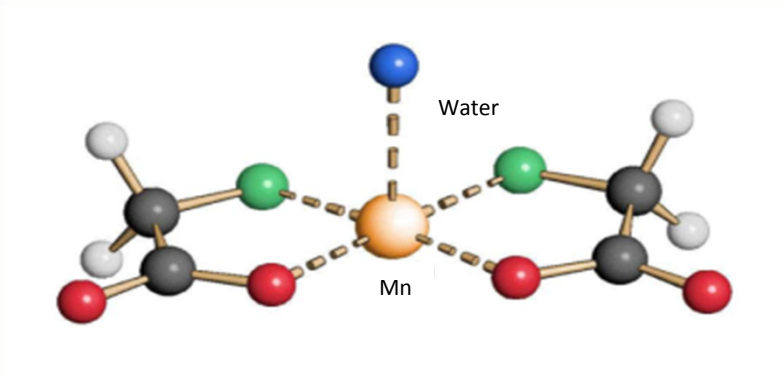
Manganese Amino Acid Chelate

Mn 80 g/L : N 28 g/L : AA 172 g/L

Analysis (w/v)
Manganese (Mn) – 80 g/L
Amino Acid (AA) – 172 g/L
Sulfate (S) – 46 g/L
Nitrogen (N) – 28 g/L
pH – 7.0 to 7.5
Specific gravity (SG) – 1.27

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

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

Directions for use:

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

Manganese deficiency:

Manganese deficiency mainly occurs in soils with high pH, sandy soils with low organic matter that have been limed. Low levels of potassium and high levels of copper, iron and zinc will reduce availability. Cereals, tree crops, vines, legumes and vegetables are particularly susceptible.

Deficiency symptoms:

- Chlorosis of new mature leaf
- Reduced mottling in broad leaf plants
- "grey fleck" in oats

The Function:

Manganese is essential for chlorophyll production and photosynthesis. It has a key role in oxidation reduction, nitrogen and carbohydrate metabolism. Cereals, tree crops, vines, legumes and vegetables are particularly sensitive to manganese deficiency.

Compatibility with Agricultural Chemicals:

Signature Manganese 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.

Wilchem takes your crop as seriously as you do!

PO BOX 77 Walkerville South Australia 5081
39 Jonal Drive Cavan South Australia 5094
ACN 055 833 111 A.B.N. 22 055 833 11

www.wilchem.com.au

Tel: (08) 8359 6855
Fax: (08) 8260 1840
Email: info@wilchem.com.au