

MANGANESE SULFATE GRANULAR

ANALYSIS

NUTRIENTS

18% Sulfur (S) as Sulfate.

31% w/w Manganese (Mn).

as manganese sulfate monohydrate ($\text{MnSO}_4 \cdot \text{H}_2\text{O}$).

IMPURITIES

Cadmium (Cd) 20 mg/kg Cd (max).

Lead (Pb) 20 mg/kg Pb (max).

Mercury (Hg) 1 mg/kg Hg (max).

This product contains heavy metal impurities. Its use may result in accumulation of cadmium and mercury in the soil. Depending on soil characteristics, irrigation water quality, plant species and variety, crop uptake of cadmium may lead to residue limits in plant and animal products greater than maximum level specified by the Australia New Zealand Food Standards Code. In pasture, the offal from grazing animals may also exceed these limits.

DIRECTIONS FOR USE

Granular Manganese Sulfate is a granulated manganese fertiliser for dry application to the soil. It is also used as an ingredient in blended fertilisers. Granular Manganese Sulfate is primarily intended for use in South Australia in planting fertilisers in crops grown on calcareous soils. Manganese deficiency most commonly occurs on alkaline (high pH) soils.

Manganese is quite abundant in the soil. Deficiency occurs because manganese is tied up or fixed by soil reactions that make it not available for plant uptake i.e., at high pH, not because the soil is low in manganese.

Manganese applied as fertiliser can be rapidly converted to plant-unavailable forms. For this reason, it is recommended that manganese be applied as foliar sprays where practicable, rather than to the soil. In horticultural crops, manganese can be applied with routine crop protection sprays. Where manganese-based fungicides such as mancozeb e.g., Dithane M45, are being used they often supply sufficient manganese to correct a deficiency.

Soil fixation is reduced when the fertiliser is banded as is the case when planting fertilisers are applied with the seed. Broadcast applications are less effective as the manganese fertilizer is exposed to more fixation sites in the soil.

Blending Manganese Sulfate Granular with fertilisers that have an acid reaction when the granules dissolve in the soil, such as MAP, may further enhance its effectiveness. Granular Manganese Sulfate is not recommended for application in solution e.g., as a foliar spray. A fine soluble grade should be chosen for such application.

APPLICATION RATES

For band applications into the soil, apply 10 to 20 kg/ha of manganese sulphate. This is typical of the rates used in planting fertilisers in grain crops in South Australia.

For broadcast applications, higher rates are suggested. Apply manganese sulfate at 50 kg/ha. Up to 100 kg/ha is recommended in some situations.

These Use Directions should be read in conjunction with the Incitec Pivot Fertilisers “Manganese” Agritopic.

SAFETY DIRECTIONS

Do not swallow. Avoid ingestion and inhaling dust.

Avoid contact with the eyes and skin.

Wash hands after use.

FIRST AID

Get medical advice/attention if you feel unwell.

ENVIRONMENT

Marine Pollutant.

Manganese is toxic to aquatic life with long lasting effects. Avoid loss to waterways.

CARE OF EQUIPMENT

This product can be corrosive to metals.

Clean equipment after use and follow manufacturer`s maintenance advice.

WARNING

Before using fertiliser seek appropriate agronomic advice. Fertiliser may burn and/or damage crops or pasture. Because climatic and soil conditions, application methods, irrigation and agricultural practices are beyond the control of Incitec Pivot Limited and cannot be foreseen, Incitec Pivot Limited accepts no responsibility whatsoever for any commercial damage, loss or other result following the use of this product whether used in accordance with directions or not, subject to any overriding statutory provision and provided that such liability under those provisions shall be limited to the replacement of the goods as supplied or the rendering again of the services that are provided. The buyer accepts and uses this product subject to these conditions.

Incitec Pivot Fertilisers (a business of Incitec Pivot Ltd ABN 42 004 080 264)

28 Freshwater Place

Southbank Vic 3006

Freecall 1800 009 832

www.incitecpivotfertilisers.com.au

