



Emperor

150 g/L Copper as nitrate
For the prevention and correction of copper deficiency
by foliar application



Zelam Limited, 15 Hudson Rd, New Plymouth 4312
Tel. +64 6 7559234 Fax. +64 6 7551174 office@zelam.com
www.zelam.com

Net Contents: 10 Litres
Packed in Cartons of 2 x 10 litres

PLEASE READ ENTIRE LABEL AND SAFETY DATA SHEET BEFORE USE.

Copper acts as a catalyst in enzymes, especially those that convert nitrogen to protein. It is important that cereals have adequate levels otherwise both quality and yield can be affected. Wheat barley and oats can be subject to losses. Soils likely to suffer from copper deficiency are reclaimed land, peat and organic soils leached or acid soils (pH<5.5), alkaline and chalk soils (pH>7.5) especially those with high organic matter content.

Soil conditions that can also limit availability are dry conditions and soils with high phosphate and soil nitrogen.

HAZARD CLASSIFICATION: 6.1D, 8.2C, 8.3A, 6.5A, 6.8B, 6.9A, 9.1A, 9.3B

APPROVED HANDLER: This product must be under the control of an approved handler during use. See MSDS for details.

RECORD KEEPING: Records of use must be kept. See MSDS for details.

DANGER: Corrosive to skin and eyes. Avoid contact with skin or eyes. May cause respiratory sensitisation from inhalation of vapours or mist and organ damage from repeated oral exposure at high doses.

WARNING: May be harmful if swallowed, inhaled or absorbed through skin.

FIRST AID: If swallowed DO NOT induce vomiting. For advice contact the National Poisons Centre 0800 POISON (0800 764 766) or a doctor immediately. If skin or hair contact occurs, remove contaminated clothing and flush skin and hair with running water. If splashed in eyes, wash out immediately with water.

PERSONAL PROTECTION: Avoid skin and eye contact and inhalation of spray mist. When mixing or applying wear waterproof gloves, eye protection, boots and overalls. DO NOT eat, drink or smoke while using. Wash splashes of concentrate from skin immediately. Remove protective clothing and wash hands and face thoroughly before meals and after work. Wash protective clothing daily after work.

ECOTOXIC: Very toxic to fish or other aquatic life. Avoid contamination of any water supply with product or empty container. Toxic to terrestrial vertebrates.

STORAGE: Store in original container, tightly closed and in a dry, cool area away from direct sunlight and foodstuffs. Protect from frost, store above 5 °C.

DISPOSAL: Triple rinse empty container and add rinsate to the spray tank. If recycling, replace cap and deliver clean container to an Agrecovery depot. Alternatively crush and bury in a suitable landfill. Dispose of product only by using according to the label, or at an approved landfill.

MATERIAL SAFETY DATA SHEET: Additional information is listed in the MSDS available from Zelam Ltd or www.zelam.com.

Approved pursuant to the HSNO Act 1996: Fertilisers (Corrosive) Group Standard HSR002569. See www.epa.govt.nz for approval conditions.

USE RATES AND TIMINGS:

Marginal deficiency: 0.4 l/ha in 200 l/ha water

Moderate deficiency: 0.8 l/ha in 200 l/ha water

In areas of severe or known deficiency a programmed approach throughout the growing season may be necessary. Apply at 0.8 l/ha and repeat every 3-4 weeks as necessary. A crop's nutrient status can only be determined accurately by tissue analysis. Headland recommends that tissue analysis results are used whenever possible to optimise micronutrient applications.

Cereals:

Apply whenever a copper deficiency is observed or expected or as a routine maintenance treatment. Applications may commence after the 3-leaf stage as soon as there is sufficient foliage to absorb the spray. Autumn applications can be made in conjunction with manganese. The ratio of 1 part copper to 5 parts manganese has been shown to be suitable in most situations. In the spring, apply up to GS32. Cereals following brassicas can be at risk.

Best results will be obtained from applications made during the early morning or evening when moisture is present in the plant. Do not apply in extremes of temperature, very bright sunlight or when crops are under drought or other stress.

Other crops:

Maize, vegetables and sugar beet can also require applications of copper. Refer to results of tissue tests. Pasture: Allow 10-14 days for pasture to absorb copper before turnout. In known deficient areas use a little and often for best results.

The use of Headland Guard 2000 at 0.1% v/v is recommended to improve spray retention and rainfastness.

MIXING AND APPLICATION:

Shake the container well before use. Half fill the spray tank with clean water, begin agitation and add the required amount of Headland Emperor. Add the rest of the water and apply without delay.

COMPATIBILITY:

Headland Emperor is physically compatible with most spray applied agricultural chemicals. Consult the Headland Product Compatibility Guide for the latest information. Read the label of the partner product carefully before mixing with Headland Emperor.

NOTICE TO BUYER: The manufacturer and vendors of Headland Emperor warrant the formulation to contain the specified active ingredients within accepted tolerance but make no warranty of any kind on the uses of material and accept no responsibility, whether the material is used in accordance with the label directions or not.

EMERGENCY PHONE: 0800 CHEMCALL – 0800 243 6225

