



PRODUCT NAME:ZINC SULPHATE

PRODUCT CODE:ZINSUL

COMMODITY CODE:28332920

COUNTRY OF ORIGIN:TURKEY

PACKAGING: 2.5KG, 5KG, 12.5KG & 25KG

TECHNICAL INFORMATION SHEET

ZINC SULPHATE—YEAST FOOD

Description

Zinc Sulphate heptahydrate granular powder is a simple source of zinc for where the nutrient is lacking. Zinc is an essential growth factor for many strains of yeast.

Benefits

- Improved yeast growth
- Faster Fermentations
- Reduction of sulphury characteristics
- Concentrated powdered product—economical in use

Principle

A healthy yeast requires many nutrients to sustain its growth. Zinc acts as a metal ion co-factor, catalysing several enzymic reactions that would otherwise not take place or at a very slow rate. An example is alcohol dehydrogenase that yeast uses to manufacture alcohol and CO₂ under fermentation conditions.

Deficiencies can cause the following symptoms:

- Long lag phase
- High pH
- Sticking fermentations
- Poor finings

Densky *et al.* (1966) showed that worts contain from 0.05 - 0.10 ppm (mg/litre) Zn and noted growth stimulation if these worts were supplemented with Zn to a level of 0.5 ppm.

Frey *et al.* (1967) found from 0.04 to 0.07 ppm of Zinc in worts and obtained stimulation of both fermentation and growth at 0.5 ppm. The study also showed that Zinc is not toxic to yeast at the 5 ppm level. (Yeast Technology, Reed & Peppler)

ZINC SULPHATE can help reduce sulphury characteristics of beers by reacting with Hydrogen sulphide produced during the fermentation to precipitate insoluble Zinc sulphide.

Application

ZINC SULPHATE can be added to the copper during the boil or may be mixed with a small volume of wort and added to the fermenter.

Rates of Use

Rates can vary depending on the specific yeast strain used and the composition in the grist. Zinc will typically be added within a range of 0.045 to 0.11 grams per hectolitre of Zinc sulphate heptahydrate. (Equivalent to 0.1 to 0.25 mg/litre as Zn²⁺)

Guidelines for use

- In case of contact with skin and eyes wash immediately with plenty of water
- Wash away spillages with plenty of water
- Precautions should be taken to avoid creating and inhaling dust.
- Read the Material Safety Data sheet prior to use

Specification

COMPOSITION	Zinc Sulphate heptahydrate, chemically pure, dissolved in water
APPEARANCE	White powder or granule
<u>Analysis</u>	
Purity Assay	99.0-108.7% w/w (as ZnSO ₄ ·7H ₂ O)
Zinc Sulphate	55.6-61.0% w/w (ZnSO ₄)
<u>Maximum Limits of Impurities</u>	
As (ppm)	<1
Pb (ppm)	<10

Regulations

This product conforms to the FCC or to the best available grade.

Storage & Shelf life

- Store in dry, cool conditions away from direct sunlight
- Keep in original container
- Keep containers sealed when not in use
- The shelf life at the recommended storage temperature is at least 6 months from the date of manufacture
- Read the Material Safety Data sheet prior to use

Technical Support

For Health & Safety information on this product, please see the Safety Data Sheet (SDS)

For support and advice on the use of this product, please call or e-mail our Technical Support:-

Telephone:- + 44 (0)115 978 5494

techsupport@murphyandson.co.uk

For up to date information regarding, Kosher, Halal, Vegetarian, GMO status, or anything not mentioned on this tech sheet please email:-

compliance@murphyandson.co.uk or call +44 (0)115 978 5494

Reference

PRODUCT	ZINC SULPHATE HEPTAHYDRATE	PRODUCT CODE	ZINSUL
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