

MATERIAL SAFETY DATA SHEET

1. IDENTIFICATION OF THE PRODUCT AND THE COMPANY

1.1 Identification of the Product

Sangral Soluble Fertilisers

A range of fast-acting soluble fertilisers containing the essential major nutrients (N, P, K and Mg) and trace elements (B, Mo, Cu, Fe, Mn and Zn).

Suitable for soil, container-grown crops and foliar feeding

Sangral 3:1:3 21+7+24 + 2MgO + Trace Elements

Sangral 3:1:1 30+10+10 + 2MgO + TE

Sangral 3:1:6 16+5+32 + 2MgO + TE

Sangral 1:1:3 8+12+36 + 4MgO + TE

Sangral 1:1:1 20+20+20 + 1MgO + TE

1.2 Company

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2. COMPOSITION/INFORMATION ON INGREDIENTS

Blend of soluble fertilisers such as: urea, potassium nitrate, mono ammonium phosphate, mono potassium phosphate, and magnesium sulphate with chelated trace elements and dye..

3. HAZARDS IDENTIFICATION

3.1 Human Health

Products are of a low toxicity but prolonged skin or eye contact may cause some irritation.

Ingestion: Small quantities are unlikely to cause toxic effects.

Large quantities may give rise to gastro-intestinal disorders.

Inhalation: Low toxicity dust but high concentration of air-borne material may cause irritation of the nose and upper respiratory tract with symptoms such as sore throat and coughing. Generally regarded as a nuisance dust with no specific official Occupational Exposure Limit (OEL). Recommend a total inhalable dust standard for nuisance dust of 10 mg/m³ as an 8 hour Time Weighted Average. See HSE Guidance Notes EH 40 and HSG 173.

Molten material: Will cause burns and inhalation of decomposition gases (e.g. in a fire) may cause serious delayed lung effects.

Hazards Identification (cont.)

3.2 Environment

As this fertiliser contains phosphate, heavy spillage may cause adverse environmental impact such as eutrophication in confined surface waters. See Section 12.

4. FIRST AID MEASURES

Product

Skin contact: wash the affected area with soap and water

Eye contact: irrigate eyes with copious amounts of eyewash solution or water for at least 10 minutes. Obtain medical advice if symptoms persist.

Ingestion: **do not** induce vomiting. Give milk or water to drink. Obtain medical attention if more than small quantities have been swallowed.

Inhalation: remove from source of exposure to dust. Keep warm and at rest. Obtain medical advice if symptoms persist.

Fire and Thermal Decomposition Products

Skin contact: wash areas in contact with molten material. Wash copiously with cold water. Seek medical advice.

Inhalation: remove from source of exposure to fumes. Keep warm and at rest.

5. FIRE-FIGHTING MEASURES

When the fertiliser **is not** directly involved in the fire use the best means available to control the fire.

When the fertiliser **is** involved:-

1. Avoid breathing the fumes. Wherever possible wear an approved breathing mask when fighting a fire or when fumes are being emitted.
2. Call the fire brigade.
3. Use plenty of water.
4. Open doors and windows to give maximum ventilation.
5. **Do not** allow molten fertiliser to run into drains.

If water containing the fertiliser enters any drain or water course, inform the appropriate water authorities immediately.

Note also first aid precautions (4).

6. ACCIDENTAL RELEASE MEASURES

Clean up spillage promptly. Sweep up and place in a clean appropriately labelled container

7. HANDLING AND STORAGE

7.1 Handling: Avoid excessive generation of dust. Avoid unnecessary exposure to the atmosphere to prevent moisture pick-up.

7.2 Storage: The basic requirements are the avoidance of involvement in a fire and contamination. Locate away from sources of heat, fire or explosion. Keep away from combustible materials and chemical substances taking particular care on farms to ensure that it is not stored near hay, grain, diesel, etc. Ensure high standard of house-keeping in the storage areas. **Do not** permit smoking or the use of naked lights in the storage area. Buildings used for storage should be dry and well ventilated; stacks therein should be at least 1 metre from walls, eaves and beams. Further storage guidance is given in HSE Guidance IND(G)230L.

8. EXPOSURE CONTROL/PERSONAL PROTECTION

8.1 Occupational exposure limits

No specific official limits

ACGIH recommended value (1995-1996) for inhalable particulate: TLV/TWA 10mg/m³.

8.2 Precautionary and engineering measures

Avoid high dust concentration and provide ventilation where necessary.

8.3 Personal Protection

Wear suitable gloves when handling the product over long periods.
Use suitable dust respirator if dust concentration is high.

After handling product, wash hands and observe good hygiene practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Pinky red powder
Odour	Odourless.
pH water solution (100g/l)	Usually around 2.0
Bulk density	Normally between 900-1100kg/m ³ .
Solubility	Soluble in water, extent depends on composition

Most formulations are hygroscopic.

10. STABILITY AND REACTIVITY

Stable under normal storage and handling conditions. Liberates ammonia when in contact with alkalis e.g. Caustic Soda, Soda Ash.

Do not weld or apply heat to equipment or plant, which may have contained the fertiliser without first washing thoroughly to remove **all** fertiliser.

11. TOXICOLOGICAL INFORMATION

11.1 General

See Section 3.1.

11.2 Toxicity Data

Product toxicity will depend on the composition.

Ammonium sulphate:

LD₅₀ (oral, rat) > 2000mg/kg

Monoammonium phosphate:

LD₅₀ (oral, rat) > 2000mg/kg

Diammonium phosphate:

LD₅₀ (oral, rat) > 2000mg/kg

Potassium chloride or sulphate:

LD₅₀ (oral, rat) > 2000mg/kg

Calcium nitrate:

LD₅₀ (oral, rat) 2100mg/kg

12. ECOLOGICAL INFORMATION

12.1 Mobility

Very soluble in water. The ammonium ion is adsorbed by soil.

12.2 Persistence/Degradability

The ammonium ion is adsorbed by soil particles. Phosphates, whether water or citrate soluble, are translocated in the soil over very short distances and are then immobilised. The dissolved potassium ion in the soil solution is adsorbed by clay minerals; where these are absent in light soils part of the potassium may be leached.

12.3 Bio-accumulation

The product does not show any bio-accumulation phenomena.

12.4 Ecotoxicity

Low toxicity to aquatic life.

13. DISPOSAL CONSIDERATIONS

Depending on the degree of contamination, dispose of by use on farm, by spreading thinly on open ground or to an authorised waste facility. Take care to avoid the contamination of watercourses and drains. Inform the appropriate water authority in the event of accidental watercourse contamination.

14. TRANSPORT INFORMATION

14.1 UN classification

Classified as non-hazardous.

15. REGULATORY INFORMATION

15.1 EC Directives

76/116/EEC (Relating to fertilisers)

15.2 National Regulations

The Fertilisers Regulations 1991 and subsequent amendments.

16. OTHER INFORMATION

This safety data sheet provides health and safety information. The product is to be used in a way consistent with best horticultural practice. Individuals handling this product should be informed under COSHH of the recommended safety precautions and should have access to this information. The product information in this data sheet is to the best of our knowledge correct at the date of publication. William Sinclair Horticulture disclaims any liability for any loss or damage resulting from reliance on this information.

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