



Safety Data Sheet

According to Regulation (EC) No 1907/2006 (REACH)

Trade name: Sangral Clarity 1-1-1

Version:1.0

Revision date: 20.09.2018

Print date: 20.09.2018

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY

1.1 Product identifier Sangral Clarity 1-1-1

1.2 Relevant identified use Horticultural Fertiliser

Industrial distribution

Industrial USE to formulate chemical product mixtures.

Professional formulation of fertiliser products

Professional USE as fertiliser at Farm-loading and spreading

Professional USE as fertiliser in Greenhouse

Professional USE as liquid fertiliser in open field (e.g. Fertigation)

Professional USE as fertiliser – maintenance of equipment

1.3 Details of the supplier of the safety data sheet:

Westland Horticulture Ltd
Bridges Road
Ellesmere Port
Chester
CH65 4LD

Sinclair Pro is a subsidiary of Westland Horticulture Ltd

Email customerservice@WestlandHorticulture.com

1.4 Emergency telephone number 01480 443789 (UK) 24hrs

2. HAZARDS IDENTIFICATION

2.1 Classification of the Substance or Mixture According to Regulation (EC) No 1272/2008:

H412 Aquatic chronic 3

2.2 Label Elements According to Regulation (EC) No 1272/2008:

Signal Word: none

Hazard statements: Harmful to aquatic life with long lasting effects.

Precautionary statements: P273 Avoid release to the environment



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3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances: N/A

3.2 Description Horticultural fertiliser NPK 20-20-20 + 2MgO + Trace Elements

Hazardous Ingredients

| Ingredient | Identifiers | Concentration %W/W | Warning Symbols | Regulation (EC) No 1272/2008 (CLP) | |
|------------------------------|----------------|--------------------|---|--|------------------------------|
| Potassium nitrate | CAS: 7757-79-1 | <20 |  | Ox. Sol. 3 | H272 |
| Copper sulphate pentahydrate | CAS: 7758-99-8 | <0.1 | N/A | Acute Tox. 4 Skin Corr/Irrit.2 Eye Dam./Irrit 2 Aquatic Chronic 1 | H302 H315 H319 H410 |

Additional information: See Section 16 for the full text of the H statements declared above

4. FIRST AID MEASURES

4.1 Description of first aid measures

General information: Have the product container, label or Material Safety Data Sheet with you when calling a poison control center or physician, or going for treatment.

Inhalation: Move person to fresh air.
Keep patient warm and at rest.
Get medical advice if symptoms persist or develop

Skin Contact: Wash off with soap and plenty of water.
Get medical advice if irritation persists or develop



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Eye Contact: Rinse with plenty of water, also under the eyelids, for at least 15 minutes.
Remove contact lenses and continue flushing.
Get medical attention if symptoms persist or develop

Ingestion: Do not induce vomiting unless directed to do so by medical personnel
Rinse out mouth and then drink water
Get medical attention if symptoms persist or develop

4.2 Most important symptoms and effects, both acute and delayed

Information not available

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically. Contact poison centre immediately if large quantities have been ingested or inhaled. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours

5. FIRE FIGHTING MEASURES

5.1 Extinguishing Media:

Use flooding quantities of water for extinction.

5.2 Specific Hazards Arising From the Substance or Mixture:

Fire will produce hazardous products of combustion.

Exposure to decomposition products may be a hazard to health. These may include carbon dioxide, carbon monoxide, nitrogen oxides and ammonia.

5.3 Advice for Fire Fighters:

Wear full protective clothing and self-contained breathing apparatus as required.

Additional Information:

Cool endangered containers with water spray

Do not allow molten material or run-off from firefighting to enter drains or water courses.

If fire run-off water enters drains or water course, inform the appropriate water authorities immediately. This material is harmful to aquatic life with long lasting effects.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal Precautions, Protective Equipment and Emergency Procedures:

Avoid formation / breathing of dust



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Avoid contact with skin and eyes
Ensure adequate ventilation
Use Personal Protective Equipment: coveralls, gloves and eye/face protection

6.2 Environmental Precautions:

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers

6.3 Methods and Materials for Containment and Cleaning Up:

Vacuum or sweep up material.
Place into suitable labelled containers for disposal according to local / national regulations

Prepared solution Absorb using inert materials such as sand, Fuller's Earth or spillage pillows. Transfer to a suitable labelled container. Dispose of by a licenced waste disposal contractor

Additional information: If large quantities of the product contaminates water courses or drains (including via contaminated soil & vegetation), inform respective authorities.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Handling:

- Prevent dust formation and inhalation
- Avoid contact with eyes and skin
- Wear gloves when handling the product over long periods of time
- Do not eat, drink or smoke when using this product
- Take off contaminated clothing and wash before reuse
- Avoid unnecessary exposure to atmosphere to prevent moisture pick up
- Wash hands and observe good hygiene practice after handling this product

7.2 Conditions for safe storage, including any incompatibilities

- Keep containers closed tightly in a dry, cool and well-ventilated place.
- Keep product in original labelled containers
- Storage areas should be appropriately sited to prevent contamination of drains or watercourses
- Keep out of the reach of children



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7.3 Specific End Uses:

Use as a fertiliser according to the instruction on the label

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control Parameters

Ingredients with limit values that require monitoring at the workplace: N/A

| Ingredient | Work Exposure Limit (WEL) | |
|------------------------------|--|---|
| | Long-term Exposure Limit (8-hr TWA reference period) | Short-term Exposure Limit (15 minute reference period) |
| Potassium nitrate | Total inhalable 36.7mg/m ³ Dermal 20.8mg/kg/bw/day | |
| Copper sulphate pentahydrate | Dermal 137mg/kg/bw/day | |

8.2 Exposure Controls

8.2.1 Appropriate engineering controls: No special ventilation requirements.

Avoid high dust concentration and provide ventilation where necessary

8.2.2 Personal protective equipment: The use of technical measures should always have priority over the use of personal protective equipment

A risk assessment based on the task being performed and the risks involved should be carried out to determine personal protection equipment required
When selecting personal protective equipment, seek appropriate professional advice

Personal protective equipment should be certified to appropriate standards

Respiratory Protection: Not necessary if room is well ventilated

Use suitable dust respirator if dust concentration is high (Filter P2)

Hand Protection: Wear suitable gloves when handling the product over long periods or if a risk assessment indicates this is necessary. Gloves complying with EN420

Eye Protection: Wear eye protection when a risk assessment indicates this is necessary to avoid exposure to dust. Safety glasses complying with EN166 as a minimum

Skin and Body Protection: Protective work clothing

8.2.3 Environmental exposure controls: N/A



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9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance: solid

Physical state: solid

Colour: green

Odour: faint

Odour threshold: none known

9.2 Other information:

| | Value | Concentration | Method | Temperature | Pressure | Remark |
|--|------------------------|---------------|--------|-------------|----------|--------|
| pH | 4.2-5.2 | - | - | 20 °C | - | - |
| Melting point/freezing point | - | - | - | - | - | - |
| Initial boiling point/boiling range | - | - | - | - | - | - |
| Flash point | - | - | - | - | - | - |
| Evaporation rate | - | - | - | - | - | - |
| Flammability (solid, gas) | - | - | - | - | - | - |
| Upper/lower flammability or explosive limits | - | - | - | - | - | - |
| Upper explosive limits | - | - | - | - | - | - |
| Lower explosive limits | - | - | - | - | - | - |
| Vapour pressure | - | - | - | - | - | - |
| Vapour density | - | - | - | - | - | - |
| Relative density | 0.92kg/dm ³ | - | - | - | - | - |
| Solubility(ies) | Soluble in water | - | - | - | - | - |
| Partition coefficient: n-octanol/water | - | - | - | - | - | - |
| Auto-ignition temperature | - | - | - | - | - | - |
| Decomposition temperature | - | - | - | - | - | - |
| Viscosity | - | - | - | - | - | - |
| Viscosity, dynamic | - | - | - | - | - | - |
| Viscosity, cinematic | - | - | - | - | - | - |
| Explosive properties | - | - | - | - | - | - |
| Oxidising properties | - | - | - | - | - | - |
| EC (mS/cm) | 0.7 | - | - | 20°C | - | - |



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Physical hazards: none known

10. STABILITY AND REACTIVITY

10.1 Reactivity: Stable under normal conditions of storage, handling and use

10.2 Chemical Stability: Stable under normal conditions of storage, handling and use

10.3 Possible hazardous reactions: Hazardous reactions will not occur under normal transport or storage conditions.

10.4 Conditions To Avoid: Avoid contamination by any source, including metals, dust and organic materials.

10.5 Incompatible Materials: Avoid Alkalis, combustible materials, and reducing materials, Urea reacts with calcium hypochlorite or sodium hypochlorite to form explosive nitrogen trichloride. Avoid organic materials and acids.

10.6 Hazardous decomposition products: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

11. TOXICOLOGICAL INFORMATION

Toxicokinetics, metabolism and distribution

11.1 Information on toxicological effects

The product has not been tested.

Acute toxicity

Practical experience / human evidence:

Animal data:

Potassium nitrate

LD50 oral (Rat) : >3000 mg/kg

LD50 dermal (Rat) : >5000mg/kg



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Copper sulphate pentahydrate
LD50 oral (Rat) >400mg/kg
LD50 dermal (Rat) >2000mg/kg

Acute Toxicity: Not expected to be toxic, however if large quantities are ingested, seek medical advice

Skin corrosion/Irritation: The mixture is not classified as skin irritant based on formulation components

Eye damage/Irritation: The mixture may cause eye irritation.

Respiratory or Skin Sensitization: The mixture is not classified as a sensitizer based on formulation components

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

The mixture is not classified as mutagenic, carcinogen, reproductive toxic or aspiration hazard based on formulation components

Other information: May cause effects on the blood system resulting in the formation of methaemoglobin. The effects may be delayed. Seek medical advice

12. ECOLOGICAL INFORMATION

The mixture has not been tested.

12.1 Toxicity: The toxicity data has been derived from components

Potassium nitrate

- **Toxicity To Fish:** LC50 *Oncorhynchus mykiss* (rainbow trout), >1378 mg/l, 96h
- **Toxicity To Aquatic Invertebrates:** EC50 *Daphnia magna* (water flea), 490 mg/l, 48h
- **Toxicity To Aquatic Plants:** EbC50 *Pseudokirchneriella subcapitata* (green algae), 1700 mg/l, 240h



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Copper sulphate pentahydrate

- **Toxicity To Fish:** Acute LC50 *Oncorhynchus mykiss* (rainbow trout), 0.09 mg/l, 96h
- **Toxicity To Aquatic Plants:** Acute EC50 *Pseudokirchneriella subcapitata* (green algae), 0.0211 mg/l, 4d

Harmful to aquatic life with long lasting effects

12.2 Persistence and Degradability: No information available on mixture

12.3 Bioaccumulative Potential: No information available on mixture

12.4 Mobility in Soil: No information available on mixture

12.5 PBT and vPvB assessment: No information available on mixture

12.6 Other adverse effects: Information not available

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product: Do not contaminate ponds, waterways or ditches with significant quantities of product
Check if agriculture use is possible. Dispose of by use on farm as a fertiliser, by spreading thinly on open ground
Where possible recycling is preferred to disposal or incineration.
If recycling is not practicable, dispose of in compliance with local regulations.

Contaminated Packaging: Empty remaining contents.
Completely empty containers can be put in the bin or disposed of in compliance with applicable local regulations

14. TRANSPORT INFORMATION



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| | Land transport (ADR/RID) | Inland waterway transport (ADN) | Sea transport (IMDG) | Air transport (ICAO-TI / IATA-DGR) |
|--|-----------------------------|--|-------------------------|--|
| 14.1 UN No. | Not dangerous goods | Not dangerous goods | Not dangerous goods | Not dangerous goods |
| 14.2 UN Proper shipping name | Not dangerous goods | Not dangerous goods | Not dangerous goods | Not dangerous goods |
| 14.3 Transport hazard class(es) | Not dangerous goods | Not dangerous goods | Not dangerous goods | Not dangerous goods |
| Hazard label(s) | Not dangerous goods | Not dangerous goods | Not dangerous goods | Not dangerous goods |
| 14.4 Packing group | Not dangerous goods | Not dangerous goods | Not dangerous goods | Not dangerous goods |
| 14.5 Environmental hazards | Not dangerous goods | Not dangerous goods | Not dangerous goods | Not dangerous goods |

14.6 Special precautions for user: None known

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Additional information: None known

15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance of mixture:

This mixture is classified in accordance with Regulation 1272/2008.

15.2 Chemical Safety Assessment: A Chemical Safety Assessment has not been undertaken for this mixture

16. OTHER INFORMATION



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16.1 Indication of changes

16.2 Abbreviations and Acronyms

| | |
|------------------------------|--|
| ADR | International Carriage of Dangerous Goods by Road |
| CAS No | Chemicals Abstract Service Registry Number |
| Directive 67/548/EEC | Dangerous Substances Directive (DSD) |
| EC No | European Community Number for chemicals within EU regulations |
| IATA-DGR | Dangerous Goods Regulations by the International Air Transport Association |
| IMDG Code | International Maritime Dangerous Goods Code |
| PBT | Persistent, Bioaccumulative and Toxic Properties |
| Regulation (EC) No 1272/2008 | Classification, Labelling and Packaging (CLP) |
| RID | International Transport of Dangerous Goods by Rail |
| vPvB | Very Persistent and Very Bioaccumulative Properties |

16.3 Key literature references and sources for data: Westland Horticulture Ltd

16.4 Classification for mixtures and used evaluation method according to regulation (EC) 1207/2008 [CLP]: See SECTION 2.1 (classification).

16.5 Relevant H- and EUH-phrases (number and full text):

| | |
|--------|---|
| H272 | May intensify fire; oxidiser |
| H360FD | May damage fertility. May damage the unborn child |

16.6 Training advice: Follow the instructions

16.7 Further information

Before using this product, ensure that you read and understand its label

MSDS information:

This Safety Data Sheet is prepared in compliance with Regulation 1272/2008 and Annex I of the REACH regulation 453/2010.

This safety data sheet provides health and safety information. This product is to be used in applications with best use 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 as at the date of publication. Westland Horticulture Limited does not accept responsibility for damage caused by incorrect use of this information.

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Training and related advice:

This document contains important information to ensure the safe storage, handling and use of this product. It is the responsibility of your organisation to ensure that the information contained in this document is communicated to the end user and that all necessary training to enable the product to be used correctly has been given.

For further information please contact Westland Horticulture Ltd, 14 Granville Industrial Estate, Granville Road, Dungannon, County Tyrone, BT70 1NJ.