



## SAFETY DATA SHEET

## SMART ROTATIONS 1 Field Vegetables and Pulses

According to Regulation (EC) No 1907/2006, Annex II, as amended. Commission Regulation (EU) No 2015/830 of 28 May 2015.

|   |
|---|
| SECTION 1: Identification of the substance/mixture and of the company/undertaking |
|---|

1.1. Product identifier

Product name SMART ROTATIONS 1 Field Vegetables and Pulses

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses Plant biofertiliser

Uses advised against No specific uses advised against are identified.

1.3. Details of the supplier of the safety data sheet

Supplier

PlantWorks Ltd.  
Unit 930, Cornforth Drive  
Kent Science Park  
Sittingbourne, Kent  
ME9 8PX

1.4. Emergency telephone number

Emergency telephone +44 (0)1795 411527 (Mon-Fri 9am-5pm).

|                                   |
|-----------------------------------|
| SECTION 2: Hazards identification |
|-----------------------------------|

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards Not Classified

Health hazards Not Classified

Environmental hazards Not Classified

2.2. Label elements

Pictogram Not Required

Precautionary statements P102 Keep out of reach of children.  
P264 Wash contaminated skin thoroughly after handling.  
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P337+P313 If eye irritation persists: Get medical advice/ attention.

P501 Dispose of contents/ container in accordance with national regulations.

Supplementary precautionary statements    P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.  
P261 Do not breathe dust

### 2.3. Other hazards

This product does not contain any substances classified as PBT or vPvB.

The fungi in this mixture are considered to belong to hazard group 1 as defined by the Advisory Committee on Dangerous Pathogens (ACDP) as "a biological agent unlikely to cause human disease". It should NOT be assumed. However, that these organisms will be innocuous in all situations or that infections can never occur. The mixture should therefore not be used by, or in the presence of immunocompromised persons. This product does not meet the criteria for classification as hazardous as defined in the Regulation EC 1272/2008 and in Directive 67/548/EEC.

## SECTION 3: Composition/information on ingredients

### 3.2. Mixtures

|  |                      |         |
|--|----------------------|---------|
| Silicon dioxide<br>CAS number: 7631-86-9<br>Substance with National workplace exposure limits.             | EC number: 231-545-4 | 20-40%  |
| Classification<br>Not Classified   |                      |         |
| Aluminium Oxide<br>CAS number: 1344-28-1<br>Substance with National workplace exposure limits.             | EC number: 215-691-6 | 20-40 % |
| Classification<br>Not Classified   |                      |         |
| Quartz (SiO <sub>2</sub> )<br>CAS number: 14808-60-7<br>Substance with National workplace exposure limits. | EC number: 238-878-4 | 20-40 % |
| Classification<br>Not Classified   |                      |         |
| Maxstim<br>CAS number: N/A<br>Substance with National workplace exposure limits.                           | EC number: N/A       | 2-4%    |
| Classification<br>Not Classified   |                      |         |

The full text for all hazard statements is displayed in Section 16.

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

|                                |  |
|--------------------------------|--|
| General information<br>medical | Get medical attention if any discomfort continues. Show this Safety Data Sheet to the personnel. |
| Inhalation                     | Move affected person to fresh air and keep warm and at rest in a position comfortable for        |

breathing. Loosen tight clothing such as collar, tie or belt. Get medical attention if symptoms are severe or persist.

|              |   |
|--------------|---|
| Ingestion    | Rinse mouth thoroughly with water. Get medical advice/attention if you feel unwell. Do not induce vomiting unless under the direction of medical personnel. |
| Skin contact | Rinse with water.   |
| Eye contact  | Rinse with water. Do not rub eye. Remove any contact lenses and open eyelids wide apart. Get medical attention if any discomfort continues.                 |

Protection of first aiders First aid personnel should wear appropriate protective equipment during any rescue.

#### 4.2. Most important symptoms and effects, both acute and delayed.

|              |  |
|--------------|--|
| Inhalation   | No specific symptoms known.                      |
| Ingestion    | No specific symptoms known.                      |
| Skin contact | Prolonged contact may cause dryness of the skin. |
| Eye contact  | Irritating to eyes.                              |

#### 4.3. Indication of any immediate medical attention and special treatment needed

Notes for the doctor Treat symptomatically.

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

Suitable extinguishing media The product is not flammable. Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog. Use fire-extinguishing media suitable for the surrounding fire.

Unsuitable extinguishing media None known.

#### 5.2. Special hazards arising from the substance or mixture

|                               |   |
|-------------------------------|---|
| Specific hazards              | None known.   |
| Hazardous combustion products | Thermal decomposition of some ingredients may give off fumes. Do not breathe fumes. |

#### 5.3. Advice for firefighters

Protective actions during firefighting Avoid breathing fire gases or vapours. Evacuate area. Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. Cool containers exposed to flames with water until well after the fire is out. Control run-off water by containing and keeping it out of sewers and watercourses. If risk of water pollution occurs, notify appropriate authorities.

Special protective equipment Self-contained breathing apparatus and full protective body clothing must be worn in case of fire.

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Provide adequate ventilation. Avoid contact with eyes. Wear protective clothing as described in Section 8 of this safety data sheet.

6.2. Environmental precautions

Environmental precautions      Avoid pollution of sewers and watercourses.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up      Contain and sweep up spillages. Place unusable material in clearly labelled containers of plastic bags for disposal. Wet residues are slippery, wash floor remove all traces.

6.4. Reference to other sections

Reference to other sections      For personal protection, see Section 8. See Section 11 for additional information on health hazards. See Section 12 for additional information on ecological hazards. For waste disposal, see Section 13.

## SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions      Keep out of reach of children. Read and follow manufacturer's recommendations. Keep away from food, drink and animal feeding stuffs. Wear protective clothing as described in Section 8 of this safety data sheet. Keep pack tightly sealed when not in use

Advice on general occupational hygiene      Wash skin thoroughly after handling. Take off contaminated clothing. Wash contaminated clothing before reuse.

## SECTION 8: Exposure Controls/personal protection

8.1. Control parametersOccupational exposure limits**Silicon dioxide**

Long-term exposure limit (8-hour TWA): WEL 6 mg/m<sup>3</sup>    inhalable dust

Long-term exposure limit (8-hour TWA): WEL 2.4 mg/m<sup>3</sup>    respirable dust

**Aluminium Oxide**

Long-term exposure limit (8-hour TWA): WEL 4 mg/m<sup>3</sup>    respirable dust

Long-term exposure limit (8-hour TWA): WEL 10 mg/m<sup>3</sup>    inhalable dust

**Quartz (SiO<sub>2</sub>)**

Long-term exposure limit (8-hour TWA): WEL 6 mg/m<sup>3</sup>    inhalable dust

Long-term exposure limit (8-hour TWA): WEL 2.4 mg/m<sup>3</sup>    respirable dust

**Maxstim**

Not known

8.2. Exposure controls

|                                  |   |
|----------------------------------|---|
| Appropriate engineering controls | Provide adequate ventilation.   |
| Eye/face protection              | Avoid contact with eyes.  |
| Hand protection                  | No specific hand protection recommended, nitrile gloves are advised.  |
| Hygiene measures                 | Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product. Wash contaminated clothing before reuse.                      |
| Respiratory protection           | No specific recommendations. Provide adequate ventilation. Large Spillages: If ventilation is inadequate, suitable respiratory protection must be worn. |
| Environmental exposure controls  | Keep container tightly sealed when not in use.  |

## SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

|            |       |
|------------|-------|
| Appearance | Solid |
| Colour     | Gray  |

|  |   |
|--|---|
| Odour  | Medium  |
| Odour threshold                              | Not available.  |
| pH   | Not available.  |
| Melting point                                | Not available.  |
| Initial boiling point and range              | Not available.  |
| Flash point                                  | Not available.  |
| Evaporation rate                             | Not available.  |
| Upper/lower flammability or explosive limits | Not available.  |
| Vapour pressure                              | Not available.  |
| Vapour density                               | Not available.  |
| Relative density                             | 0.9g/ml   |
| Solubility(ies)                              | Not known.  |
| Partition coefficient                        | Not available.  |
| Auto-ignition temperature                    | Not available.  |
| Decomposition Temperature                    | Not available.  |
| Viscosity                                    | Not applicable.   |
| Explosive properties                         | Not considered to be explosive.                             |
| Oxidising properties                         | Does not meet the criteria for classification as oxidising. |

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Reactivity See the other subsections of this section for further details.

### 10.2. Chemical stability

Stability Stable at normal ambient temperatures and when used as recommended. Stable under the prescribed storage conditions.

### 10.3. Possibility of hazardous reactions

Possibility of hazardous reactions  
No potentially hazardous reactions known.

### 10.4. Conditions to avoid

Conditions to avoid There are no known conditions that are likely to result in a hazardous situation.

### 10.5. Incompatible materials

Materials to avoid No specific material or group of materials is likely to react with the product to produce a hazardous situation.

### 10.6. Hazardous decomposition products

Hazardous decomposition products Does not decompose when used and stored as recommended. Thermal decomposition or combustion products may include the following substances: Harmful gases or vapours.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

#### Acute toxicity - oral

Notes (oral LD<sub>50</sub>) Based on available data the classification criteria are not met.

#### Acute toxicity - dermal

Notes (dermal LD<sub>50</sub>) Based on available data the classification criteria are not met.

Acute toxicity - inhalation

notes (inhalation LC<sub>50</sub>) Based on available data the classification criteria are not met.

Skin corrosion/irritation

Animal data Based on available data the classification criteria are not met.

Serious eye damage/irritation

Serious eye damage/irritation Causes possible eye irritation.

Respiratory sensitisation

Respiratory sensitisation Based on available data the classification criteria are not met.

Skin sensitisation

Skin sensitisation Causes possible skin irritation.

Germ cell mutagenicity

Genotoxicity - in vitro Based on available data the classification criteria are not met.

Carcinogenicity

Carcinogenicity Based on available data the classification criteria are not met.

Reproductive toxicity

Reproductive toxicity - fertility Based on available data the classification criteria are not met.

Reproductive toxicity - development Based on available data the classification criteria are not met.

Specific target organ toxicity - single exposure

STOT - single exposure Not classified as a specific target organ toxicant after a single exposure.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure Not classified as a specific target organ toxicant after repeated exposure.

Aspiration hazard

Aspiration hazard Not relevant. Solid.

General information The severity of the symptoms described will vary dependent on the concentration and the length of exposure.

Inhalation No specific symptoms known.

Ingestion No specific symptoms known.

Skin contact Prolonged contact may cause dryness of the skin.

Eye contact Irritating to eyes.

Route of entry Ingestion Inhalation Skin and/or eye contact

Target organs No specific target organs known.

**SECTION 12: Ecological Information**

## Ecotoxicity

The product components are not classified as environmentally hazardous. However, this does not exclude the possibility of frequent spills can have harmful or damaging effect on the environment.

12.1. Toxicity

## Toxicity

Based on available data the classification criteria are not met.

12.2. Persistence and degradability

Persistence and degradability                      The degradability of the product is not known.

### 12.3. Bioaccumulative potential

Bioaccumulative potential                      No data available on bioaccumulation.

Partition coefficient                              Not available.

### 12.4. Mobility in soil

Mobility    No data available.

### 12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment              This product does not contain any substances classified as PBT or vPvB.

### 12.6. Other adverse effects

Other adverse effects                      None known.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

General information                      The generation of waste should be minimised or avoided wherever possible. Reuse or recycle products wherever possible. This material and its container must be disposed of in a safe way. When handling waste, the safety precautions applying to handling of the product should be considered.

Disposal methods                      Packaging: Reuse or recycle products wherever possible. Dispose of waste to licensed waste

## SECTION 14: Transport information

General    The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, ADR/RID).

### 14.1. UN number

Not applicable.

### 14.2. UN proper shipping name

Not applicable.

### 14.3. Transport hazard class(es)

Not required

### 14.4. Packing group

Not applicable.

### 14.5. Environmentally hazardous substance/marine pollutant

Not applicable.

### 14.6. Special precautions for user

Not applicable.

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

Not applicable.

## SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

National regulations Health and Safety at Work etc. Act 1974 (as amended). The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009 (SI 2009 No. 1348) (as amended) ["CDG 2009"]. EH40/2005 Workplace exposure limits.

EU legislation Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended).  
Commission Regulation (EU) No 2015/830 of 28 May 2015.  
Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended).

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

Inventories

EU - EINECS/ELINCS

None of the ingredients are listed or exempt.

## SECTION 16: Other information

Abbreviations and acronyms ADR: European Agreement concerning the International Carriage of Dangerous Goods by used in the safety data sheet Road.

ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways.

RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail.

IATA: International Air Transport Association.

ICAO-TI: Technical Instructions for the Safe Transport of Dangerous Goods by Air.

IMDG: International Maritime Dangerous Goods.

CAS: Chemical Abstracts Service. ATE: Acute Toxicity Estimate.

LC<sub>50</sub>: Lethal Concentration to 50 % of a test population.

LD<sub>50</sub>: Lethal Dose to 50% of a test population (Median Lethal Dose).

EC<sub>50</sub>: 50% of maximal Effective Concentration.

PBT: Persistent, Bioaccumulative and Toxic substance.

vPvB: Very Persistent and Very Bioaccumulative.

Classification abbreviations Eye Irrit. = Eye irritation and acronyms

Training advice Read and follow manufacturer's recommendations.

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.