



# SUMITOMO CHEMICAL (U.K.) PLC

## SAFETY DATA SHEET SMARTGRASS®

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

#### 1.1. Product identifier

Product name	SMARTGRASS®
Name	Gibberellic acid A3, 400 g/kg water soluble granules
GIFAP Code	SG
Synonyms; trade names	

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

Identified uses	Plant growth regulator (agricultural use)
Uses advised against	Not for public use

#### 1.3. Details of the supplier of the safety data sheet

Supplier	Sumitomo Chemical (UK) Plc Hythe House 200 Shepherds Bush Road Hammersmith London W6 7NL <a href="mailto:regulatory@scuk.sumitomo-chem.co.uk">regulatory@scuk.sumitomo-chem.co.uk</a> +44 (0)203 538 3099
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#### 1.4. Emergency telephone number

Emergency telephone	+44 (0)1235 239670 (EU)
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### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### Classification (EC 1272/2008)

Physical hazards	None
Health hazards	None
Environmental hazards	None

#### 2.2. Label elements

Pictogram	None
Signal word	None
Hazard statements	None
Precautionary statements	P501 Dispose of contents/container to a licensed hazardous-waste disposal contractor or collection site except for empty clean containers which can be disposed of as non-hazardous waste.
Supplemental label information	EUH 401: To avoid risks to human health and the environment, comply with the instructions for use.
Special risks and safety precautions	SP 1: Do not contaminate water with the product or its container. (Do not clean

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(Commission Regulation (EU) 547/2011): application equipment near surface water.)  
 General provisions

Special risks and safety precautions (Commission Regulation (EU) 547/2011): None  
 Specific safety precautions

**2.3. Other hazards** None known.

### SECTION 3: Composition/information on ingredients

#### 3.1. Substances

Classification according to Regl 1272/2008

#### 3.2 Mixtures

Classification according to Regl 1272/2008

<b>GA3: (3S,3aS,4S,4aS,7S,9aR,9bR,12S)-7,12-dihydroxy-3-methyl-6-methylene-2-oxoperhydro-4a,7-methano-9b, 3-propenoazuleno[1,2-b]furan-4-carboxylic acid</b>	<b>40%</b>
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CAS number: 77-06-5

EC number: 201-001-0

#### Classification

None

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

**Composition comments** All percentages displayed expressed as weight/weight.

**Other information** Code ID : ABG-3206

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

##### General information

In all cases of doubt, seek medical attention.

##### Inhalation

Move to fresh air. If symptoms persist, seek medical advice.

##### Ingestion

Rinse mouth. Never induce vomiting in unconscious or confused persons. Always seek medical attention

##### Skin contact

Remove contaminated clothing. Wash skin immediately with water.

##### Eye contact

Rinse thoroughly with plenty of water. Eyelids should be held away from the eyeball to ensure thorough rinsing. Seek medical advice if irritation develops.

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

##### Human health

Dust may be irritating to the respiratory tract and cause symptoms of bronchitis.

##### General information

No typical symptoms and effects known.

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

##### Notes for the doctor

Symptomatic treatment is advised.

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

##### Suitable extinguishing media

Dry chemical powder. Carbon dioxide (CO<sub>2</sub>). Sand. Foam. Water.

##### Unsuitable extinguishing media

None known.

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

##### Specific hazards

No hazardous combustion products known in contact with fire.

#### 5.3. Advice for firefighters

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<b>Protective actions during firefighting</b>	Water used to extinguish a fire should not be allowed to enter the drainage system or watercourses.
<b>Special protective equipment for firefighters</b>	Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing and eye/face protection.

### SECTION 6: Accidental release measures

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

<b>For non-emergency personnel</b>	Do not breathe dust. Wear protective gloves, safety goggles or face shield, and suitable protective clothing. Remove ignition sources. Evacuate the danger area.
<b>For emergency responders</b>	Do not breathe dust. Wear protective nitrile gloves, safety goggles or face shield, and suitable protective clothing. Remove ignition sources. Evacuate the danger area or consult an expert.

#### 6.2. Environmental precautions

<b>Environmental precautions</b>	Do not allow escape into sewage system or watercourses. Do not wash residues into drains or other waterways.
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#### 6.3. Methods and material for containment and cleaning up

<b>Containment of a spill</b>	Do not allow escape into sewage system or watercourses.
<b>Methods for cleaning up</b>	Clean up spills immediately. Sweep up and place into sealable containers. Dig up heavily contaminated soil and place into drums. Use a damp cloth to clean floors and other objects, and also place in sealable container. Dispose of all waste and contaminated clothing in the same manner as waste chemicals (i.e. via an authorized disposal facility). Do not wash residues into drains or other waterways.

#### 6.4. Reference to other sections

<b>Reference to other sections</b>	For personal protection see section 8.
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### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

<b>Fire and explosion prevention</b>	No specific recommendations.
<b>Usage precautions</b>	Follow precautions for safe handling described in this safety data sheet. Avoid spilling. Do not allow to escape into sewage system or water courses.
<b>Advice on general occupational hygiene</b>	Do not eat, drink or smoke when using this product.

#### 7.2. Conditions for safe storage, including any incompatibilities

<b>Storage precautions</b>	Store in a dry and cool place. Keep container in a well-ventilated place. Keep away from food, drink and animal feedingstuffs. Do not drink, eat and smoke in work areas.
<b>Other information</b>	Do not mix with water (except for the normal preparation).

#### 7.3. Specific end use(s)

<b>Specific end use(s)</b>	See label on the container.
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### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

<b>Occupational exposure limits</b>	There is no national exposure limit for this product. No chemical safety report is required for this kind of product.
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#### 8.2. Exposure controls

<b>Appropriate engineering controls</b>	Provide adequate ventilation.
<b>Eye/face protection</b>	Wear safety goggles or face shield.
<b>Hand protection</b>	Wear protective nitrile gloves.

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<b>Other skin and body protection</b>	Wear suitable protective clothing.
<b>Hygiene measures</b>	Wash contaminated clothing before reuse.
<b>Respiratory protection</b>	In case of dust formation, use dust mask.

### SECTION 9: Physical and chemical properties

#### 9.1 Information on basic physical and chemical properties

<b>Name</b>	Gibberellic acid A3, 40% water soluble granules
<b>Appearance</b>	Granules (Visual assessment)
<b>Dust content</b>	Nearly dust free (0.001 g dust/30 g product) (CIPAC MT171) Attrition resistance: 99.8% (CIPAC MT178)
<b>Colour</b>	White (Visual assessment)
<b>Odour</b>	Odourless (Olfactory assessment)
<b>Odour threshold</b>	Not determined
<b>pH</b>	2.8 (1% dilution in water, room temperature) (CIPAC MT 75.3)
<b>Melting point</b>	Not applicable
<b>Initial boiling point and range</b>	Not determined
<b>Flash point</b>	Not applicable
<b>Evaporation rate</b>	Not applicable
<b>Flammability (solid, gas)</b>	Not flammable (OPPTS 830.6315)
<b>Upper/lower flammability or explosive limits</b>	Not determined
<b>Vapour pressure</b>	Not determined (GA3: $1 \times 10^{-5}$ Pa at 25°C, extrapolated) (OECD 104)
<b>Vapour density</b>	Not determined
<b>Relative density</b>	Not determined
<b>Bulk density</b>	Pour density: 0.53 g/ml Tap density: 0.55 g/ml (CIPAC MT 186)
<b>Solubility(ies)</b>	Soluble in water. (Solubility of GA3 = 4.6 g/l, 25°C) (EEC A.6)
<b>Solubility in other solvents</b>	Not determined
<b>Partition coefficient</b>	Not determined
<b>Auto-ignition temperature</b>	>400°C (EEC A.16)
<b>Decomposition temperature</b>	The active substance decomposes at temperatures >200°C (OECD 113)
<b>Viscosity</b>	Dynamic; similar to that of water (OPPTS 830.7100) Kinematic; not applicable
<b>Explosive properties</b>	Not explosive (OPPTS 830.6316)
<b>Oxidising properties</b>	Not oxidising (OPPTS 830.6314)

#### 9.2. Other information

<b>Relative vapour density (air = 1)</b>	Not determined.
<b>Surface Tension</b>	Not determined.

### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

<b>Reactivity</b>	Stable under recommended storage and handling conditions. See also section 7.
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#### 10.2. Chemical stability

<b>Stability</b>	Stable for a minimum of 2 years under recommended storage and handling conditions. See section 7.
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#### 10.3. Possibility of hazardous reactions

<b>Possibility of hazardous reactions</b>	None known.
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#### 10.4. Conditions to avoid

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**Conditions to avoid** Avoid high temperature, light, humidity.

### 10.5. Incompatible materials

**Materials to avoid** None known.

### 10.6. Hazardous decomposition products

**Hazardous decomposition products** No hazardous combustion products known in case of fire. See also section 5.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

<b>Name</b>	Gibberellic acid A3, 40% water soluble granules
<b><u>Acute toxicity - oral</u></b>	
<b>Acute toxicity - oral</b>	LD <sub>50</sub> rat: >5000 mg/kg (OECD 425)
<b><u>Acute toxicity - dermal</u></b>	
<b>Acute toxicity - dermal</b>	LD <sub>50</sub> rat: >5000 mg/kg (OECD 402)
<b><u>Acute toxicity - inhalation</u></b>	
<b>Acute toxicity - inhalation</b>	LC <sub>50</sub> rat (4 hours): >2.269 mg/l (nose only) (OECD 403)
<b><u>Skin corrosion/irritation</u></b>	
<b>Skin corrosion/irritation</b>	Weakly irritating (OECD 404)
<b><u>Serious eye damage/irritation</u></b>	
<b>Serious eye damage/irritation</b>	Mildly irritating (OECD 405)
<b><u>Skin sensitisation</u></b>	
<b>Skin sensitisation</b>	Not sensitizing (maximisation test) (OECD 406)

### Toxicological information on ingredients

<b>Name</b>	Active substance, Gibberellic acid A3, technical grade
<b>Other toxicological information</b>	Genotoxicity: negative (OECD 471, 473, 476, US EPA40-160&792) Teratogenicity (rat, rabbit): NOAEL = 1000 mg/kg bw/d (OECD 414)
<b>General information</b>	Based on the available data, no classification criteria are met for any of these hazard classes.
<b>Route of exposure</b>	This product is for agricultural use; therefore, the most probable routes of exposure are via skin or inhalation.

## SECTION 12: Ecological information

### 12.1. Toxicity

<b>Name</b>	Gibberellic acid A3, 40% water soluble granules
<b><u>Acute aquatic toxicity</u></b>	
<b>Acute toxicity - aquatic invertebrates</b>	EC <sub>50</sub> 48 hours: >140 mg/l <i>Daphnia magna</i> (OECD 202)
<b>Acute toxicity - algae</b>	EC <sub>b50</sub> & EC <sub>r50</sub> 72 hours: >92 mg/l (mean measured concentration), <i>Pseudokirchneriella subcapitata</i> NOECr&b: 92 mg/l, <i>Pseudokirchneriella subcapitata</i> (OECD 201)
<b>Aquatic plant</b>	EC <sub>50</sub> , 14 days: >316 mg/l, <i>Myriophyllum spicatum</i> NOEC = 316 mg/l (OECD Guideline Proposal, 2013)
<b>Acute toxicity - terrestrial</b>	LD <sub>50</sub> , 48 hours, oral: >285 µg/bee <i>Apis mellifera</i> (Honeybee) (OECD 213) LD <sub>50</sub> , 48 hours, contact: >250 µg/bee <i>Apis mellifera</i> (Honeybee) (OECD 214)

### Ecological information on ingredients

<b>Name</b>	Active substance, Gibberellic acid A3, technical grade
<b>Acute toxicity - fish</b>	LC <sub>50</sub> , 96 hours: >150 mg/l, <i>Onchorhynchus mykiss</i> (Rainbow trout) (US EPA 540/9-85-006) LC <sub>50</sub> , 96 hours: >100 mg/l, <i>Cyprinus carpio</i> (Common carp) (OECD 203)

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### Acute toxicity - terrestrial

LD<sub>50</sub>: >2000 mg/kg bw, *Anas platyrhynchos* (Mallard duck) (US EPA FIFRA 71-1)  
 LC<sub>50</sub>, 14 days: >1111 mg/kg soil, *Eisenia foetida* (Earthworm) (OECD 207)  
 No significant impact on carbon mineralization or nitrogen transformation at up to 100 mg/kg dry soil

### 12.2. Persistence and degradability

#### Ecological information on ingredients

<b>Name</b>	Active substance, Gibberellic acid A3, technical grade
<b>Degradation Biotic</b>	Not readily biodegradable (OECD 301B)
<b>Degradation Abiotic</b>	Hydrolysis: Stable in water at pH 4, 7; DT <sub>50</sub> = 46 hours at pH 9 (30°C, OECD 111) Photolysis: DT <sub>50</sub> = 249-271 hours at pH 5 and 7.5 (12-Nohsan-No.8147 of MAFF)
<b>Biological methods for sewage treatment</b>	3h-EC <sub>50</sub> activated sludge: > 100 mg/l (OECD 209)

### 12.3. Bioaccumulative potential

#### Ecological information on ingredients

<b>Name</b>	Active substance, Gibberellic acid A3, technical grade
<b>Bioaccumulation</b>	Partition coefficient n-octanol/water log Pow: 0.72 in pH 2.2 (22°C) (OECD 107) Bio Concentration Factor (BCF) in fish: no bioaccumulation study is necessary.

### 12.4. Mobility in soil

#### Ecological information on ingredients

<b>Name</b>	Active substance, Gibberellic acid A3, technical grade
	Adsorption K <sub>loc</sub> values: 7.125 ml/g for 5 soils (OECD 106) Therefore the substance has high mobility, although due to the rapid degradation it is unlikely to be expressed in the environment. (OECD 106)

### 12.5. Results of PBT and vPvB assessment

#### Ecological information on ingredients

Not required (no chemical safety report required).

### 12.6. Other adverse effects

#### Ecological information on ingredients

No other known adverse effects on the environment.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

<b>Disposal methods</b>	According to local regulations. For further advice, contact manufacturer.
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## SECTION 14: Transport information

### 14.1. UN Number

<b>UN No. (ADR/RID)</b>	None
<b>UN No. (IMDG)</b>	None
<b>UN No. (ICAO)</b>	None

### 14.2. UN proper shipping name

<b>Proper shipping name (ADR/RID)</b>	Not relevant
<b>Proper shipping name (IMDG)</b>	Not relevant
<b>Proper shipping name (ICAO)</b>	Not relevant

### 14.3. Transport hazard class(es)

<b>ADR/RID class</b>	Not restricted
<b>ADR/RID label</b>	Not relevant
<b>IMDG class</b>	Not restricted

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**ICAO class/division** Not restricted

### 14.4. Packing group

**ADR/RID packing group** Not relevant

**IMDG packing group** Not relevant

**ICAO packing group** Not relevant

### 14.5. Environmental hazards

**Environmentally hazardous substance/marine pollutant** No

### 14.6. Special precautions for user

No other special precaution required.

**EmS** Not relevant

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

**Transport in bulk according to Annex II of MARPOL 73/78 and the ICB Code** Not applicable

## SECTION 15: Regulatory information

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

**EU legislation** There is no specific regulation/legislation for this mixture.

### 15.2. Chemical safety assessment

No chemical safety assessment is required for this mixture.

## SECTION 16: Other information

**Method for evaluating information referred to in Article 9 of Regulation (EC) No 1272/2008 used for the purpose of classification** Classification based on; tests and properties of the active substance

**Classification abbreviations and acronyms** None

**Abbreviations and acronyms Used in the safety data sheet**

ASTM : American Society for Testing Material  
CAS: Chemical Abstracts Service.  
CFR : Code of Federal Regulations  
CLP : Classification, Labelling and Packaging  
EC : European Community  
EEC : European Economic Community  
EPA : Environmental Protection Agency (USA)  
EPPO : European and Mediterranean Plant Protection Organization  
EU : European Union  
GIFAP : International Group of National Associations of manufacturers of Agrochemical Products  
GHS: Globally Harmonized System.  
ID : identification  
i.e. : shortening of the Latin expression id est, which is translated as "that is."  
OECD : Organisation for Economic Co-operation and Development  
PBT: Persistent, Bioaccumulative and Toxic substance.  
REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006.  
Regl : Regulation  
US EPA : United States Environmental Protection Agency  
vPvB: Very Persistent and Very Bioaccumulative.  
w/w : weight per weight

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FIFRA : Federal Insecticide, Fungicide and Rodenticide Act of 1972  
 LD<sub>50</sub>: Lethal Dose to 50% of a test population (Median Lethal Dose).  
 LC<sub>50</sub>: Lethal Concentration to 50 % of a test population.  
 EC<sub>50</sub>: 50% of maximal Effective Concentration.  
 NOEC: No Observed Effect Concentration.  
 NOAEL: No Observed Adverse Effect Level.  
 ECh<sub>50</sub> : 50% of maximal Effective Concentration on biomass.  
 NOECb : No Observed Effect Concentration on biomass.  
 DT<sub>50</sub> : degradation time for 50% of a compound  
 log Pow : Octanol-water partition coefficient.  
 Koc : organic carbon adsorption coefficient  
 BCF: Bioconcentration Factor.  
 UN: United Nations.  
 No. : number  
 ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.  
 RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail.  
 IMDG: International Maritime Dangerous Goods.  
 ICAO: Technical Instructions for the Safe Transport of Dangerous Goods by Air.  
 N.O.S. : Not Otherwise Specified  
 EmS : Emergency Response Procedures for Ships Carrying Dangerous Goods  
 MARPOL 73/78: International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978.  
 IBC: International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk (International Bulk Chemical Code).  
 SDS : Safety Data Sheet  
 CT<sub>50</sub> : clearance time  
 ECr<sub>50</sub> : 50% of maximal Effective Concentration on growth rate.  
 NOECr : No Observed Effect Concentration on growth rate.  
 Vol. = volume  
 CIPAC : Collaborative International Pesticides Analytical Council  
 USP : United States Pharmacopeia  
 SETAC: Society of Environmental Toxicology And Chemistry  
 OPPTS : Office of Prevention, Pesticides & Toxic Substances  
 a.s. : active substance  
 bw: bodyweight  
 MAFF : Ministry of Agriculture, Forestry and Fisheries (Japan)  
 ISO : International Organization for Standardization  
 v/v : volume per volume  
 w/v : weight per volume  
 BBA : Biologische Bundes Ansladt für Land und Fortwirtschadt (German Federal Biological Research Centre for Agriculture and Forestry)  
 subsp. = subspecies  
 cfu : colony-forming unit  
 SG : Water soluble granules

### Revision comments

Sections were modified as follows: Identity of the company/undertaking, and sections 9, 11 & 12 were modified to add new data.

### Hazard statements in full

None

### Reference of the SDS

Based on GA340SGCLP/EU/320gb from SCAE

This information only concerns the above mentioned product for the specific use mentioned and is not valid for such product used in combination with any other product. The information is to our best present knowledge correct and complete and is given in good faith as of the date indicated. It is the user's responsibility to use this information as appropriate for his own particular use of this product.