

SAFETY DATA SHEET

According to Regulation (EC) No 1907/2006 (REACH)
and Commission Regulation (EU) No 453/2010

REGULEX 10SG



1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

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Gibberellins A4A7, 10% water soluble granules
GIFAP code: SG
EC number: not applicable.

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

Plant growth regulator (agricultural use)
Not for public use

1.3. Details of the supplier of the safety data sheet

INTERFARM (UK) LIMITED
36 Newgate Street
Doddington
Cambridgeshire PE15 0SR
United Kingdom
Tel.: +44 (0)1354 741414
email: technical@interfarm.co.uk

Manufacturer of the product

VALENT BIOSCIENCES CORPORATION
870 Technology Way, Suite 100
Libertyville, Illinois 60048
USA
Tel.: +1 847 9684700

1.4. Emergency Telephone number 24/24hrs

UK & Ireland; +44 (0)333 333 9962

2. HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Not classified as hazardous according to regulation (EC) No 1272/2008 (CLP)

Signal word(s) none

Pictogram (s) none

Hazard statement(s) none

2.2. Label elements

Signal word(s) none

Pictogram (s) none

Hazard statement(s) none

Precautionary statement(s)

P261: Avoid breathing spray.
P285: In case of inadequate ventilation wear respiratory protection.
P501 (UK): 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.
EUH 401: To avoid risks to human health and the environment, comply with the instructions for use.

Special risks and safety precautions (Commission Regulation (EU) 547/2011):

General provisions

SP 1: Do not contaminate water with the product or its container (Do not clean application equipment near surface water).

Specific safety precautions None

2.3. Other hazards None known

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3. COMPOSITION/INFORMATION ON INGREDIENTS

3.2. This product is to be considered as a mixture in conformance to EU regulations.

Composition/Information on main ingredients

Number	% w/w	CAS number	Chemical name
*	10	8030-53-3	Gibberellins (Gibberellin A4 + Gibberellin A7)
Reminder: 1: min 63.1%		468-44-0	Gibberellin A4: (3S,3aR,4S,4aR,7R,9aR,9bR,12S)-12-hydroxy-3-methyl-6- =methylene -2-oxoperhydro-4a,7-methano-3,9b-propanoazuleno[1,2-b]-furan-4- =carboxylic acid.
2: min 13.0%		510-75-8	Gibberellin A7: (3S,3aR,4S,4aR,7R,9aR,9bR,12S)-12-hydroxy-3-methyl-6- =methylene -2-oxoperhydro-4a,7-methano-9b,3-propenoazuleno[1,2-b]-furan-4- =carboxylic acid.

Number	EC number	Annex-1 listing	Regl 1272/2008 Pict.	Hazard statements
*	NA	yes	none	none

Other information code ID: VBC30011

4. FIRST AID MEASURES

4.1. Description of first aid measures

General	In all cases of doubt, seek medical attention.
Inhalation	Move to fresh air. If symptoms persist, seek medical advice.
Skin	Remove contaminated clothing. Wash skin immediately with water.
Eye	Rinse thoroughly with plenty of water. Eyelids should be held away from the eyeball to ensure thorough rinsing. Seek medical advice if irritation develops.
Ingestion	Rinse mouth. Never induce vomiting in unconscious or confused persons. Always seek medical attention.

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

No typical symptoms and effects known. Dust may be irritating to the respiratory tract and cause symptoms of bronchitis

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

Symptomatic treatment is advised.

5. FIRE-FIGHTING MEASURES

5.1. Extinguishing media

Suitable Extinguishing media	Dry chemical powder, carbon dioxide, foam, sand, water.
Unsuitable extinguishing media	None known.

5.2. Special hazards arising from the substance or mixture

No hazardous combustion products known.

5.3. Advice for fire-fighters

Wear self-contained breathing apparatus. Wear suitable protective clothing and eye/face protection.

Other information

Water used to extinguish a fire should not be allowed to enter the drainage system or watercourses.

6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment, and emergency procedures

For non-emergency personnel

Do not breathe dust.
Wear protective gloves, safety goggles or face shield, and suitable protective clothing.
Remove ignition sources.
Evacuate the danger area.

For emergency responders

Do not breathe dust.
Wear protective nitrile gloves, safety goggles or face shield, and suitable protective clothing.
Remove ignition sources.

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Evacuate the danger area or consult an expert.

6.2. Environmental precautions Do not allow escape into sewage system or watercourses. Do not wash residues into drains or other waterways.

6.3. Methods and material for containment and cleaning up

Containment of a spill Do not allow escape into sewage system or watercourses.

Clean-up procedures 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 For personal protection see section 8.

7. HANDLING AND STORAGE

7.1. Precautions for safe handling The usual precautions for handling chemicals should be observed. For personal protection see section 8.

Fire and explosion prevention No specific recommendations.

7.2. Conditions for safe storage, including any incompatibilities

Storage requirements Store in a dry and cool place. Keep container in a well-ventilated place. Keep away from heat. Keep away from food, drink and animal feedingstuffs. Do not drink, eat and smoke in work areas.

Other information Do not mix with water (except for the normal preparation).

7.3. Specific end use(s) See label on the container.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters There is no national exposure limit for this product.
No chemical safety report is required for this kind of product.

8.2. Exposure controls

Appropriate engineering controls Provide adequate ventilation.

Individual protection measures

Respiratory In case of dust formation, use dust mask.

Hand Wear protective nitrile gloves.

Eye Wear safety goggles or face shield.

Skin and body Wear suitable protective clothing.

Other information Launder clothes before reuse.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Name	<i>Gibberellins A4A7, 10% water soluble granules</i>
Appearance	granular solid (Visual assessment)
Colour	white (Visual assessment)
Odour	Faint sweet odour (Olfactory assessment)
Odour threshold	not determined
pH value	3.6 (1% in water, room temperature) (CIPAC MT 75.3)
Melting point/freezing point	not determined
Initial boiling point & boiling range	not applicable
Flash point	not applicable
Evaporation rate	not applicable
Flammability	not "highly flammable" (based on the ingredients) (expert statement)
Upper/lower flammability or explosive limits	not determined
Vapour pressure	not determined (Vapour pressure of Gibberellin A4A7: 7.68×10^{-6} Pa to 1.6×10^{-1} Pa ; OECD 104)

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Vapour density	not applicable
Relative density	not determined
Bulk density	0.551 g/ml (25°C) (OPPTS 830.7300)
Solubility in water	soluble in water (solubility of Gibberellin A4A7 = 127 mg/l at 20°C (OECD 105, shake flask method, pure water)
Solubility in other solvents	not applicable
Partition coefficient n-octanol/water	not determined (Gibberellin A4: log Pow = 2.34 Gibberellin A7: log Pow = 2.25) (20°C, OECD 107)
Autoignition temperature	the active substance does not self ignite before the melting point (EEC A.16)
Decomposition temperature	the active substance decomposes at 210°C (OECD 102)
Dynamic viscosity	not applicable
Kinematic viscosity	not applicable
Explosive properties	not explosive (based on the ingredients) (expert statement)
Oxidising properties	not oxidising (based on the ingredients) (expert statement)

9.2. Other information

Relative vapour density (air = 1)	not determined
Surface tension	not applicable

10. STABILITY AND REACTIVITY

10.1. Reactivity	Stable under recommended storage and handling conditions (see also section 7).
10.2. Chemical stability	Stable under recommended storage and handling conditions (see section 7).
10.3. Possibility of hazardous reactions	None known.
10.4. Conditions to avoid	Avoid high temperature, light, humidity.
10.5. Incompatible materials	None known.
10.6. Hazardous decomposition products	No hazardous combustion products known in contact with fire (see also section 5).

11. TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Name	<i>Gibberellins A4A7, 10% water soluble granules</i>
Acute toxicity	
Oral	LD ₅₀ rat: >5000 mg/kg (OECD 425)
Dermal	LD ₅₀ rat: >5000 mg/kg (OECD 402)
Irritation	
Skin	weakly irritating (OECD 404)
Eye	mildly irritating (OECD 405)
Sensitization	not sensitising (maximisation test) (OECD 406)

The following data are applicable to the active substance:

Name	<i>Active substance, Gibberellins A4A7, technical grade</i>
Acute toxicity	
Inhalation	LC ₅₀ rat (4 hours): >2.98 mg/l (maximum feasible concentration, whole body) (EPA FIFRA 81.3)
Other toxicological information	- Genotoxicity: negative. (OECD 471, 473, 476, 474, 486) - Teratogenicity in rabbit: negative. (OECD 414) - Toxicity on reproduction (rat): negative. (OECD 416) - Carcinogenicity: considered as negative based on the absence of genotoxicity and of any adverse finding indicative of a possible tumorigenesis during toxicity studies in animals.

Based on the available data, no classification criteria are met for any of these hazard classes.

Information on likely routes of exposure

This product is for agricultural use, therefore the most probable routes of exposure are via skin or inhalation.

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12. ECOLOGICAL INFORMATION

12.1. Toxicity

No experimental ecotoxicological data are available on the preparation as such. The following data are applicable to the ingredient(s) listed below:

Name	Active substance, Gibberellins A4A7 technical grade
Fish	Acute toxicity, 96h-LC ₅₀ (<i>Oncorhynchus mykiss</i>): >96 mg/l (OECD 203)
Daphnia	Acute toxicity, 48h-EC ₅₀ (<i>Daphnia magna</i>): >97 mg/l (OECD 202)
Algae	Acute toxicity, 96h - E _b C ₅₀ (<i>Pseudokirchneriella subcapitata</i>): > 100 mg/l 96h - E _r C ₅₀ (<i>Pseudokirchneriella subcapitata</i>): > 100 mg/l 96h - NOEC (<i>Pseudokirchneriella subcapitata</i>): = 100 mg/l (OECD 201)
Bees	Acute oral toxicity, 48h-LD ₅₀ (<i>Apis mellifera</i>): >87 µg/bee (OECD 213) Acute contact toxicity, 48h-LC ₅₀ (<i>Apis mellifera</i>): >100 µg/bee (OECD 214)
Earthworm	Acute toxicity, 14d-LC ₅₀ : > 1250 mg/kg d.w soil 14d-LC _{50corrected} : > 625 mg/kg d.w soil (OECD 207)
Soil micro organisms	No significant impact on carbon mineralization or nitrogen transformation at up to 0.13 mg/kg dry soil. (BBA, part VI, 1-1)

The following data are applicable to the close substance listed below:

Name	Gibberellins A3, technical grade
Birds	Acute toxicity, LC50 (Bobwhite quail): > 2250 mg/kg bw (FIFRA 71-1)

12.2. Persistence and degradability

The following data are applicable to the ingredient(s) listed below:

Name	Active substance, Gibberellins A4A7 technical grade
Degradation Biotic	Readily biodegradable (OECD 301B)
Degradation Abiotic	Hydrolytically stable (pH 7) (OECD 211) Photolysis: pH 5: 104 days; pH 9: 206 days (OECD direct photolysis draft guideline, tier I)
Biological methods for sewage treatment	3h-EC50 activated sludge: > 100 mg/l (OECD 209)

12.3. Bioaccumulative potential

The following data are applicable to the ingredient(s) listed below:

Name	Active substance, Gibberellins A4A7 technical grade
Bioaccumulation	Partition coefficient n-octanol/water log Pow: Gibberellin A4: log Pow = 2.34 (20°C) Gibberellin A7: log Pow = 2.25 (20°C) (OECD 107) No potential for bioaccumulation of GA4A7 in fish.

12.4. Mobility in soil

The following data are applicable to the ingredient(s) listed below:

Name	Active substance, Gibberellins A4A7 technical grade
	Estimated Koc both GA4 and GA7: 0.5747 ml/g.

12.5. Results of PBT and vPvB assessment

Not required (no chemical safety report required).

12.6. Other adverse effects

No other known adverse effects on the environment.

13. DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Substance and/or Mixture	According to local regulations. For further advice contact manufacturer.
Contaminated packaging	According to local regulations.

14. TRANSPORT INFORMATION

Land transport ADR/RID, Sea transport IMO/IMDG, Air transport ICAO-TI/IATA-DGR:

14.1. UN Number	None
14.2. UN proper shipping name	Not relevant
14.3. Transport hazard class(es)	Land transport ADR/RID class: not restricted label: not relevant

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IMO/IMDG code class: not restricted
Air transport ICAO-TI/IATA-DGR class: not restricted

14.4. Packing group

not relevant

14.5. Environmental hazards

Marine pollutant: no

14.6. Special precautions for user

EMS: Not relevant
No other special precaution required.

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

Not applicable

15. REGULATORY INFORMATION

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

There is no specific regulation/legislation for this mixture.

15.2. Chemical safety assessment

No chemical safety assessment is required for this mixture.

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.

Changes made to the previous version: Section 1; change to emergency telephone number. Sections 2, 3, 4, 12, were modified to remove any reference to directives 2001/59/EC or 1999/45/EC, and add changes due to ATP4. [Based on GA4A710SGCLP/EU/320gb from SCAE]

Full text of hazard statement(s) used in this document:

None

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 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.