

HICURE®

HICURE® is a liquid plant biostimulant (PFC 6) based on amino acids and peptides. HICURE supports natural processes in the plant enhancing plant performance in general and especially under abiotic stress conditions.

NUTRIENT COMPOSITION

Value giving nutrients	Minimum guaranteed content % w/w	Average value % w/w	Maximum value in specification % w/w
Total amino acids	60.0	62.5	69.4
C total	29.0	31.3	33.0
N total	11.0	11.7	12.5
Free Amino acids	10.3	11.0	14.0
N organic	9.9	10.3	11.1

SAFETY PRECAUTIONS

(a) Operator protection

If medical advice is needed, have product container or label at hand.

Do not breath vapour or spray mist.

Do not get in eyes, on skin, or on clothing.

Do not eat, drink or smoke when using this product.

Wash hands and face before eating, drinking or smoking.

If you feel unwell stop work immediately, apply first aid measures and call a POISON CENTER or doctor.

Wash body thoroughly and change clothing after working.

Wash contaminated clothing and protective equipment before reuse.

If this product is tank mixed and applied together with plant protection products, operators need to wear the Personal Protective Equipment specified on the label of the plant protection product.

(b) Environmental protection

Do not contaminate water with the product or its container.

Do not clean application equipment near surface water. Avoid contamination via drains from farmyards and roads.

(c) Storage and disposal

Store in the closed original container.

Keep the product at a temperature between 0 and 25°C in a dry and well-ventilated place. Protect from sunlight.

RINSE CONTAINER THOROUGHLY by using an integrated pressure rinsing device or manually rinsing three times. Add washings to sprayer at time of filling and dispose of safely. Do not re-use empty containers.

INSTRUCTIONS FOR USE

GENERAL INFORMATION

HICURE® is a high concentrated biostimulant consisting of easily absorbable amino acids and peptides (short chains of amino acids). Amino acids and peptides are used by the plant for the creation of proteins which are essential components for plant growth and development. All components of Hicure are of natural origin.

CROP SPECIFIC INFORMATION

Turf: Application of Hicure in a programme can enhance turf growth and quality during periods of abiotic stress and also assist turf recovery.

For optimum turf quality HICURE should be used in conjunction with turf management practices that promote good turf health. Best results will be obtained when HICURE is applied at regular intervals starting prior to periods of stress. Use higher rates when greater stress is expected. HICURE is safe to use on all turf species.

Timing: HICURE can be applied throughout the year and can be applied at any growth stage of the turf. Apply after mowing.

Ornamentals: Application of Hicure in a programme can enhance plant growth and quality during periods of abiotic stress and also assist plant recovery.

For optimum plant quality HICURE should be used in conjunction with agronomic management practices that promote good plant health. Best results will be obtained when HICURE is applied at regular intervals starting prior to periods of stress. HICURE is safe to use on all plant types.

Timing: HICURE can be applied throughout the year and can be applied at any growth stage.

Best results will be achieved with regular treatments with the recommended dose (see table).

Crop	Cultivation method	Treatment type	Dose (product) per treatment	Water volume	Recommended interval (days)
Turf	Outdoors	Foliar application	10-20 L/ha	250-500 L/ha	14-28
Potplants	Indoors	Foliar application	0,125% (125 ml / 100 L water)	1000 L/ha	5-7
			0,25 % (250 ml / 100 L water)	1000 L/ha	10-14
		Drench	0,25 % (250 ml / 100 L water)	Drench with 10 % of pot volume	10-14
Cut flowers	Indoors	Foliar application	0,125% (125 ml / 100 L water)	1000 L/ha	5-7
			0,25 % (250 ml / 100 L water)	1000 L/ha	10-14
		Soil treatment/ irrigation	2,5 L/ha	-	10-14
Cut flowers	Outdoors	Foliar application	1,25 L/ha	400 L/ha	5-7
			2,5 L/ha	400 L/ha	10-14
		Soil treatment	2.5 L/ha	-	10-14

Crop	Cultivation method	Treatment type	Dose (product) per treatment	Water volume	Recommended interval (days)
Tree nursery and perennials	Indoors	Foliar application	0,125% (125 ml / 100 L water)	1000 L/ha	5-7
			0,25 % (250 ml / 100 L water)	1000 L/ha	10-14
		Drench	0,25 % (250 ml / 100 L water)	Drench with 10 % of the pot volume	10-14
Tree nursery and perennials	Outdoors	Foliar application	1,25 L/ha	400 L/ha	5-7
			2,5 L/ha	400 L/ha	10-14
		Soil treatment	2.5 L/ha	-	10-14
Bulbflowers	Outdoors	Foliar application	1,25 L/ha	400 L/ha	5-7
			2,5 L/ha	400 L/ha	10-14
		Soil treatment	2.5 L/ha	-	10-14

Hicure has been successfully used at the recommended doses on a range of species and cultivars without crop damage. However because of the large number of species and cultivars of ornamentals, the cultivar susceptibility should always be checked by treating a small number of plants in the first instance.

MIXING AND APPLICATION

Hicure is suitable for soil applications as well as foliar. It can be applied with all kinds of application devices. When applying through irrigation system, avoid high water volumes, in order to allow an optimal availability for the plant.

Make sure the sprayer is clean and set to give an even application at the correct volume and an even deposit. Half fill the spray tank with clean water and commence agitation. Add the required quantity of HICURE to the spray tank. Complete filling to the required volume and continue to agitate throughout the spraying operation. Do not leave the spray liquid in the sprayer for long periods (such as during meal breaks or overnight). Make up only the amount of spray required for immediate use. Thoroughly wash all spray equipment with water immediately after use.

Mixing with other products:

HICURE can be tank mixed with a large number of products including other fertilizers and most crop protection products. Do not use HICURE in combination with sulphur, mineral oils or copper containing products as this can cause serious crop damage.

Do not use HICURE in combination with more than two other products. When using Hicure in combination with other products, cultivar susceptibility should always be checked by treating a small number of plants in the first instance.

Shelf-life: The product is stable five years from the date of manufacture.

Section 6 of the Health and Safety at Work Act
Additional Product Safety Information

(This section does not form part of the product label under the Plant Protection Products Regulations 1995.)

The product label provides information on a specific pesticidal use of the product; do not use otherwise, unless you have assessed any potential hazard involved, the safety measures required and that the particular use has 'Extension of Use' approval or is otherwise permitted under the Plant Protection Products Regulations.

The information on this label is based on the best available information including data from test results.

Safety Data Sheet V1

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

1.1 Product Identifier

Trade name: HICURE

Design code: A20058A

1.2 Relevant Identified Uses of the substance or mixture and uses advised against

Use of the Substance/Mixture: Fertiliser

1.3 Details of the supplier of the safety data sheet

Company: Syngenta UK Ltd

CPC4, Capital Park, Fulbourn, Cambridge, CB21 5XE

Telephone: +44 (0) 1223 883400

Telefax: +44 (0) 1223 882195

E-mail address: customer.services@syngenta.com

Company: Syngenta Ireland Limited

Block 6 Cleaboy Business Park, Old Kilmeaden Road, Waterford, Ireland

Telephone: (051) 377203

Telefax: (051) 354748

E-mail address: cropsales.ie@syngenta.com

1.4 Emergency telephone number

Emergency phone No.: +44 1484 538444

SECTION 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Not a hazardous substance or mixture.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Not a hazardous substance or mixture.

Supplemental Hazard Statements: SP1

Do not contaminate water with the product or its container.

Precautionary statements: P102

Keep out of reach of children.

P103

Read label before use.

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

SECTION 3. COMPOSITION / INFORMATION ON INGREDIENTS

3.2 Mixtures

Components

Remarks : No hazardous ingredients

SECTION 4. FIRST-AID MEASURES

4.1 Description of first aid measures

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

If inhaled: Move the victim to fresh air. If breathing is irregular or stopped, administer artificial respiration. Keep patient warm and at rest. Call a physician or poison control centre immediately.

In case of skin contact: Take off all contaminated clothing immediately. Wash off immediately with plenty of water. If skin irritation persists, call a physician. Wash contaminated clothing before re-use.

In case of eye contact: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses. Immediate medical attention is required.

If swallowed: If swallowed, seek medical advice immediately and show this container or label. Do not induce vomiting.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms: Nonspecific. No symptoms known or expected.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment: There is no specific antidote available. Treat symptomatically.

SECTION 5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media:

Extinguishing media - small fires

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Extinguishing media - large fires

Alcohol-resistant foam or Water spray

Unsuitable extinguishing media: Do not use a solid water stream as it may scatter and spread fire.

5.2 Special hazards arising from the substance or mixture

Specific hazards during fire-fighting: As the product contains combustible organic components, fire will produce dense black smoke containing hazardous products of combustion (see section 10).

Exposure to decomposition products may be a hazard to health.

5.3 Advice for firefighters

Special protective equipment for firefighters: Wear full protective clothing and self-contained breathing apparatus.

Further information: Do not allow run-off from fire fighting to enter drains or water courses. Cool closed containers exposed to fire with water spray.

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions: Refer to protective measures listed in sections 7 and 8.

6.2 Environmental precautions

Environmental precautions: Prevent further leakage or spillage if safe to do so. Do not flush into surface water or sanitary sewer system. If the product contaminates rivers and lakes or drains inform respective authorities.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up: Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Clean contaminated surface thoroughly. Clean with detergents. Avoid solvents. Retain and dispose of contaminated wash water.

6.4 Reference to other sections

For disposal considerations see section 13., Refer to protective measures listed in sections 7 and 8.

SECTION 7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Advice on safe handling: No special protective measures against fire required. Avoid contact with skin and eyes. When using do not eat, drink or smoke. For personal protection see section 8.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers: No special storage conditions required. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children. Keep away from food, drink and animal feedingstuffs.

7.3 Specific end use(s)

Specific use(s): For proper and safe use of this product, please refer to the approval conditions laid down on the product label.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

Contains no substances with occupational exposure limit values.

8.2 Exposure controls

Engineering Measures

Containment and/or segregation is the most reliable technical protection measure if exposure cannot be eliminated. The extent of these protection measures depends on the actual risks in use. Maintain air concentrations below occupational exposure standards. Where necessary, seek additional occupational hygiene advice.

Personal protective equipment

Eye protection: No special protective equipment required.

Hand protection

Remarks: No special protective equipment required.

Skin and body protection: No special protective equipment required. Select skin and body protection based on the physical job requirements.

Respiratory protection: No personal respiratory protective equipment normally required. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

Protective measures: The use of technical measures should always have priority over the use of personal protective equipment. When selecting personal protective equipment, seek appropriate professional advice.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance:	liquid
Colour:	No data available
Odour:	No data available
Odour Threshold:	No data available
pH:	No data available
Melting point/range:	No data available
Boiling point/boiling range:	No data available
Flash point:Method:	No data available
Evaporation rate:	No data available
Flammability (solid, gas):	No data available
Upper explosion limit / Upper flammability limit:	No data available
Lower explosion limit / Lower flammability limit:	No data available
Vapour pressure:	No data available
Relative vapour density:	No data available
Density:	1.265 g/cm ³
Solubility in other solvents:	No data available
Partition coefficient: n-octanol/water:	No data available
Auto-ignition temperature:	No data available
Decomposition temperature:	No data available
Viscosity, dynamic:	No data available
Explosive properties:	No data available
Oxidizing properties:	No data available

9.2 Other information

No data available

SECTION 10. STABILITY AND REACTIVITY

10.1 Reactivity

None reasonably foreseeable.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

Hazardous reactions: No dangerous reaction known under conditions of normal use.

10.4 Conditions to avoid

Conditions to avoid: No decomposition if used as directed.

10.5 Incompatible materials

Materials to avoid: None known.

10.6 Hazardous decomposition products

Hazardous decomposition products: No hazardous decomposition products are known.

SECTION 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Information on likely routes of exposure: Ingestion, Inhalation, Skin contact, Eye contact

Acute toxicity

Product:

Acute oral toxicity: Method: Expert judgement
Assessment: The substance or mixture has no acute oral toxicity

Acute inhalation toxicity: Method: Expert judgement
Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity: Method: Expert judgement
Assessment: The substance or mixture has no acute dermal toxicity.

Skin corrosion/irritation

Product:

Result: No skin irritation
Remarks: Expert judgement

Serious eye damage/eye irritation

Product:

Result: No eye irritation
Remarks: Expert judgement

Respiratory or skin sensitisation

Product:

Result: Does not cause skin sensitisation
Remarks: Expert judgement

Reproductive toxicity

Product:

Reproductive toxicity - Assessment: No toxicity to reproduction
Remarks: Expert judgement

SECTION 12. ECOLOGICAL INFORMATION

12.1 Toxicity

Product:

Toxicity to fish: Remarks: No data available

12.2 Persistence and degradability

Product:

Biodegradability: Result: Biodegradable
Stability in water: Remarks: No data available

12.3 Bioaccumulative potential

Product:

Bioaccumulation: Remarks: Bioaccumulation is unlikely.

12.4 Mobility in soil

Product:

Distribution among environmental compartments: Remarks: No data available

12.5 Results of PBT and vPvB assessment

Product:

Assessment: This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects

No data available

SECTION 13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product: Do not contaminate ponds, waterways or ditches with chemical or used container. Do not dispose of waste into sewer. 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. Triple rinse containers. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.

Waste Code: 150110, packaging containing residues of or contaminated by hazardous substances.

SECTION 14. TRANSPORT INFORMATION

14.1 UN number

Not regulated as a dangerous good

14.2 UN proper shipping name

Not regulated as a dangerous good

14.3 Transport hazard class(es)

Not regulated as a dangerous good

14.4 Packing group

Not regulated as a dangerous good

14.5 Environmental hazards

Not regulated as a dangerous good

14.6 Special precautions for user

Remarks : Not classified as dangerous in the meaning of transport regulations.

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable for product as supplied.

SECTION 15. REGULATORY INFORMATION

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

Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals: Not applicable

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59): Not applicable

REACH - List of substances subject to authorisation (Annex XIV): Not applicable

Regulation (EC) No 1005/2009 on substances that deplete the ozone layer: Not applicable

Regulation (EC) No 850/2004 on persistent organic pollutants: Not applicable

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII): Not applicable

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances: Not applicable

Other regulations:

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.

15.2 Chemical Safety Assessment

A Chemical Safety Assessment is not required for this substance when it is used in the specified applications.

SECTION 16. OTHER INFORMATION

Full text of other abbreviations

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECS - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Further information

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The 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, unless specified in the text.

Product names are a trademark or registered trademark of a Syngenta Group Company.

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