

RYDER®

A turf pigment.

**Danger****May cause an allergic skin reaction.****Causes serious eye damage.**

Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.

Wear protective gloves/ eye protection/ face protection.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/ doctor.

If skin irritation or rash occurs: Get medical advice/ attention.

Take off contaminated clothing and wash it before reuse.

Collect spillage.

Dispose of contents/container to a licensed hazardous waste disposal contractor or collection site except for triple rinsed clean containers which can be disposed of as non-hazardous waste.

UFI: 3C55-T012-0008-QXD4

SAFETY PRECAUTIONS

Keep out of reach of children.

Keep away from food, drink and animal feeding stuffs.

When using do not eat drink or smoke.

To avoid risks to man and the environment, comply with the instructions for use.

KEEP IN ORIGINAL CONTAINER, tightly closed, in a safe place.

WASH OUT CONTAINER THOROUGHLY, and dispose of safely.

DO NOT RE-USE CONTAINER for any other purpose.

DIRECTIONS FOR USE

GENERAL INFORMATION

RYDER® is a highly concentrated and stable green pigment designed for use on managed turf to improve its appearance and to help protect against UV radiation and excessive light intensities.

RYDER delivers a lasting and natural looking green colour for an enhanced, more uniform, appearance.

RYDER is safe to use on all turf species. For optimum turf quality RYDER should be used in conjunction with turf management practices that promote good turf health.

RESTRICTIONS

Prevent spray drift onto surrounding areas. Stone, paths and pavements will be stained if contacted.

Avoid product drift to open water bodies:

Apply vegetative buffer zones to water bodies of 3-5 m. Product application must be done using drift preventing practices and equipment (weather conditions during application, spraying equipment calibration)

Rates of Use

Greens and turf maintained at under 12mm

Apply at a rate of 0.75 to 1.5 l/ha in a water volume of 250-500 litres per hectare. Use higher rates for deeper green colour and higher heights of cut.

Turf maintained above 12mm

Apply at a rate of 1.0 to 2.0 l/ha in a water volume of 250-500 litres per hectare. Use higher rates for deeper green colour and higher heights of cut.

For superior coverage apply 0.5 – 1.0 l/ha in each of two directions (90° opposite directions)

Timing

Apply RYDER at approximately 2 to 3 week intervals during the main growing season and at 4- 6 week intervals when turf growth slows and mowing frequency drops.

RYDER can be applied throughout the year as required.

Apply after mowing.

MIXING AND SPRAYING

Use of PPE for mixing/loading and application: Impermeable clothing (long sleeves shirt, long trousers), footwear. Hand protection: nitrile gloves. Eye protection: Tightly fitting safety goggles, Face shield. During handling of concentrated product: respiratory protection.

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 RYDER to the spray tank. Complete filling to the required volume and continue to agitate throughout the spraying operation.

Wash out containers thoroughly, preferably using an integrated pressure rinsing device, or manually rinse three times. Add washings to the sprayer at the time of filling. 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 (> 1 hour) or overnight). Make up only the amount of spray required for immediate use.

Thoroughly wash all spray equipment with water immediately after use.

Thoroughly wash out sprayer according to manufacturer's guidelines and dispose of washing and clean containers according to DEFRA Code of Practice and local water authority guidelines.

Good Field Practice

As part of our Product Stewardship policy, Syngenta Crop Protection recommends the following precautions should also be observed:

- Wear appropriate clothing – coveralls, eye protection and protective gloves, when handling the concentrate.

For further information please see www.greencast.co.uk or www.greencast.ie

RYDER® is a trademark of a Syngenta Group Company

SAFETY DATA SHEET - V2.0

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

1.1 Product Identifier

Trade name: RYDER

Design code: CA6242A

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

Use of the Substance/Mixture: Colouring agents, pigments

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 of person responsible for the SDS: customer.services@syngenta.com

1.4 Emergency telephone number

Emergency phone No.: +44 (0) 1484 538444

SECTION 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Serious eye damage, Category 1 H318: Causes serious eye damage.

Skin sensitisation, Category 1 H317: May cause an allergic skin reaction.

Chemical Name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
1,2-benzisothiazol-3(2H)-one	2634-33-5 220-120-9 613-088-00-6	Acute Tox. 4; H302 Skin Irrit. 2; H315 Eye Dam. 1; H318 Skin Sens. 1; H317 Aquatic Acute 1; H400	>= 0.1 - < 0.25

For explanation of abbreviations see section 16.

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

Use 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 fire-fighters

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 tight-ly 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

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
C.I. pigment green 7	1328-53-6	TWA (Dusts and mists)	1 mg/m ³ (Copper)	GB EH40
	1328-53-6	STEL (Dusts and mists)	2 mg/m ³ (Copper)	GB EH40
carbon black	1333-86-4	TWA	3.5 mg/m ³	GB EH40
	1333-86-4	STEL	7 mg/m ³	GB EH40

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: Tightly fitting safety goggles

Always wear eye protection when the potential for inadvertent eye contact with the product cannot be excluded. Use eye protection according to EN 166.

Hand protection

Material: Nitrile rubber

Break through time: > 480 min

Glove length: 0.5 mm

Remarks: Wear protective gloves. The choice of an appropriate glove does not only depend on its material but also on other quality features and is different from one producer to the other. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time. The break through time depends amongst other things on the material, the thickness and the type of glove and therefore has to be measured for each case. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Skin and body protection: Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place. Remove and wash contaminated clothing before re-use.

Wear as appropriate: Impervious clothing

Respiratory protection: When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

Suitable respiratory equipment: Respirator with combination filter for vapour/particulate (EN 141)
The filter class for the respirator must be suitable for the maximum expected contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling the product. If this concentration is exceeded, self-contained breathing apparatus must be used.

Filter type: Combined particulates and organic vapour type (A-P)

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:	green
Odour:	characteristic
Odour Threshold:	No data available
	pH: >= 7
Melting point/range:	No data available
Boiling point/boiling range:	> 100 °C
Flash point:	does not flash
Evaporation rate:	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:	1.272 g/cm ³
Solubility(ies)	
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	
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 oral toxicity:

Product:

Acute oral toxicity: Acute toxicity estimate: > 2,000 mg/kg
Method: Calculation method

Components:

C.I. pigment green 7:

Acute oral toxicity: LD50 (Rat): > 5,000 mg/kg
Acute inhalation toxicity: Assessment: The component/mixture is minimally toxic after short term inhalation.
Acute dermal toxicity: LD50 (Rabbit): > 3,000 mg/kg

alcohols, C12-15,ethoxylated:

Acute oral toxicity: LD50 (Rat): 1,000 - 2,000 mg/kg
Remarks: Information given is based on data obtained from similar substances.

Fatty acids, tall-oil, diesters with polypropylene glycol:

Acute oral toxicity: Assessment: The component/mixture is minimally toxic after single ingestion.

1,2-benzisothiazol-3(2H)-one:

Acute oral toxicity: Acute toxicity estimate: 500.0 mg/kg
Method: Converted acute toxicity point estimate
Assessment: The component/mixture is moderately toxic after single ingestion.

Skin corrosion/irritation

Components:

C.I. pigment green 7:

Result: Mild skin irritation
Fatty acids, tall-oil, diesters with polypropylene glycol:
Result: Irritating to skin.

1,2-benzisothiazol-3(2H)-one:

Assessment: Irritating to skin.

Serious eye damage/eye irritation

Components:

C.I. pigment green 7:

Result: Irritation to eyes, reversing within 7 days

alcohols, C12-15,ethoxylated:

Species: Rabbit
Result: Risk of serious damage to eyes.
Remarks: Information given is based on data obtained from similar substances.

Fatty acids, tall-oil, diesters with polypropylene glycol:

Result: Eye irritation

1,2-benzisothiazol-3(2H)-one:

Result: Irreversible effects on the eye

Respiratory or skin sensitisation

Product:

Result: May cause sensitisation by skin contact.
Remarks: Experience with human exposure

Components:

1,2-benzisothiazol-3(2H)-one:

Result: May cause sensitisation by skin contact.

Further information

Product:

Remarks: No data available

SECTION 12. ECOLOGICAL INFORMATION

12.1 Toxicity

Components:

C.I. pigment green 7:

Toxicity to fish: LC50 (*Danio rerio* (zebra fish)): > 1,000 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates: EC50 (*Daphnia magna* (Water flea)): > 5,600 mg/l
Exposure time: 24 h

Toxicity to algae: EC50 (*Desmodesmus subspicatus* (green algae)): > 10,000 mg/l
Exposure time: 72 h

1,2-benzisothiazol-3(2H)-one:

Ecotoxicology Assessment

Acute aquatic toxicity: Very toxic to aquatic life.

12.2 Persistence and degradability

No data available

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

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: Where possible recycling is preferred to disposal or incineration. It must undergo special treatment, e.g. at suitable disposal site, to comply with local regulations.

Contaminated packaging: Dispose of as unused product.

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

Not applicable

14.7 Transport in bulk according to Annex II of MARPOL 73/78 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): Conditions of restriction for the following entries should be considered: (3)

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. Take note of Directive 94/33/EC on the protection of young people at work or stricter national regulations, where applicable. Use plant protection products safely. Always read the label and product information before use.

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 H-statements

H302	Harmful if swallowed
H315	Causes skin irritation
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H400	Very toxic to aquatic life.

Full text of other abbreviations

Acute Tox.:	Acute toxicity
Aquatic Acute:	Acute aquatic toxicity
Eye Dam.:	Serious eye damage
Eye Irrit.:	Eye irritation
Skin Irrit.:	Skin irritation
Skin Sens.:	Skin sensitisation
GB EH40:	UK. EH40 WEL - Workplace Exposure Limits
GB EH40 / TWA:	Long-term exposure limit (8-hour TWA reference period)
GB EH40 / STEL:	Short-term exposure limit (15-minute reference period)

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; IECSC - 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 Organization 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; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Further information**Classification of the mixture: Classification procedure:**

Eye Dam. 1	H318	Calculation method
Skin Sens. 1	H317	Calculation method

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.