



Angus Horticulture Ltd

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Material Safety Data Sheet

1. Identification of the substance/preparation and of the company/undertaking

1.1 Product identifier

Product Name Angus Downcast / Turfcast

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

Identified uses:

- Fertiliser

Uses identified against:

- None identified

1.3 Details of the supplier of the safety data sheet

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1.4 Emergency telephone number

Emergency Tel: +44 (0)1674 674253

2. Hazards identification

2.1 Classification of the substance or mixture

Physical Hazards: Not classified

Health Hazards: Not classified

Environmental Hazards: Not classified

2.2 Label elements

Hazard Pictograms: Not relevant

Signal Word: Not relevant

Hazard Statements: Not relevant.

Precautionary Statements: Not relevant

2.3 Other Hazards

This substance is not classified as PBT or vPvB according to current EU criteria.

3. Composition/information on ingredients

3.2 Mixtures

This product mixture contains no ingredients that are classified according to Regulation (EC) No. 1272/2008 (CLP). Ingredients include those given below:

Product Name	Identifiers			% in mixture (%)	Classification according to Regulation (EC) No. 1272/2008 (CLP)
	CAS No.	EC No.	REACH Registration No.		
Ammonium sulphate	231-984-1	7783-20-2	01-2119455044-46-xxxx	20-25	Not classified

4. First aid measures

4.1 Description of first aid measures

Following inhalation:	Remove to fresh air. Get medical attention for any breathing difficulty.
Following eye contact:	Rinse cautiously with running water. Check for and remove any contact lenses if possible. Continue to rinse for at least 10 minutes. Get medical attention if symptoms are severe or persist after washing.
Following skin contact:	Wash affected area thoroughly with soap and water or use an approved skin cleanser. Get medical attention if symptoms are severe or persist after washing.
Following ingestion:	If swallowed, promptly rinse mouth then drink large amounts of water. Do not induce vomiting. Seek medical attention.
Self-protection of first-aiders:	No action shall be taken involving any personal risk or without suitable training. Personal protective equipment for first aid responders is recommended. Wear protective gloves when assisting patient.

4.2 Most important symptoms and effects, both acute and delayed

Inhalation:	After inhalation of decomposition products there is a risk of pulmonary edema. Symptoms can appear later.
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4.3 Indication of any immediate medical attention and special treatment needed

Immediate / special treatment: Eye bathing equipment should be available on the premises.

In case of doubt or when symptoms of feeling unwell persist, get medical attention. Never administer anything orally to persons who are unconscious.

5. Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media: Use a fire-extinguishing media suitable for the cause of fire.

Unsuitable extinguishing media: Not applicable.

5.2 Special hazards arising from the substance or mixture

Hazardous combustion products: When heated ammonia can be released.

5.3 Advice for firefighters

Protective actions: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool. When heated ammonia can evolve.

Special protective equipment: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EC 469 will provide a basic level of protection for chemical incidents.

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

6.1.1 For non-emergency personnel

Protective equipment: Those dealing with major releases should wear full protective clothing including respiratory protection.

Emergency procedures: Remove sources of heat and ignition. If safe to do so turn leaking containers leak-side up to prevent further leakage. Do not touch or walk through spilled product. Evacuate unnecessary personnel.

6.1.2 For emergency responders

Use appropriate personal protective equipment.

6.2 Environmental precautions

Downcast MSDS

Avoid dispersal of spilt material and runoff. Avoid contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

6.3 Methods and material for containment and cleaning up

Clean-up procedures: For small spills, move containers from spill area. Vacuum or sweep up material and place in a designated, labelled waste container. Dispose of via a licensed waste disposal contractor.
For large spills, move containers from spill area. Approach the release from upwind. Prevent entry in to sewers, water courses, basements or confined areas. Vacuum or sweep up material and place in a designated, labelled waste container. Dispose of via a licensed waste disposal contractor.

6.4 Reference to other sections

Refer to Sections 8, Exposure controls/personal protection, and Section 13, Disposal considerations, of SDS.

7. Handling and storage

7.1 Precautions for safe handling

Protective measures: Use appropriate personal protective equipment. Do not ingest. Avoid contact with eyes, skin and clothing. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Do not reuse container.
Measures to prevent fire: Keep away from open flames, hot surfaces and sources of ignition.
To protect the environment: Prevent discharge in to water courses.
Hygiene measures: Handle in accordance with good industrial hygiene and safety procedures. Wash hands with soap and water before eating, drinking, or smoking and again when leaving work.

7.2 Conditions for safe storage, including any incompatibilities

Technical measures: Ensure storage is in accordance with all applicable local, regional and national regulations. Storage construction should be of non-combustible material. Segregate from incompatible materials.
Packaging materials: Store in original container.
Requirements for storage: Keep container tightly closed and sealed until ready for use. Store in a cool, well-ventilated area away from combustible and reducing materials, and food and drink. Containers that have been opened must be resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Keep away from direct sunlight.

7.3 Specific end use(s)

Recommendations: The identified uses for this product are detailed in Section 1.2.

8. Exposure controls/personal protection

8.1 Control parameters

Ammonium sulphate

Exposure limit values:	Not available.
DNEL:	Workers – Inhalation, long-term systemic effects: 11.167 mg/m ³ Workers – Dermal, long-term systemic effects: 42.667 mg/kg bw/day General Population – Inhalation, long-term systemic effects: 1.667 mg/m ³ General Population – Dermal, long-term systemic effects: 12.8 mg/kg bw/day General Population – Oral, long-term systemic effects: 6.4 mg/kg bw/day
PNEC:	Freshwater: 0.312 mg/l Marine water: 0.0312 mg/l Intermittent releases: 0.53 mg/l Sewage treatment plant: 16.18 mg/l Sediment (freshwater): 0.063 mg/kg sediment dw Soil: 62.6 mg/kg soil dw

8.2 Exposure controls

Appropriate engineering measures:	Handling should only take place in adequately ventilated areas. Keep away from foodstuffs, beverages and feed. Immediately remove all contaminated clothing.
Personal protective equipment:	If insufficient ventilation, wear respiratory protection. Protective goggles, face-shield or visor should be worn. Protective (heat resistant, chemical resistant, impervious) gloves should be worn. Protective work clothing and footwear should be worn to prevent repeated or prolonged skin contact.
Environmental exposure controls:	Do not empty in to drains, sewers, waterways or ground water systems.

9. Physical and chemical properties

Appearance:	Aqueous solution.
Odour:	Slight ammoniacal odour.
Odour Threshold:	No data available.
pH:	No data available.
Melting point / freezing point:	No data available.
Initial boiling point and boiling range:	No data available.
Flash point:	No data available.
Evaporation rate:	No data available.
Flammability (solid, gas):	No data available.
Upper/lower flammability or explosive limits:	No data available.
Vapour pressure:	No data available.
Vapour density:	No data available.
Relative density:	No data available.
Solubility(ies):	No data available.
Partition coefficient: n-octanol/water:	No data available.
Auto-ignition temperature:	No data available.
Decomposition temperature:	No data available.
Viscosity:	No data available.
Explosive properties:	No data available.
Oxidising properties:	No data available.

10. Stability and reactivity

Ammonium sulphate

Reactivity:	Stable under normal temperatures and pressures.
Chemical stability:	Stable under recommended storage and handling conditions (See Section 7).
Possibility of hazardous reactions:	None under normal processing.
Conditions to avoid:	Avoid contact with incompatible materials, high temperatures and free flames.
Incompatible materials:	Strong oxidisers: chlorates, nitrates and nitrites.
Hazardous decomposition products:	Ammonia, sulphur oxide

11. Toxicological information

11.1 Information on toxicological effects:

Acute toxicity

Product mixture:	Not classified – lack of data.
Ammonium sulphate:	LD50 Oral, rat: 4250 mg/kg bw Inhalation, rat (3.6 mg/m ³ , 4 hours): no significant effect LD50 Dermal, rat: > 2000 mg/kg

Skin corrosion/irritation

Product mixture:	May cause severe skin burns.
Ammonium sulphate:	Skin irritation, rabbit: not irritating

Serious eye damage/irritation

Product mixture:	May cause serious eye damage.
Ammonium sulphate:	Eye irritation, rabbit: not irritating

Respiratory or skin sensitisation

Product mixture:	May cause respiratory irritation.
Ammonium sulphate:	Skin sensitisation, guinea pig: not sensitising

Germ Cell Mutagenicity:

Product mixture:	Not classified – lack of data.
Ammonium sulphate:	In vitro: this substance shows no evidence of mutagenic properties. In vivo: not classified – lack of data.

Carcinogenicity

Product mixture:	Not classified – lack of data.
Ammonium sulphate:	No evidence of long-term carcinogenicity.

Reproductive toxicity

Product mixture:	Not classified – lack of data.
Ammonium sulphate:	NOAEL Oral, rat: females: 1371.4 mg/kg; males: 1288.2 mg/kg

STOT-single exposure

Product mixture:	Not classified – lack of data.
Ammonium sulphate:	Not classified – lack of data.

STOT-repeated exposure

Product mixture:	Not classified – lack of data.
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Ammonium sulphate:	Downcast MSDS Not classified – lack of data.
Aspiration Hazard	
Product mixture:	Not classified – lack of data.
Ammonium sulphate:	Not classified – lack of data.
Symptoms/injuries after inhalation:	Can cause respiratory irritation.
Symptoms/injuries after skin contact:	Can cause severe skin burns.
Symptoms/injuries after eye contact:	Can cause serious eye damage.
Chronic symptoms:	Inhalation of the decomposition gases of this product might result in pulmonary edema.

12. Ecological information

12.1 Toxicity

Fish – short-term toxicity

Product mixture:	No data available.
Ammonium sulphate:	LC50 (Agonus cataphractus, 96 h): 130 - 210 mg/l

Fish – long-term toxicity

Product mixture:	No data available.
Ammonium sulphate:	LOEC (Clarias batrachus, 12 months): 100 mg/l

Aquatic invertebrates – short-term toxicity

Product mixture:	No data available.
Ammonium sulphate:	LC50 (Perna Viridis, 96 h): 47.7 mg/l

Aquatic invertebrates – long-term toxicity

Product mixture:	No data available.
Ammonium sulphate:	EC10 (Musculium transversum, 42 days): 3.7 mg/l

Toxicity to aquatic algae and cyanobacteria

Product mixture:	No data available.
Ammonium sulphate:	EC50 (Chlorella vulgaris, 18 d): 2700 mg/l

Toxicity to microorganisms

Product mixture:	No data available.
Ammonium sulphate:	No data available.

12.2 Persistence and degradability

Biodegradation

Product mixture:	No data available.
Ammonium sulphate:	No data available.

12.3 Bioaccumulative potential

This product does not contain any substances expected to be bioaccumulating.

Bioaccumulation factor

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Product mixture:	No data available.
Ammonium sulphate:	No data available.

12.4 Mobility in soil

This product is soluble in water.

Adsorption/Desorption

Product mixture:	No data available.
Ammonium sulphate:	No data available.

12.5 Results of PBT and vPvB assessment

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

13. Disposal considerations

Waste treatment methods

General information:	Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.
Packaging disposal recommendations:	Packaging should be disposed by landfill or incineration as appropriate, in accordance with relevant regulations. Do not remove the label from the packaging unless the packaging has been thoroughly cleaned.
Sewage disposal recommendations:	This product may be hazardous to the aquatic environment. Keep out of sewers and waterways.
Waste disposal recommendations:	Place in an appropriate container and dispose of in a safe way.

14. Transport information

General:	The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, ADR/RID).
UN Number:	Not applicable.
UN proper shipping name:	Not applicable.
Transport hazard class(es):	No transport warning sign required.
Packing group:	Not applicable.
Environmental hazards:	This product is not environmentally hazardous according to the criteria of the UN Model Regulations, nor is it a marine pollutant according to the IMDG Code.
Special precautions for user:	Not applicable.
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:	Not applicable.

15. Regulatory information

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

Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16th December 2008 on classification, labelling and packaging of substances and mixtures (as amended). Regulation (EC) No 1907/2006

Downcast MSDS

of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended).

15.2 Chemical safety assessment

No chemical safety assessment has been carried out.

16. Other information

The information in the safety document applies only to the specific product detailed in Section 1 and is not necessarily correct for use with other chemicals/products.

The product information in this data sheet is, to the best knowledge of Angus Horticulture Ltd., correct at the date of publication.

The Manufacturer or Supplier does not accept liability for any loss or damage resulting from reliance on this information. Final determination of the suitability of any product is the responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, it cannot be guaranteed that these are the only hazards that exist.