



SAFETY DATA SHEET

AITKENS NUTRI-SMART 11-0-11+2Fe+3MgO+3.2CaO 20KG

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

1.1. Product identifier

Product name	AITKENS NUTRI-SMART 11-0-11+2Fe+3MgO+3.2CaO 20KG
Product number	I3393
REACH registration notes	This Mixture is exempt from REACH registration according to Regulation (EC) No. 1907/2006 (REACH) All raw materials used in the mixture are REACH registered where necessary.

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

Identified uses	Fertiliser
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1.3. Details of the supplier of the safety data sheet

Supplier	Aitkens Sportsturf Ltd & Richard Aitken (Seedsmen) Ltd 20 Robert Drive Glasgow G51 3HE 01977 681155 Mon - Fri 8am - 4.30pm 0141 440 0033 Mon - Fri 8am - 5pm enquiries@aitkens.co.uk
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1.4. Emergency telephone number

Emergency telephone	+44 (0) 141 440 0033 Mon - Fri 8am - 5pm
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SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards	Not Classified
Health hazards	Not Classified
Environmental hazards	Aquatic Chronic 3 - H412

2.2. Label elements

Hazard statements	H412 Harmful to aquatic life with long lasting effects. EUH208 Contains nickel sulfate. May produce an allergic reaction.
Precautionary statements	P273 Avoid release to the environment. P501 Dispose of contents/ container in accordance with national regulations.

2.3. Other hazards

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

SECTION 3: Composition/information on ingredients

3.2. Mixtures

AITKENS NUTRI-SMART 11-0-11+2Fe+3MgO+3.2CaO 20KG

iron (II) sulfate 1-5%		
CAS number: 7720-78-7	EC number: 231-753-5	
Classification Acute Tox. 4 - H302 Skin Irrit. 2 - H315 Eye Irrit. 2 - H319		
Manganese Sulphate Mono <1%		
CAS number: 10034-96-5	EC number: 232-089-9	REACH registration number: 01-2119456624-35-XXXX
Classification Eye Dam. 1 - H318 STOT RE 2 - H373 Aquatic Chronic 2 - H411	Classification (67/548/EEC or 1999/45/EC) Xn; R48/20/21/22. Xi; R41. N; R51/53	
Copper Sulphate <1%		
CAS number: 7758-99-8	EC number: 231-847-6	
M factor (Acute) = 10	M factor (Chronic) = 10	
Classification Acute Tox. 4 - H302 Skin Irrit. 2 - H315 Eye Irrit. 2 - H319 Aquatic Acute 1 - H400 Aquatic Chronic 1 - H410	Classification (67/548/EEC or 1999/45/EC) Xn; R22. Xi; R36/38. N; R50/53	
Boric acid (boron) <1%		
CAS number: 10043-35-3	EC number: 233-139-2	REACH registration number: 01-2119486683-25-XXXX
Classification Repr. 1B - H360FD	Classification (67/548/EEC or 1999/45/EC) Repr. Cat. 1 R60, R61	

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nickel sulfate	<1%
CAS number: 7786-81-4	EC number: 232-104-9
M factor (Acute) = 1	M factor (Chronic) = 1
Classification Acute Tox. 4 - H302 Acute Tox. 4 - H332 Skin Irrit. 2 - H315 Resp. Sens. 1 - H334 Skin Sens. 1 - H317 Muta. 2 - H341 Carc. 1A - H350i Repr. 1B - H360D STOT RE 1 - H372 Aquatic Acute 1 - H400 Aquatic Chronic 1 - H410	

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation	Get medical attention if symptoms are severe or persist.
Ingestion	Get medical attention if symptoms are severe or persist.
Skin contact	Wash skin thoroughly with soap and water or use an approved skin cleanser. Get medical attention if symptoms are severe or persist after washing.
Eye contact	Rinse immediately with plenty of water. Remove contact lenses, if present and easy to do. Continue rinsing. Continue to rinse for at least 10 minutes. Get medical attention if symptoms are severe or persist after washing.

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

Inhalation	Dust in high concentrations may irritate the respiratory system.
Ingestion	No harmful effects expected from quantities likely to be ingested by accident.
Skin contact	Skin irritation should not occur when used as recommended. The product contains a small amount of sensitising substance.
Eye contact	The product is considered to be a low hazard under normal conditions of use. Solid particles trapped behind the eyelid may cause abrasive damage.

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

Notes for the doctor	Treat symptomatically.
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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	The product is not flammable. Use fire-extinguishing media suitable for the surrounding fire.
Unsuitable extinguishing media	Not applicable.

5.2. Special hazards arising from the substance or mixture

Specific hazards	None known.
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5.3. Advice for firefighters

Protective actions during firefighting Evacuate area. Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk.

Special protective equipment for firefighters Use protective equipment appropriate for surrounding materials. Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Firefighter's clothing conforming to European standard EN469 (including helmets, protective boots and gloves) will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Avoid inhalation of dust and contact with skin and eyes. Use suitable respiratory protection if ventilation is inadequate. Wear suitable protective equipment, including gloves, goggles/face shield, respirator, boots, clothing or apron, as appropriate. Take care as floors and other surfaces may become slippery.

6.2. Environmental precautions

Environmental precautions Harmful to aquatic life with long lasting effects. The product is slowly degradable. Avoid the spillage or runoff entering drains, sewers or watercourses. Avoid discharge into drains and the aquatic environment. Use appropriate containment to avoid environmental contamination. Spillages or uncontrolled discharges into watercourses must be reported immediately to the Environmental Agency or other appropriate regulatory body.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Take care as floors and other surfaces may become slippery. Avoid generation and spreading of dust. Collect spillage with a shovel and broom, or similar and reuse, if possible. Containers with collected spillage must be properly labelled with correct contents and hazard symbol. Dispose of contents/container in accordance with national regulations. Do not empty into drains. Collect and dispose of spillage as indicated in Section 13.

6.4. Reference to other sections

Reference to other sections For personal protection, see Section 8. For waste disposal, see Section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Read label before use. Wear appropriate clothing to prevent repeated or prolonged skin contact. Avoid inhalation of dust and contact with skin and eyes.

Advice on general occupational hygiene Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling. Wash at the end of each work shift and before eating, smoking and using the toilet.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Store in a dry place. Keep container in a well-ventilated place. Keep out of the reach of children. Store away from incompatible materials (see Section 10). Use appropriate containment to avoid environmental contamination.

7.3. Specific end use(s)

Specific end use(s) The identified uses for this product are detailed in Section 1.2.

SECTION 8: Exposure Controls/personal protection

8.1. Control parameters

Occupational exposure limits

Ammonium Sulphate

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Long-term exposure limit (8-hour TWA): LTEL 10Mg/m³

Gypsum

Long-term exposure limit (8-hour TWA): WEL 4 mg/m³ respirable dust

Calmag Magnesium Oxide

Long-term exposure limit (8-hour TWA): WEL 10 mg/m³ inhalable dust
as Mg

Long-term exposure limit (8-hour TWA): WEL 4 mg/m³ fume and respirable dust
as Mg

Amino Acid Powder

Long-term exposure limit (8-hour TWA): WEL 10 mg/m³ inhalable dust

Long-term exposure limit (8-hour TWA): WEL 4 mg/m³ respirable dust

Manganese Sulphate Mono

Long-term exposure limit (8-hour TWA): WEL 0.5 mg/m³

Boric acid (boron)

Long-term exposure limit (8-hour TWA): 10 mg/m³

Sodium Molybdate

Long-term exposure limit (8-hour TWA): WEL 5 mg/m³

Short-term exposure limit (15-minute): WEL 10 mg/m³

WEL = Workplace Exposure Limit

Potash (CAS: 7447-40-7)

DNEL Workers - Dermal; Short term systemic effects: 580 mg/kg/day
Workers - Dermal; Long term systemic effects: 580 mg/kg/day
Workers - Inhalation; Short term systemic effects: 292 mg/m³
Workers - Inhalation; Long term systemic effects: 292 mg/m³

PNEC Industry - Fresh water; 0,047 mg/l
- Marine water; 0,047 mg/l

Urea (CAS: 57-13-6)

DNEL Consumer - Oral; Long term systemic effects: 42 mg/kg/day
Consumer - Oral; Short term systemic effects: 42 mg/kg/day
Consumer - Dermal; Long term systemic effects: 580 mg/kg/day
Consumer - Dermal; Short term systemic effects: 580 mg/kg/day
Industry/Professional - Dermal; Long term systemic effects: 580 mg/kg/day
Industry/Professional - Dermal; Short term systemic effects: 580 mg/kg/day
Consumer - Inhalation; Long term systemic effects: 125 mg/m³
Consumer - Inhalation; Short term systemic effects: 125 mg/m³
Industry/Professional - Inhalation; Short term local effects: 292 mg/m³
Industry/Professional - Inhalation; Short term systemic effects: 292 mg/m³

PNEC - Fresh water; 0.47 mg/l
- Marine water; 0.047 mg/l

Copper Sulphate (CAS: 7758-99-8)

DNEL Industry - Oral; Long term systemic effects: 0.041 mg/kg/day
Industry - Oral; Short term systemic effects: 0.082 mg/kg/day

Zinc Sulphate Monohydrate (CAS: 7446-20-0)

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DNEL Industry - Inhalation; Long term systemic effects: 1 mg/m³
 Industry - Dermal; Long term systemic effects: 8.3 mg/kg/day
 Consumer - Oral; Long term systemic effects: 0.83 mg/kg/day
 Professional - Inhalation; Long term systemic effects: 1.3 mg/m³
 Consumer - Dermal; Long term systemic effects: 8.3 mg/kg/day

PNEC - Fresh water; 0.0206 mg/l
 - Marine water; 0.0061 mg/l
 - Sediment (Freshwater); 235.6 mg/kg
 - Sediment (Marinewater); 113 mg/kg
 - Soil; 106.8 mg/kg
 - STP; 0.0052 mg/l

Boric acid (boron) (CAS: 10043-35-3)

DNEL Industry - Dermal; Long term systemic effects: 68.6 mg/kg/day
 Industry - Inhalation; Long term systemic effects: 1.45 mg/m³
 Consumer - Oral; Long term systemic effects: 0.17 mg/kg/day
 Consumer - Inhalation; Long term systemic effects: 0.97 mg/m³
 Consumer - Oral; Short term systemic effects: 0.17 mg/kg/day
 Consumer - Dermal; Long term systemic effects: 34.3 mg/kg/day

PNEC - Fresh water; 1.35 mg/l
 - Marine water; 1.35 mg/l
 - Intermittent release; 9.1 mg/l
 - Sediment; 1.8 mg/kg
 - Soil; 5.4 mg/kg
 - STP; 1.75 mg/l

8.2. Exposure controls

Protective equipment



Appropriate engineering controls

All handling should only take place in well-ventilated areas.

Eye/face protection

Wear eye protection.

Hand protection

Wear protective gloves.

Other skin and body protection

Wear appropriate clothing to prevent repeated or prolonged skin contact.

Hygiene measures

Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product.

Respiratory protection

No specific recommendations.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance Granules.
Colour Beige. to Dark brown. or Black.
Odour Mild.
Odour threshold Not determined.

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pH	Slightly Acidic
Melting point	Not relevant.
Initial boiling point and range	Not relevant.
Flash point	Not relevant.
Evaporation rate	Not relevant.
Flammability (solid, gas)	The product is not flammable.
Vapour pressure	Not relevant.
Vapour density	Not relevant.
Relative density	Not relevant.
Solubility(ies)	Not known.
Partition coefficient	Not known.
Auto-ignition temperature	Not relevant.
Decomposition Temperature	Not relevant.
Viscosity	Not relevant.
Explosive properties	Not relevant.
Oxidising properties	Does not meet the criteria for classification as oxidising.

9.2. Other information

Other information No information required.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity No test data specifically related to reactivity available for this product or its ingredients.

10.2. Chemical stability

Stability Stable when stored in a dry place.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions No potentially hazardous reactions known.

10.4. Conditions to avoid

Conditions to avoid There are no known conditions that are likely to result in a hazardous situation.

10.5. Incompatible materials

Materials to avoid None known.

10.6. Hazardous decomposition products

Hazardous decomposition products None known.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - oral

ATE oral (mg/kg) 15,948.96

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Acute toxicity - dermal

Notes (dermal LD₅₀) No specific test data are available.

Acute toxicity - inhalation

Notes (inhalation LC₅₀) No specific test data are available.

Skin corrosion/irritation

Skin corrosion/irritation Based on available data the classification criteria are not met.

Serious eye damage/irritation

Serious eye damage/irritation Based on available data the classification criteria are not met.

Respiratory sensitisation

Respiratory sensitisation No specific test data are available.

Skin sensitisation

Skin sensitisation Contains a small amount of a skin sensitising substance. May cause irritation.

Germ cell mutagenicity

Genotoxicity - in vitro This substance has no evidence of mutagenic properties.

Carcinogenicity

Carcinogenicity No specific test data are available.

Reproductive toxicity

Reproductive toxicity - fertility Based on available data the classification criteria are not met. Contains a small amount of Boron which is a SVHC and may damage fertility and may cause damage to the unborn child.

Specific target organ toxicity - single exposure

STOT - single exposure Not classified as a specific target organ toxicant after a single exposure.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure Not classified as a specific target organ toxicant after repeated exposure. Contains Manganese Sulphate Mono - STOT RE2 - Target Organ - Brain. Supplier information: "MnSO₄ is already classified under Directive 67/548/EEC as R48/20/22 and under GHS as STOT RE2. Data exists showing some neurochemical changes at low levels after inhalation exposure for 90 days, together with locomotor changes, around 3mg/m³ concentration, suggesting that significant toxicity could occur at the 20-200 mg/m³ concentration level, which supports the current classification of STOT RE 2 for the inhalation route. " Contains a minimal amount of Nickel Sulphate - STOT RE 1

Aspiration hazard

Aspiration hazard Not anticipated to present an aspiration hazard, based on chemical structure.

SECTION 12: Ecological Information

Ecotoxicity Contains Ferrous Sulphate Contains Manganese Sulphate Mono Contains Nickel Sulphate. Contains Copper Sulphate Harmful to aquatic life with long lasting effects.

12.1. Toxicity

12.2. Persistence and degradability

Persistence and degradability The product is slowly degradable.

12.3. Bioaccumulative potential

Partition coefficient Not known.

12.4. Mobility in soil

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Mobility No data available.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment This product does not contain any substances classified as PBT or vPvB.

12.6. Other adverse effects

Other adverse effects Not relevant.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

Disposal methods The generation of waste should be minimised or avoided wherever possible. Reuse or recycle products wherever possible. Only store in correctly labelled containers. Dispose of contents/container in accordance with national regulations. Do not empty into drains.

SECTION 14: Transport information

General The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, ADR/RID).

14.1. UN number

Not applicable.

14.2. UN proper shipping name

Not applicable.

14.3. Transport hazard class(es)

No transport warning sign required.

14.4. Packing group

Not applicable.

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant
No.

14.6. Special precautions for user

Not applicable.

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

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

SECTION 15: Regulatory information

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

AITKENS NUTRI-SMART 11-0-11+2Fe+3MgO+3.2CaO 20KG

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

SECTION 16: Other information

Abbreviations and acronyms used in the safety data sheet

ATE: Acute Toxicity Estimate.
ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.
ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways.
CAS: Chemical Abstracts Service.
DNEL: Derived No Effect Level.
GHS: Globally Harmonized System.
IATA: International Air Transport Association.
IMDG: International Maritime Dangerous Goods.
ICAO-TI: Technical Instructions for the Safe Transport of Dangerous Goods by Air.
LC₅₀: Lethal Concentration to 50 % of a test population.
LD₅₀: Lethal Dose to 50% of a test population (Median Lethal Dose).
PBT: Persistent, Bioaccumulative and Toxic substance.
PNEC: Predicted No Effect Concentration.
REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006.
SVHC: Substances of Very High Concern.
vPvB: Very Persistent and Very Bioaccumulative.
cATpE: Converted Acute Toxicity Point Estimate.
LOAEC: Lowest Observed Adverse Effect Concentration.
LOAEL: Lowest Observed Adverse Effect Level.
EC₅₀: 50% of maximal Effective Concentration.
NOAEL: No Observed Adverse Effect Level.
NOEC: No Observed Effect Concentration.
LOEC: Lowest Observed Effect Concentration.
DMEL: Derived Minimal Effect Level.

Revision comments NOTE: Lines within the margin indicate significant changes from the previous revision.

Revision date 18/12/2017

Revision 2

Supersedes date 10/11/2017

SDS number 5742

AITKENS NUTRI-SMART 11-0-11+2Fe+3MgO+3.2CaO 20KG**Risk phrases in full**

R20/22 Harmful by inhalation and if swallowed.
R22 Harmful if swallowed.
R36/38 Irritating to eyes and skin.
R38 Irritating to skin.
R42/43 May cause sensitisation by inhalation and skin contact.
R48/20/22 Harmful: danger of serious damage to health by prolonged exposure through inhalation and if swallowed.
R48/23 Toxic: danger of serious damage to health by prolonged exposure through inhalation.
R49 May cause cancer by inhalation.
R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R60 May impair fertility.
R61 May cause harm to the unborn child.
R68 Possible risk of irreversible effects.

Hazard statements in full

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.
H332 Harmful if inhaled.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H341 Suspected of causing genetic defects.
H350i May cause cancer by inhalation.
H360D May damage the unborn child.
H360FD May damage fertility. May damage the unborn child.
H372 Causes damage to organs through prolonged or repeated exposure.
H373 May cause damage to organs through prolonged or repeated exposure.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.
H411 Toxic to aquatic life with long lasting effects.
H412 Harmful to aquatic life with long lasting effects.
EUH208 Contains nickel sulfate. May produce an allergic reaction.

This 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. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.