Single Superphosphate

Issue Date: 25-Oct-17
Revision Date: 25-Oct-17
Revision Number: 1

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

1.1 Name of Product

Single Superphosphate

1.2 Use of the Substance/Preparation

Fertiliser

1.3 Manufacturer/Distributor

Thomas Elliott (Fertilisers)
Selby Place
Stanley Industrial Estate
Skelmersdale
WN8 8EF
Tel: 01695 51875
Email: info@thomas-elliott.co.uk

1.4 Emergency Contact

Tel: 01695 51875 (Office Hours)

2. HAZARDS IDENTIFICATION

2.1 Classification

Classification according to Directive EC 1272/2008 Classification, Labelling and Packaging.

Physical hazards

Not Classified

Health hazards

Eye Dam. 2 - H318

Environmental hazards

Not Classified

2.2 Label elements

Contains Superphosphate, concentrated (EC 266-030-3, CAS 65996-95-4)

Pictogram

Signal Word

Danger

Hazard statements

H318 Causes serious eye damage

Precautionary statements

P101 Read label before use
P102 Keep out of reach of children
P103 If medical advice is needed, have product label or container at hand.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310 Immediately call a POISON CENTRE or doctor/physician.

2.3 Other hazards

None

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient	CAS/EINECS	Classification	Concentration (%)
Calcium bis(dihydrogen orthophosphate)	7758-23-8/ 231-837-1	Eye dam 1 H313	>25
Calcium sulphate	7778-18-9/ 231-900-2		1-10%

4. FIRST AID MEASURES

4.1 Description of First Aid Measures

General information – Do not leave affected persons unattended.

Eye contact – Rinse eyes cautiously with water for several minutes. Remove contact lenses, if present and easy to do so. Continue rinsing. Immediately call a poison centre or doctor/physician.

Skin contact – Immediately wash with water and soap and rinse thoroughly. If skin irritation continues, consult a doctor.

Ingestion – Rinse out mouth, with water, drink 1 or 2 glasses of water or milk. If symptoms persist consult a doctor. Never give anything by mouth to unconscious person.

Inhalation – Remove to fresh air. Consult doctor in case of complaints.

4.2 Most important symptoms and effects, both acute and delayed

Irritation to the eyes.

4.3 Indication of immediate medical attention and special treatment needed

No further relevant information available.

5. FIRE FIGHTING MEASURES

5.1 Extinguishing Media

Use foam, carbon dioxide, dry powder, sand. The mixture is not classified as flammable. As such extinguishing media appropriate for surrounding materials should be chosen.

5.2 Special hazards arising from substance or mixture

Phosphorus and Sulphur Dioxide (SO_2)

5.3 Advice for firefighters

Wear self-contained breathing apparatus in confined spaces.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal Precautions

Ensure adequate ventilation. Wear a suitable dust mask if dust is generated above exposure limits. Wear protective gloves and eye protection. Wash hands and exposed skin after handling.

6.2 Environmental precautions

Do not allow to enter drains or sewers.

6.3 Methods and material for containment and cleaning up:

Sweep up and shovel product or use other means and place in container for reuse (preferred) or disposal. Dilute residues from larger spillages with water and neutralise with lime or limestone powder.

7. HANDLING & STORAGE

7.1 Precautions for Safe Handling

Ensure good ventilation at workplace. Ensure good hygiene practices are observed. Avoid contact with eyes. Ensure workplace exposure limits are observed. Do not block stack pallets. Tightly fitting safety goggles must be worn.

7.2 Conditions for Safe Storage

Store in a cool location. Do not store together with alkalis (caustic solutions). Do not store together with urea. Protect from heat and direct sunlight. Protect from humidity and water.

7.3 Specific end use

Fertiliser

8. EXPOSURE CONTROLS/ PERSONAL PROTECTION

8.1 Control parameters

SSP Single Superphosphate (CAS 8011-76-5), Desired No Effect Level (DNEL)

Worker

Systemic long-term effects dermal:	17.4	mg/kg/day
Systemic long-term effects inhalative:	3.1	mg/m^3

General Population

Systemic long-term effects dermal:	10.4	mg/kg/day
Systemic long-term effects inhalative:	0.9	mg/m^3
Systemic long-term effects oral:	2.1	mg/kg/day

SSP Single Superphosphate (CAS 8011-76-5), Predicted No Effect Concentration (PNEC)

Fresh water	1.7	mg/L
Marine water	0.17	mg/m^3
Intermittent release	17	mg/L
STP	10	mg/L

8.2 Exposure Controls:

The usual precautionary measures are to be adhered to when handling chemicals.
Do not eat or drink while working. Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at the end of work. Avoid contact with the eyes and skin.
Breathing equipment: Use suitable respiratory protective device in case of insufficient ventilation.
Eye protection: tightly sealed safety glasses.
Gloves: The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.
Clothing: Protective work clothing.

9. PHYSICAL & CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties:

Appearance	Light brown/grey powder/granule
Odour	Acidic
pH	Approx. 3.7 at 1% w/w in water
Boiling point	n/a
Melting point	n/a
Flash point	none
Flammability	Not flammable
Autoflammability	Product is not self-igniting
Explosivity	Product does not present an explosion hazard
Oxidising properties	none
Vapour Pressure	8.4×10^{-7} Pa (OECD 104, EC A.4)
Relative density	$2.41 g/cm^3$ (OECD 109, EC A.3)
Solubility	1-100g/L
Decomposition temperature	n/a

9.2 Other Information:

None

10. STABILITY & REACTIVITY

10.1 Reactivity

Reacts with alkali. Mixes with urea to form urea phosphate

10.2 Stability

Stable under normal conditions.

10.4 Conditions to Avoid

Store away from heat.

10.5 Incompatible materials

Alkalis, urea

10.6 Hazardous Decomposition Products

Decomposes at high temperatures producing toxic fluorine based pyrolysis products, phosphorus and sulphur oxide fumes.

11. TOXICOLOGICAL INFORMATION

11.1 Information on Toxicological Effects

Acute toxicity

LD/LC50 values that are relevant for classification: no reliable studies. Classification based on read across from analogous substances.

Oral LD50 diammonium hydrogenorthophosphate 7783-28-0	>2000	mg/kg (rat)
Dermal LD50 diammonium hydrogenorthophosphate 7783-28-0	>2000	mg/kg (rat)
Inhalative LC50 diammonium hydrogenorthophosphate 7783-28-0	>5000	mg/kg (rat)

Primary irritant effect for Ferrous Sulphate Heptahydrate (7720-78-7)

Skin: ammonium dihydrogenorthophosphate 7722-76-1	OECD 404	Not irritating (rabbit)
Eye: superphosphate (SSP) 8011-76-5	OECD 405 EC B5	Irritant effect (rabbit)

Subacute to chronic toxicity

Data of the Key Studies for superphosphates, concentrated 65996-95-4:

Oral NOAEL	250	mg Fe/kg/day (rat, 90 days) (not according to OECD)
Dermal NOAEL		no relevant data available
Inhalative NOAEC		no relevant data available

CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)

Mutagenicity:
Negative (OECD 471, CAS 65996-95-4 Superphosphate concentrated)
Negative (OECD 473, CAS 8011-76-5 single superphosphate)
Negative (OECD 476, CAS 7722-76-1 ammonium dihydrogenorthophosphate)

Carcinogenicity:
No data available (no carcinogenicity study required as this substance is not genotoxic).

Toxicity for reproduction:
No classification is necessary.

Reproductive toxicity: NOAEL	750	mg/kg bw/day; rat; oral
Developmental toxicity: NOAEL	750	mg/kg bw/day; rat; oral (OECD 422, CAS 65996-95-4 Superphosphate, concentrated

12. ECOLOGICAL INFORMATION

12.1 Toxicity

12.1 Toxicity

Inorganic phosphates are not considered toxic.

Ammonium dihydrogenorthophosphate 7722-76-1

NOEL/96h	≥ 1000 mg/l (Danio)
EC50/96h	≥ 85.9 mg/l (rainbow trout)

Superphosphate (SSP) 8011-76-5

EC50/72h	≥ 1790 mg/l (Daphnia)

Superphosphates, concentrated 65996-95-4

NOEC/48h	≥ 87.6 mg/l (algae)

12.2 Persistence and degradability

The substance is inorganic; therefore no biodegradation tests are applicable. This product dissociates into Ca+2, sulphate and phosphate ions, which cannot be further degraded.

12.3 Bioaccumulative potential

Does not accumulate in organisms. This substance is highly water soluble and dissociating.

12.4 Mobility in soil

Low potential for adsorption (based on substance properties). This substance is highly water soluble and dissociating.

12.5 Results of PBT and vPvB

No assessment is required for inorganic substances.

12.6 Other adverse data

The product should not get in high quantities into waste water because it may act as a plant nutrient and cause eutrophication.

13. DISPOSAL CONSIDERATIONS

Disposal must be made according to official regulations.

13.1 Waste treatment methods

This product is used as fertiliser. However, large spills can kill vegetation. Prevent large quantities from entering waterways. If uncontaminated, sweep up or collect, and reuse as product. If contaminated with other materials, collect in suitable containers. On the basis of the necessary

technical regulations and after consultation with the disposal agent and the relevant authorities, can be disposed of with domestic waste or incinerated with domestic waste.

European Waste Catalogue
06 00 00 WASTES FROM INORGANIC CHEMICAL PROCESSES
06 09 00 wastes from the MSFU of phosphorous chemicals and phosphorous chemical processes
06 09 04 calcium-based reaction wastes other than those mentioned in 06 09 03

14. TRANSPORT INFORMATION

14.1 UN-Number
ADR, IMDG, IATA Not applicable

14.2 UN proper shipping name
ADR, IMDG, IATA Not applicable

14.3 Transport hazard class(es)
ADR, IMDG, IATA Not applicable

14.4 Packaging Group
ADR, IMDG, IATA Not applicable

14.5 Environmental hazards
Not an environmentally hazardous substance.

14.6 Special precautions for user
None

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code
Listed

15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific to this substance:
This substance is classified and labelled in accordance with regulation 1999/45/EC, 1272/2008, the statutory instrument No.716 2009 Chemicals (Hazard Information and Packaging) regulations and the EC Fertiliser Regulations 2003, 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), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, including amendments.

15.2 Chemical Safety Assessment
Not undertaken for this material

16. OTHER INFORMATION

Reason for revision
MSDS re-formatted in-line with regulation 453/2010 all sections affected.
Liability
The product label provides information on the use of the product: do not use otherwise, unless you have assessed any potential hazard involved and the safety measures required. Prepared by Thomas Elliott (Fertilisers), for Health and Safety purposes from the best knowledge available at the time of printing.