



Safety Data Sheet

Conforms to REGULATION (EU) No 453/2010

Version:	Revision B
Issue date:	17/06/2016

GROUP 8 NITROGEN FREE P & PK, (CONTAINING <10% SUPERPHOSPHATES).

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

1.1 Product identifier	
Product/Trade name	Nitrogen free P & PK fertilizers, (containing <10% superphosphates). As indicated on packaging by PSDS Group 8 marking and nutrient inclusion.
Common chemical name	P & PK, compound/blended fertilizer, complex fertilizer, (containing <10% superphosphates).
Synonyms	N/A Mixture
Chemical formula	N/A Mixture
EU index number	N/A Mixture
EC No	N/A Mixture
CAS No.	N/A Mixture
REACH Registration Number	N/A Mixture
National Product Registration Number, where appropriate.	N/A
1.2 Relevant identified uses of the substance or mixture and uses advised against	
Use of the substance/mixture	Fertilizer.
Uses advised against	All non-agricultural fertilizer use.
1.3 Details of the supplier of the safety data sheet	
Manufacturer/Importer/Supplier	Manufacturer
	Company name: Origin Fertilisers (UK) Limited.
	Full address: 1-3 Freeman Court, Jarman Way, Royston, Hertfordshire, SG8 5HW.
	Tel: 01763 255500
Email address of the person responsible for SDS	Email address; andy.bell@originfertilisers.co.uk
1.4 Emergency telephone number	Tel; 01763 255500 Out of hours; 07715 801875

2 Hazards identification

2.1 Classification of the substance or mixture	
Classification in accordance with Regulation 1272/2008 (CLP)	Non hazardous
Hazard statement(s)	Not applicable.
Classification in accordance with Directive 67/548 (DSD)	Not applicable.
Risk phrase(s)	Not applicable.
2.2 Label elements	
Hazard pictogram(s)	None.
Signal word	Not applicable.
Hazard statement(s)	None.

2.3	Precautionary statement(s)	None.
	Other hazards	None.
	PBT/vPvB criteria	Not applicable.
	Other hazards which do not result in classification	
	Physical and chemical hazards	Fertilizers are basically harmless products when handled correctly. However, the following points should be noted for heating and fire. The fertilizer is not itself combustible. On heating or fire, elements can melt and further heating may result in decomposition releasing toxic fumes containing phosphorous oxides, (e.g. P2O5), sulphur oxides, (SOx), hydrogen chloride gas and danger of toxic flourine based pyrolosis products may be present.
Health hazards	The fertilizers are basically harmless products when handled correctly. Prolonged or repeated contact with skin may cause discomfort, ingestion of large quantities may give rise to gastro-intestinal disorders and inhalation of dust at high concentrations may cause irritation of the nose and upper respiratory tract with symptoms such as sore throat and coughing.	
Environmental hazards	Heavy spillage of phosphates may cause adverse environmental impact such as eutrophication in confined surface waters. See Section 12.	

3 Composition/information on ingredients

Substance:

Hazardous ingredients

Chemical name	CAS no.	EC no.	Generic REACH Reg No.)	Classification Regulation (EC) No. 1272/2008	Classification Directive 67/548/EEC	% (w/w)
Triple superphosphate	65996-95-4	266-030-3	01-2119493057-33	Eye Dam./Irrit. H318	Xi; R41	<10%

Other ingredients

Potassium Chloride	7447-40-7	231-211-8				Variable
Limestone	1317-65-3	215-279-6				Variable

EC no. means EINECS or ELINCS number.

4 First aid measures

4.1 Description of first aid measures

General	In some cases medical attention necessary (see below).
Inhalation	Remove from source of exposure to dusts to fresh air. Obtain medical attention if ill effects occur.
Ingestion	Do not induce vomiting unless directed to do so by medical personnel. Rinse mouth and then give plenty of water to drink. Obtain medical attention if more than small quantities have been swallowed. NOTE; never give an unconscious person anything to drink.
Skin contact	Wash the affected area with water and soap and rinse thoroughly. If skin irritation continues, consult a doctor.
Eye contact	Flush/irrigate eyes including under eyelids with copious amounts of water for at least 15 minutes. Remove contact lenses if present and easy to do so. Continue rinsing. Obtain medical attention if symptoms persist.

4.2 Most important symptoms and effects, both acute and delayed

Acute effects	Irritating to eyes.
Delayed effects	

4.3 Indication of any immediate medical attention and special treatment needed

Note to physician	Treat symptomatically. Contact poison centre specialist immediately if large quantities have been ingested or inhaled.
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5	Fire-fighting measures	
5.1	Extinguishing media	
	Suitable extinguishing media	If fertilizer is not directly involved in the fire Use the best means available to extinguish the fire. If fertilizer is involved in the fire The product is not flammable. Use plenty of water.
	Unsuitable extinguishing media	Do not use chemical extinguishers or foams or attempt to smother the fire with steam or sand.
5.2	Special hazards arising from the substance or mixture	
	Specific hazards	No specific fire or explosion hazard.
	Hazardous thermal decomposition and combustion products	Phosphorous oxides, (e.g. P ₂ O ₅), sulphur oxides, (SO _x), and danger of toxic fluorine based pyrolysis products; Phosphates, (P inclusion), and, Hydrogen chloride gas; Potassium Chloride (K inclusion).
5.3	Advice for firefighters	
	Special fire fighting procedures	Open doors and windows of the store to give maximum ventilation. Avoid breathing the fumes (toxic); stand up-wind of the fire. In case of inhalation of any decomposition products in a fire, symptoms may be delayed.
	Special protective equipment for fire-fighters	Use a self-contained breathing apparatus if fumes are being entered.
6	Accidental release measures	
6.1	Personal precautions, protective equipment and emergency procedures	Avoid walking through spilled product and exposure to dust.
6.2	Environmental precautions	Take care to avoid the contamination of watercourses and drains and inform the appropriate authority in case of accidental contamination of watercourses.
6.3	Methods and material for containment and cleaning up	Any spillage of fertilizer should be cleaned up promptly, swept up and placed in a clean labelled open container for safe disposal, avoiding dusty conditions. Do not mix with sawdust and other combustible or organic substances. Dilute any contaminated or fine grained fertilizer with inert materials such as limestone/dolomite, mineral phosphate, gypsum, sand or dissolve in water.
6.4	Reference to other sections	See section 1 for emergency contact information, section 8 for personal protective equipment and section 13 for waste disposal.
7	Handling and storage	
	The information in this section contains generic advice and guidance. The list of identified uses given in section 1 should be considered for any use-specific information provided in the Exposure Scenario(s).	
7.1	Precautions for safe handling	Avoid excessive generation of dust. Avoid contamination by combustible (e.g. diesel oil, grease, etc.) and/or other incompatible materials. Avoid unnecessary exposure to the atmosphere to prevent moisture pick-up. When handling the product over long periods use appropriate personal protective equipment, e.g. gloves. Carefully clean all equipment prior to maintenance and repair.
7.2	Conditions for safe storage, including any incompatibilities	Store in compliance with national and local regulations. Locate away from the sources of heat or fire. Keep away from combustible materials and substances mentioned under Section 10. On farm, ensure that the fertilizer is not stored near hay, straw, grain, diesel oil, etc. When stored loose, take particular care to avoid mixing with other fertilizers. Ensure high standard of housekeeping in the storage area. Do not permit smoking and use of naked lights in the storage areas. Restrict stack size (according to local regulations) and keep at least 1m distance around the stacks of bagged products. Any building used for the storage should be dry and well ventilated. Where the nature of the bagged product and climatic conditions so require, store under conditions that will avoid product breakdown by thermal cycling (wide variation in temperature). The product should not be stored in direct sunlight to avoid physical breakdown due to thermal cycling. Packaging materials: Plastic synthetic materials, steel and aluminum are suitable. Avoid use of copper and zinc.
7.3	Specific end use(s)	As a fertilizer.

8 Exposure controls/personal protection																										
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8.1 Control parameters																										
Regulated Exposure limit values Recommended occupational and consumer exposure limit values (following from the performed CSA):	No specific EU official limit.																									
	UK EH40 Workplace Exposure Limits, (WEL's),																									
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PNEC	fresh water: mg/l	marine water: mg/l	Intermittent use/release: mg/l	Sewage treatment plant: mg/l	Freshwater sediment mg/kg/dw	Soil mg/kg/dw																				
Triple superphosphate.	1.7	0.17	17	Not given	Not given	Not given																				
Potassium Chloride.	Not given	Not given	Not given	Not given	Not given	Not given																				
Limestone	Not given	Not given	Not given	Not given	Not given	Not given																				
8.2 Exposure controls																										
Appropriate engineering measures	Avoid high dust concentration and provide ventilation where necessary. Risk of inhalation must be minimised as much as possible.																									
Hygienic measures	When handling the product do not eat, drink or smoke. Wash hands after handling and before eating, smoking and using the lavatory and at the end of the working period.																									
Individual protection																										
Respiratory system	If dust concentration is high and/or ventilation is inadequate, use suitable dust mask or respirator with an appropriate filter; EN 136, EN 140, EN143, EN149, Filters P2																									
Skin and body	Working clothes.																									
Hands	Wear suitable gloves (e.g. plastic, rubber or leather) when handling the product over long periods.																									
Eyes	Recommended: safety glasses with side shields (EN 166). Wear safety glasses with side protection or safety goggles, (EN166).																									
Environmental exposure controls	Avoid the contamination of watercourses and drains and inform the appropriate authority in case of accidental contamination of watercourses. Do not flush into surface water or sanitary sewer system.																									
9 Physical and chemical properties																										
9.1 Information on basic physical and chemical properties																										
Appearance	Solid, granular, brown or grey and red or cream and light grey granules unless deliberately coloured during manufacture.																									
Odour	May be acrid with superphosphate inclusion.																									
Odour threshold	Not determined.																									
pH	> 3.6 aqueous solution.																									
Melting point/freezing point	Not determined.																									
Initial boiling point and boiling range	Superphosphate decomposes > 200 °C.																									
Flash point	Not determined.																									
Evaporation rate	Not determined.																									
Flammability (solid, gas)	Not determined.																									
Upper/lower flammability or explosive limits	Not determined.																									

9.2	Explosive properties	Not determined.
	Auto-ignition temperature	Not determined.
	Decomposition temperature	Superphosphate starts to decompose above approx. 200°C
	Minimum ignition energy	Not determined.
	Oxidising properties	Not oxidising.
	Critical temperature	Not applicable
	Relative density	Not applicable.
	Density	Not determined.
	Loose bulk density	Normally between 1000-1200 kg/m ³ .
	Vapour pressure at 20°C	Not determined.
	Vapour density	Not applicable
	Partition coefficient (n-octanol/water)	Not applicable
	Viscosity	Not applicable to solids
	Mean particle size	2-4mm
Water solubility	>100 g/l at 20°C. Hygroscopic - readily picks up moisture from the air.	
Surface tension	Not surface active (based on molecular structure)	
Other information		
	Miscibility	Not applicable
	Fat solubility	No available
	Gas group	Not applicable
	Remarks	No further information available.

10	Stability and reactivity	
10.1	Reactivity	Stable under recommended storage and handling conditions (see section 7, handling and storage).
10.2	Chemical stability	Stable under recommended storage and handling conditions (see section 7, handling and storage).
10.3	Possibility of hazardous reactions	When heated, superphosphates can decompose.
10.4	Conditions to avoid	Heating above 200°C (decomposes to gases). Contamination by incompatible materials. Unnecessary exposure to the atmosphere. Sources of heat or fire close to the product. Heating under confinement. Welding or hot work on equipment or plant which may have contained fertilizer without first washing thoroughly to remove all fertilizer.
10.5	Incompatible materials	Superphosphates may react or be incompatible with alkalis and is incompatible with Urea.
10.6	Hazardous decomposition products	Under normal conditions of storage and use, hazardous decomposition products should not be produced. For fire situation: see section 5. When strongly heated, decomposition products are produced releasing toxic fumes including phosphorous oxides, (e.g. P ₂ O ₅), sulphur oxides, (SO _x), and danger of toxic fluorine based pyrolysis products; Phosphates, (P inclusion), and, Hydrogen chloride gas; Potassium Chloride (K inclusion). See also Sections 2 and 9.

11	Toxicological information	
11.1	Information on toxicological effects	
	Toxicokinetics, metabolism and distribution	Not available
	Acute toxicity	Ingredients
	Acute oral toxicity	Triple superphosphate LD50: >2000 mg/kg bw, (rat; male, female, exposure time 4 hours).
	Acute dermal toxicity	Triple superphosphate LD50: > 5000 mg/kg bw, (rat; male, female, exposure time 4 hours).
	Acute inhalation toxicity	Triple superphosphate LC50: > 5 g/m ³ , (rat; male, female, exposure time 4 hours).
	Acute oral toxicity	Potassium chloride LD50: 3020 mg/kg, rat.
	Acute dermal toxicity	
	Acute inhalation toxicity	
	Local effects	
	Skin irritation	Product Not irritating (OECD 404)
	Eye irritation	Product Irritating (OECD 405)
	Skin sensitisation	Not sensitizing (OECD 429, with triple superphosphate, and, potassium chloride - information derived from practical experience). Prolonged contact may cause irritation and dryness from Limestone.

Other	Sub-acute toxicity	Oral 90-day Sub-chronic NOAEL \geq 250 mg/kg bw/day tested on rat, (OECD 422, with triple superphosphate) Inhalation; No specific data.
	Mutagenicity	No known significant effects or critical hazards.
	Reproductive toxicity	No known significant effects or critical hazards.
	Carcinogenicity	No known significant effects or critical hazards.
	Remarks	Adverse health effects are considered unlikely when the product is handled and used correctly. If large quantities are ingested may give rise to gastro-intestinal disorders. Superphosphates will cause serious eye damage therefore suitable eye protection must be worn to prevent eye contact. Prolonged inhalation may cause respiratory irritation with apparent adverse symptoms such as coughing, wheezing and breathing difficulties. Limestone dust if inhaled over a prolonged or extended period can, by respirable dust, lead to respiratory system damage and disease. Crystalline silica is present in limestone at around 2% by content, (Ref; HSE INDG 463), respirable crystalline silica has been associated with the lung disease silicosis.

12 Ecological information

12.1 Toxicity	Triple superphosphate	Toxicity to fish	96-h Acute LC50: $>$ 85.9 mg/l, freshwater, (OECD 203).
		Toxicity to daphnia and other aquatic invertebrates.	72-h Acute LC50: 1.790 mg/l, aquatic invertebrates - Water flea.
		Toxicity to algae	72-h Acute EC50: $>$ 87.6 mg/l, aquatic plants - Algae.
		Inhibition of microbial activity	No data.
	Potassium Chloride (K)	Toxicity to fish.	LC50: 880 mg/l, species Pimephales Promelas, (fathead minnow), 96 hour period, OECD Test Guideline 203.
		Toxicity to daphnia and other aquatic invertebrates.	EC50: 440 - 880 mg/l, species Daphnia Magna, (water flea), 48 hour period, OECD Test Guideline 202.
		Toxicity to algae.	EC50: $>$ 100 mg/l, species Desmodesmus Subspicatus, (green algae), 72 hour period, OECD Test Guideline 201.
		Toxicity to bacteria.	EC50: $>$ 1000mg/l, activated sludge, 3 hour period, OECD Test Guideline 209.
	12.2 Persistence and degradability	Toxicity to fish, (chronic toxicity)	No observed effect concentration: 500 mg/l, 7 day period, OECD Test Guideline 210.
		Ingredient name.	Triple superphosphate.
Biodegradation	Biodegradation	Superphosphates are readily biodegradable in plants and soils and does not show any bioaccumulation phenomena.	
	Hydrolysis	Not applicable.	
12.3 Bioaccumulative potential	Biodegradation	Ingredient name.	Potassium chloride.
		Hydrolysis	Not applicable.
	Biodegradation	Ingredient name.	Limestone.
		Hydrolysis	Limestone is non-volatile and inert, it is resistant to degradation and will persist in the environment.
	Hydrolysis	Not applicable.	
	12.4 Mobility in soil	Octanol-water partition coefficient (Kow)	Not applicable.
Bioconcentration factor (BCF)		Low potential for bioaccumulation (based on substance properties).	
12.5 Results of PBT and vPvB assessment	Low potential for absorption (based on substance properties). Limestone is resistant to degradation and will persist in the environment.		
12.6 Other adverse effects	Not considered to be persistent, bioaccumulating or toxic PBT or vPvB. No known effects or significant hazards.		

13 Disposal considerations						
13.1	Waste treatment methods	In accordance with local and national regulations, disposed by landfill or incineration. Controlled biodegradation in waste water treatment is possible.				
	Container	Containers should be cleaned by appropriate method and then re-used or disposed by landfill or incineration as appropriate, in accordance with local and national regulations. Do not remove label until container is thoroughly cleaned.				
	Methods of disposal	Depending on degree and nature of contamination dispose of by use as fertilizer on farm, as raw material for liquid fertilizer, or to an authorised waste facility. Do not empty into drains; dispose of this material and its container in a safe way and in accordance with all applicable local and national regulations. See chapters 06 03 and 06 10 of the list of wastes (Commission decision 2000/532/EC)				
	Package waste disposal	Empty the bag by shaking to remove as much as possible of its contents. If approved by local authorities, empty bags may be disposed of as non-hazardous material or returned for recycling.				
<i>Note: see section 7 for safe handling and storage</i>						
14 Transport information						
		ADR/RID	ADN/ADNR	IMDG	ICAO/IATA	
14.1	UN Number	Not classified.				
14.2	UN Proper shipping name	Not applicable.	Not applicable.	Not applicable.	Not applicable.	
14.3	Transport hazard class(es)	Not classified.				
14.4	Packing group	Not applicable.				
	Label	Not applicable.				
14.5	Environmental hazards	Not applicable.				
14.6	Special precautions for user	None.				
14.7	Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable				
15 Regulatory information						
15.1	Safety, health and environmental regulation/legislation specific for the substance or mixture					
	Other regulations	Regulation EC 1907/2006 (REACH), EC 2003/2003, 96/82 EC. Decision No 1348/2008/EC of the European Parliament & of the Council and Commission Regulation (EC) No 552/2009.				
15.2	Chemical safety assessment	In accordance with REACH Article 14, a Chemical Safety Assessment has been carried out for the substance Triple superphosphate.				
16 Other 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 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 proceed, unless specified in the text.					
	Classification in accordance with Regulation 1272/2008, as listed in Annex VI:	None.				
	Classification in accordance with Regulation 1272/2008, by self-classification based on the performed CSA	None.				
	Risk phrases	None.				
	Symbols	None.				

Abbreviations and acronyms	<p><i>Eye Dam. Irrit. 1 (Eye Irrit. 1)</i> Causes serious eye irritation (H318) CLP - Classification, Labelling and Packaging Regulation, (Regulation EC No. 1272/2008). CAS Number - Chemical Abstracts Number, substance registration number. EC No. - European Commission substance identification number. % w/w - Percentage weight for weight; percentage by weight of solute in total weight of solution. PBT - Persistent, bioaccumulative, toxic. vPvB - Very persistent, very bioaccumulative. DNEL - Derived no effect level. PNEL - Prescribed no effect level. LC50 - Lethal concentration for 50% of subjects. LD50 - Lethal dose for 50% of subjects. OECD - Organisation for Economic Co-operation and Development. LOAEL - Lowest observed adverse effect level. NOAEL - No observed adverse effect level. EC50 - Effective Concentration for 50% of subjects. NOEC - No observed effect concentration. LTEL - Long term exposure limit. STEL - Short term exposure limit TWA - Time weighted average. mg/kg/bw/day - mg/kg of body weight per day. mg/kg/dw - mg/kg of dry weight.</p>
Training advice	Operators should be provided with information, instruction, training and supervision relative to this Safety Data Sheet and any subsequent COSHH assessment produced by his/her employer.
Date of previous SDS	08/07/2010
Modifications in this version	
References	EFMA/Fertilizers Europe Guidance documents, TFI HPV data; NOTOX gap analysis
<p>Disclaimer The information in this Safety Data Sheet is given in good faith and belief in its accuracy based on our knowledge of the substance/preparation concerned at the date of publication. It does not imply the acceptance of any legal liability or responsibility whatsoever by Origin Fertilisers for the consequences of its use or misuse in any particular circumstances.</p>	