




SAFETY DATA SHEET

SECTION 1	PRODUCT AND COMPANY IDENTIFICATION
Trade Name:	Nexfos®
Chemical Name:	Calcium Phosphates (blend of calcium, phosphates, silica)
CAS Number:	10031-30-8 & 7789-77-7 & 14808-60-7
Chemical Family:	Inorganic Salt
Synonyms:	MCP/DCP Calcium Phosphate Monobasic Monocalcium Phosphate Monocalcium Diphosphate Monodicalcium Phosphate Dicalcium Phosphate Defluorinated Phosphate Calcium Phosphate Monobasic Monohydrate
Primary Use:	Animal Feed ingredient. This product is not intended for direct consumption, but as part of a formulation.
Company Information:	THE MOSAIC COMPANY 3033 Campus Drive Plymouth, MN 55441 www.mosaicco.com 800-918-8270 or 763-577-2700 8 AM to 5 PM Central Time US
Emergency Telephone:	EMERGENCY OVERVIEW 24 Hour Emergency Telephone Number: <u>For Chemical Emergencies:</u> Spill, Leak, Fire or Accident Call CHEMTREC North America: (800) 424-9300 (reference CCN201871) Others: (703) 527-3887 (collect)

SECTION 2	HAZARD IDENTIFICATION		
GHS Classification:	<table border="0" style="width: 100%;"> <tr> <td style="width: 50%;">Skin Irritant Category 2 Eye Irritant Category 2B STOT SE Category 1 Carcinogenicity 1A</td> <td style="width: 50%;">Hazard Statement H315 Hazard Statement H320 Hazard Statement H335 Hazard Statement H350 Hazard Statement H372</td> </tr> </table>	Skin Irritant Category 2 Eye Irritant Category 2B STOT SE Category 1 Carcinogenicity 1A	Hazard Statement H315 Hazard Statement H320 Hazard Statement H335 Hazard Statement H350 Hazard Statement H372
Skin Irritant Category 2 Eye Irritant Category 2B STOT SE Category 1 Carcinogenicity 1A	Hazard Statement H315 Hazard Statement H320 Hazard Statement H335 Hazard Statement H350 Hazard Statement H372		
	Signal Word: DANGER Hazard Statement(s) H315: Causes skin irritation H320: Causes eye irritation H335: May cause respiratory irritation H350: May cause cancer H372: Causes damage to organs through prolonged or repeated exposure		
Label Elements:			
Prevention:	P201: Obtain special instructions before use. P202: Do not handle until all safety precautions have been read and understood. P260: Do not breathe dust/fume/gas/mist/vapours/spray. P264: Wash hands thoroughly after handling. P270: Do not eat, drink or smoke when using this product. P280: Wear protective gloves		



	P261: Avoid breathing dust P271: Use only outdoors or in a well-ventilated area. P280: Wear protective gloves/protective clothing/eye protection/face protection.	
Response:	P302+ P352	IF ON SKIN: Wash with plenty of water.
	P308+ P313	IF exposed or concerned: Get medical advice/attention.
	P314	Get medical advice/attention if you feel unwell.
	P321	Specific Treatment, see supplemental first aid information.
	P332+ P313	If skin irritation occurs: Get medical advice/attention.
	P362+ P364	Take off contaminated clothing and wash it before reused.
	P305+P351+ P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	P337+ P313	If eye irritation persists: Get medical advice/attention.
	P304+ P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
Storage:	Not applicable	Not applicable
Disposal:	P501	Disposal of content/containers to be in accordance with local/regional/national regulations.

SECTION 3		COMPOSITION INFORMATION ON INGREDIENTS			
Formula:	Ca(H ₂ PO ₄) ₂ · H ₂ O - CaHPO ₄ · 2H ₂ O				
Composition:	Monocalcium Phosphate - Monohydrate	CAS 10031-30-8	40-60%	Skin Irritant Category 2 Eye Irritant Category 2B STOT SE 1 (Lungs, Inhalation) Carcinogenicity 1A	
	Dicalcium Phosphate Dihydrate	CAS 7789-77-7	25-40%		
	Iron Phosphate	CAS 31096-47-6	9-11%		
	Sodium Phosphate Monobasic	CAS 7558-807	4-6%		
	Crystalline Silica - Quartz	CAS 14808-60-7	2-4%		
	Calcium Sulfate Dihydrate	CAS 10101-41-4	0.2-1.0%		

SECTION 4		FIRST AID MEASURES	
First Aid Procedures:	Eyes:	Move victim away from exposure and into fresh air. Flush eyes with plenty of clean water for at least 15 minutes. If symptoms persist, seek medical attention.	
	Skin:	Wash contaminated area thoroughly with mild soap and water. If chemical or solution soaks through clothing, remove clothing and wash contaminated skin. If irritation develops and persists after washing, seek medical attention.	
	Inhaled:	If respiratory symptoms develop, move victim away from source of exposure and into fresh air. If symptoms persist, seek medical attention.	
	Ingestion:	If large amounts are swallowed, seek emergency medical attention. If possible, do not leave victim unattended and observe closely for adequacy of breathing.	
Note to Physician:	None known.		

SECTION 5		FIRE FIGHTING MEASURES	
Extinguishing Media:	Use extinguishing agent suitable for type of surrounding fire. Avoid excessive water to minimize runoff.		



Protection of Firefighters:	<p>Positive pressure, self-contained breathing apparatus is required for all firefighting activities involving hazardous materials. Full structural firefighting (bunker) gear is the minimum acceptable attire. The need for proximity, entry, flashover and/or special chemical protective clothing (see Section 8) needs to be determined for each incident by a competent firefighting safety professional.</p> <p>Water used for fire suppression and cooling may become contaminated. Discharge to sewer system(s) or the environment may be restricted, requiring containment and proper disposal of water.</p>
SECTION 6	ACCIDENTAL RELEASE MEASURES
Response Techniques:	<p>Stay upwind and away from spill (dust hazard). Wear appropriate protective equipment, including respiratory protection, as conditions warrant (see Section 8). Prevent spilled material from entering sewers, storm drains, other unauthorized treatment drainage systems, and natural waterways. Notify appropriate federal, state, and local agencies as may be required (see Section 15). Minimize dust generation. Sweep up and package appropriately for disposal.</p>

SECTION 7	HANDLING AND STORAGE
Handling:	<p>The use of appropriate respiratory protection is advised when concentrations exceed any established exposure limits (see Sections 3 and 8). Wash thoroughly after handling. Wash contaminated clothing or shoes. Use good personal hygiene practices.</p>
Storage:	<p>Keep container(s) tightly closed. Use and store this material in dry, well ventilated areas. Store only in approved containers. Keep away from any incompatible material (see Section 10). Protect container(s) against physical damage.</p>

SECTION 8	EXPOSURE CONTROLS / PERSONAL PROTECTION								
Engineering Controls:	<p>If current ventilation practices are not adequate to maintain airborne concentrations below the established exposure limits, additional ventilation or exhaust systems may be required.</p>								
Personal Protective Equipment (PPE):	<table border="1"> <tr> <td>Eye/Face:</td> <td>Approved eye protection to safeguard against potential eye contact, irritation, or injury is recommended.</td> </tr> <tr> <td>Skin:</td> <td>The use of cloth or leather work gloves is advised to prevent skin contact; possible irritation and absorption (see glove manufacturing literature for information on permeability).</td> </tr> <tr> <td>Respiratory:</td> <td>A NIOSH approved air purifying respirator with a type 95 (R or P) particulate filter may be used under conditions where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited (see manufacturer's respirator selection guide). Use a positive pressure air supplied respirator if there is potential for uncontrolled release, exposure levels are not known or any other circumstances where air purifying respirators may not provide adequate protection. A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements must be followed if workplace conditions warrant a respirator.</td> </tr> <tr> <td>Other:</td> <td>A source of clean water should be available in the work area for flushing eyes and skin. Impervious clothing should be worn as needed.</td> </tr> </table>	Eye/Face:	Approved eye protection to safeguard against potential eye contact, irritation, or injury is recommended.	Skin:	The use of cloth or leather work gloves is advised to prevent skin contact; possible irritation and absorption (see glove manufacturing literature for information on permeability).	Respiratory:	A NIOSH approved air purifying respirator with a type 95 (R or P) particulate filter may be used under conditions where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited (see manufacturer's respirator selection guide). Use a positive pressure air supplied respirator if there is potential for uncontrolled release, exposure levels are not known or any other circumstances where air purifying respirators may not provide adequate protection. A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements must be followed if workplace conditions warrant a respirator.	Other:	A source of clean water should be available in the work area for flushing eyes and skin. Impervious clothing should be worn as needed.
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General Hygiene Considerations:	Wash thoroughly after handling Wash contaminated clothing Use adequate ventilation Use good personal hygiene practice	
Exposure Guidelines:	OSHA Permissible Exposure Limits (PEL):	Particulates Not Otherwise Regulated: 5 mg/m ³ TWA (respirable); 15 mg/m ³ TWA (total) Silica Quartz: <u>30 mg/ m³</u> % SiO ₂ +2 OSHA TWA (total dust) <u>10 mg/ m³</u> % SiO ₂ +2 OSHA TWA (respirable)
	ACGIH Threshold Limit Value (TLV):	Particulates Not Otherwise Specified: 3 mg/m ³ TWA (respirable); 10 mg/m ³ TWA (inhalable) Silica Crystalline Quartz: 0.025 mg/m ³ TWA (respirable)

SECTION 9	PHYSICAL AND CHEMICAL PROPERTIES
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Note: Unless otherwise stated, values in this section are determined at 20°C (68°F) and 760 mm Hg (1 atm).

Appearance:	Light gray granules	Vapor Pressure (mm Hg):	Not applicable
Odor:	Slight	Vapor Density (air=1):	Not applicable
Odor Threshold:	No data available	Specific Gravity or Relative Density:	2.2
Physical state:	Solid granules	Bulk Density:	Loose 54 - 62 lbs/ft ³ (865 - 990 kg/m ³)
pH:	4.0 – 5.0 in a 1 w/v%	Solubility in Water:	60-75% in water
Melting Point/ Freezing Point:	Not applicable	Partition coefficient:	No data available
Boiling Point:	Not applicable	Auto-Ignition Temperature:	Not applicable
Flash Point:	Not applicable	Decomposition Temperature:	No data available
Evaporation Rate:	No data available	Viscosity:	No data available
Flammability:	Not applicable	Volatility:	Not applicable
Upper/lower Flammability or explosive limits	Not applicable		

SECTION 10	STABILITY AND REACTIVITY
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Chemical Stability:	Stable under normal conditions of storage and handling; decomposes at approx. 200° C.
Conditions to Avoid:	None known.
Incompatible Materials:	None known.
Hazardous Decomposition Products:	Combustion can yield phosphorus oxides when heated at very high temperatures.
Corrosiveness:	No data.
Hazardous Polymerization:	Will not occur.



SECTION 11		TOXICOLOGICAL INFORMATION	
Substance:	Monocalcium Phosphate Monohydrate		
Acute Oral Toxicity:	See Section 15 under Food and Drug Administration (FDA) notes LD ₅₀ (rat, oral) = 17500 mg/kg LD ₅₀ (mouse, oral) = 15250 mg/kg		
Acute Inhalation Toxicity:	No data available		
Acute Dermal Toxicity:	LD ₅₀ (rabbit, dermal) > 300 mg/kg See TOXNET		
Substance:	Dicalcium Phosphate Dihydrate		
Acute Oral Toxicity:	No data available		
Acute Inhalation Toxicity:	No data available		
Acute Dermal Toxicity:	No data available		
Substance:	Silica Crystalline Quartz		
Acute Oral Toxicity:	LD ₅₀ (rat, oral) = 3160 mg/kg		
Acute Inhalation Toxicity:	No data available		
Acute Dermal Toxicity:	No data available		
Mutagenesis:	No data available	Target Organ	STOT SE 1 (Lungs, Inhalation)
Developmental Toxicity:	No data available	Carcinogenicity	The ingredients of this product are classified as carcinogenic by NTP (National Toxicology Program), IARC, or OSHA. Refer to section 15.


SECTION 12		ECOLOGICAL INFORMATION	
Ecotoxicology:	May release phosphates which will result in algae growth, increased turbidity, and depleted oxygen (primarily fresh and coastal water systems). At extremely high concentrations, this may be hazardous to fish or other marine organisms. Release to watercourses may cause effects downstream.		

SECTION 13		DISPOSAL CONSIDERATIONS	
	Properly characterize all waste materials. Consult federal, state/provincial and local regulations regarding the proper disposal of this material. Prevent material from entering sewers, storm drains, other unauthorized treatment drainage systems, and natural waterways.		

SECTION 14		TRANSPORT INFO	
Regulatory Status:	Not regulated		
Identification Number:	HTS 2835.26.00		
Hazard Class:	Not applicable		
Proper Shipping Name	Not applicable		
Packing Group	Not applicable		
DOT Emergency Response Guide Number:	Not applicable		



Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:	Not applicable
MARPOL Annex V:	Non-HME
IMO/IMDG:	Not applicable

SECTION 15	REGULATORY INFORMATION				
FDA:	FDA Code of Federal Regulations (CFR) Title 21, Food Substances Generally Recognized as Safe, 582.1217 (Calcium Phosphate (mono-, di-, tribasic)) when used as an animal feed ingredient.				
CERCLA:	Not listed				
RCRA 261.33:	Not listed				
SARA TITLE III: (Exemptions at 40 CFR, Part 370 may apply for agricultural use, or for quantities of less than 10,000 pounds on-site.)	Section 302/304: Not listed		RQ: No		TPQ: No
	Section 311/312:				
	Acute: Yes	Chronic: No	Fire: No	Pressure: No	Reactivity: No
	Section 313: Not listed				
NTP, IARC, OSHA:	Respirable crystalline silica in the form of quartz or cristobalite from occupational sources is listed by the International Agency for Research on Cancer (IARC) and National Toxicology Program (NTP) as a lung carcinogen.				
Canada DSL and NDSL:	DSL: Yes NDSL: Not listed				
TSCA:	Listed on the TSCA Inventory				
CA Proposition 65: (Health & Safety Code Section 25249.5)	 WARNING: Cancer and Reproductive Harm – www.P65Warnings.ca.gov				
WHMIS:	Product does not ship into Canada				
CBSA:	This product does not contain any bovine, ruminant or other animal by-products.				

SECTION 16	OTHER INFORMATION
Disclaimer:	<p>The information in this document is believed to be correct as of the date issued. HOWEVER, MOSAIC MAKES NO GUARANTEE, REPRESENTATION, OR WARRANTY, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE REGARDING THE ACCURACY OR COMPLETENESS OF THIS INFORMATION, THE RESULTS TO BE OBTAINED FROM THE USE OF THIS INFORMATION OR THE PRODUCT, THE SAFETY OF THIS PRODUCT, OR THE HAZARDS RELATED TO THE USE OF THIS PRODUCT.</p> <p>User is responsible for determining whether this product is fit for a particular purpose and suitable for user's method of use or application and assumes the risk of use thereof. The conditions and use of this product are beyond the control of Mosaic, and Mosaic disclaims any liability for loss or damage incurred in connection with the use or misuse of this product. Each user should review the recommended industrial hygiene and safe handling procedures in the specific context of the intended use and determine whether they are appropriate.</p>
Preparation:	The preparation of this SDS was in accordance with ANSI Z400.1-2010.



Revision Date:	December 31, 2018			
Sections Revised:	Section 11, 15, 16			
SDS Number:	MOS 103094			
References:	Globally Harmonized System of Classification and Labelling of Chemicals (GHS) – 4th Edition 2011 OSHA Hazard Communication Standard, 2012 MARPOL Annex V; TOXNET			
Other Hazard Classifications:	NFPA HAZARD CLASS		HMIS HAZARD CLASS	
	Health:	2	Health:	1
	Flammability:	0	Flammability:	0
	Instability:	0	Physical Hazard:	0
	Special Hazard:	None	PPE:	Section 8