

**Magruder 250341 MAP/DAP 11-48-0**

*Results due April 15, 2025*

**Estimated Analysis**

Total Nitrogen (N) ..... 11%

Available Phosphate (P<sub>2</sub>O<sub>5</sub>) ..... 48%

Derived from: monoammonium phosphate and diammonium phosphate

*Also analyze for:*

As (ppm), Cd (ppm), Cr (ppm), Co (ppm), Pb (ppm), Hg (ppm), Mo (ppm), Ni (ppm), Se (ppm), Cu (%) and Zn (%)

*The units above are those required for reporting data from this Magruder sample. They may not be the units required on a commercial fertilizer label.*

*Note: This Magruder Check Sample material is not to be used in the manufacture of products nor applied to any crops or for other fertilizer uses. It is intended for analytical testing purposes only.*

**SDS for this product can be found at:**

<https://www.magruderchecksample.org/SDS/250341GuarSDS.pdf>

# SDS for Magruder 250341

SECTION 1	PRODUCT AND COMPANY IDENTIFICATION
Trade Name:	Regranulated Ammonium Phosphate with Sulfur
Chemical Name:	Monoammonium Phosphate with Ammonium Sulfate and Sulfur
CAS Number:	7722-76-1, 7783-28-0, 7783-20-2 and 7704-34-9
Chemical Family:	Ammonium Phosphates—Inorganic Salts
Synonyms:	Mixture of MAP and DAP plus Sulfur
Primary Use:	Crop nutrient
Company Information:	Corporate Headquarters The Mosaic Company. 101 East Kennedy Blvd, Ste 2500, Tampa, FL 33602
	US Guarantor: Mosaic Global Sales, LLC. 13830 Circa Crossing Drive, Lithia, FL 33547
	Canada Guarantor Mosaic Canada Crop Nutrition, LP, 1700 – 2010 12th Ave. Regina, SK Canada S4P 0M3
	Contact Info <a href="http://www.mosaicco.com">www.mosaicco.com</a> ; (800) 918-8270 or (813) 775-4200
Emergency Telephone:	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
OSHA/HCS Status:	This material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200). See appropriate classifications below.
Hazard Classification:	Physical hazards: Not classified. Health Hazards: Not classified
Hazard symbol: None	Signal Word: None applicable. Hazard Statement(s): None applicable.
Label Elements:	
Prevention:	Avoid release to the environment
Response:	Wash hands after handling
Storage:	Store away from incompatible materials
Disposal:	Dispose of contents / container in accordance with local /regional/national regulations
Hazards not otherwise classified (HNOC)	None known
Supplemental information	57% of the mixture consists of components of unknown acute hazards to the aquatic environment. 57% of the mixture consists of components of unknown long-term hazards to the aquatic environment.

SECTION 3	COMPOSITION INFORMATION ON INGREDIENTS	
Chemical Name	CAS Number	Concentration
Ammonium dihydrogen orthophosphate (MAP)	7722-76-1	60-80 %
Diammonium hydrogenorthophosphate (DAP)	7783-28-0	5-10 %

Sulfur	7704-34-9	3-7 %
Ammonium Sulfate	7783-20-2	5-10 %

<b>SECTION 4</b>	<b>FIRST AID MEASURES</b>
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.
Most important symptoms /effects, acute and delayed	Dusts may irritate the respiratory tract, skin and eyes
Indication of immediate medical attention and special treatment needed, if necessary	Treat symptomatically

<b>SECTION 5</b>	<b>FIRE FIGHTING MEASURES</b>
Suitable extinguishing media:	This product is noncombustible. Use extinguishing agent suitable for type of surrounding materials. Avoid excessive water to minimize runoff. Prevent firefighter water from entering the environment. Small fires: Water spray, foam, dry chemical or carbon dioxide (CO <sub>2</sub> ). Large fires: Water spray, fog or foam
Unsuitable extinguishing media	None known
Specific hazards arising from the chemical	Product itself doesn't burn. During fire, gases hazardous to health may be formed.
Protection of Firefighters:	Self-contained breathing apparatus and full protective clothing must be worn in case of fire
Unusual fire and explosion hazards	May decompose giving off ammonia, phosphorus oxides, nitrogen oxides.

<b>SECTION 6</b>	<b>ACCIDENTAL RELEASE MEASURES</b>
Personal precautions	Avoid dust inhalation and contact with skin or eyes. Avoid generation and spreading of dust. Stay upwind and away from spill (dust hazard). Wear personal protective equipment during clean up. See Section 8.
Methods for containment and cleaning up.	Stop the flow of material if this is without risk. Collect dust using a vacuum cleaner equipped with a HEPA filter.  Large Spills. Wet down with water and dike for later disposal. Shovel the material into waste container. Avoid generation of dusts during clean-up. Prevent product from entering drains. Following product recovery, flush area with water.

	Small spills: Sweep up or vacuum spillage and collect in suitable container for disposal. For waste disposal, see section 13.
Environmental precautions	Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground. Inform appropriate supervisory personnel of all environmental releases. Do not flush into surface water or sanitary sewer system. Runoff from fire control or dilution water may cause pollution.

<b>SECTION 7</b>	<b>HANDLING AND STORAGE</b>
Precautions for safe handling:	<p>Avoid generation and spreading of dust. Avoid inhalation and contact with skin and eye. Use adequate ventilation. Observe good industrial hygiene practices.</p> <p>Avoid systems that would tend to segregate dust or any components of this product. Avoid accumulation of fugitive dust, as high concentrations of sulfur dust may present an explosion hazard. Follow standard safe-work practices, including hot-work procedures when working around this product.</p>
Conditions for safe storage, including incompatibilities.	This product when stored in a confined, unventilated space/hold can give off ammonia or other odors and lead to the depletion of oxygen with this space and other confined spaces. Store in a cool well-ventilated space and keep away from any incompatible materials. Keep container(s) tightly closed. (see Section 10). Protect container(s) against physical damage. Material may absorb moisture from the air.

<b>SECTION 8</b>	<b>EXPOSURE CONTROLS / PERSONAL PROTECTION</b>
Occupational Exposure Limits:	
US OSHA Permissible Exposure Limits (PEL): Particulates Not Otherwise Regulated (PNOR): 5 mg/m <sup>3</sup> PEL (respirable fraction); 15 mg/m <sup>3</sup> TWA (total dust) Particulates Not Otherwise Regulated (PNOR): 5 mg/m <sup>3</sup> TWA (respirable fraction); 15 mg/m <sup>3</sup> TWA (total dust)	
US ACGIH Threshold Limit Values (TLV): Particulates Not Otherwise Specified: 3 mg/m <sup>3</sup> TWA (respirable); 10 mg/m <sup>3</sup> TWA (inhalable)	
Engineering Controls:	Good ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If engineering measures are not sufficient to maintain concentrations of dust particulates below the Occupation Exposure Limits (OEL), suitable respiratory protection must be worn. If material is ground, cut, or used in any operation which may generate dusts, use appropriate local exhaust ventilation to keep exposure below the recommended exposure limits.
Personal Protective Equipment (PPE):	
Eye/Face:	Wear approved safety glasses with side shield (or goggles)
Skin:	Hands: wear cloth or leather work gloves. Other: wear suitable protective clothing
Respiratory:	A NIOSH/MSHA 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.
General Hygiene Considerations:	Wash thoroughly after handling the material and before eating, drinking, or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

<b>SECTION 9</b>	<b>PHYSICAL AND CHEMICAL PROPERTIES</b>
Physical state:	Solid
Color / Appearance:	Gray, tan, or brown granules
Odor including odor threshold.	Rotten egg-like or slightly ammoniacal odor
Melting point/ freezing point:	Decomposes at 374°F (190°C) before melting
Boiling point:	Not relevant
Flammability:	Not relevant
Lower and upper explosion limit / flammability limit	Not relevant
Flash Point:	Not relevant
Auto-ignition temperature:	Not available
Decomposition temperature:	374°F (190°C)
pH:	4.2 – 8.1 in a 1 % solution
Viscosity:	No data available
Solubility in water:	80-90 % (328 grams/liter) 20°C
Partition coefficient n-octanol/water (log value)	No data available
Vapor pressure including evaporation rate	Not applicable
Density (air=1):	Not relevant
Vapor density	Not relevant
Specific gravity or relative density:	Not available
Bulk density:	Lose 56 - 66 lbs/ft <sup>3</sup> (900 - 1060 kg/m <sup>3</sup> )
Particle characteristics	

<b>SECTION 10</b>	<b>STABILITY AND REACTIVITY</b>
Reactivity:	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability:	Stable under normal conditions of storage and handling.
Possibility of hazardous reactions	No hazardous reactions known under conditions of normal use.
Conditions to avoid	Extreme temperatures, accumulation of dust.
Incompatible Materials:	alkaline materials, strong acids, copper and its alloys.
Hazardous Decomposition Products:	If heated to the point of decomposition, oxides of phosphorus, nitrogen and/or sulfur (e.g., SO <sub>2</sub> ) may be released, as well as ammonia vapor.

<b>SECTION 11</b>	<b>TOXICOLOGICAL INFORMATION</b>
Information on likely routes of exposure	

Inhalation	Dust may irritate respiratory system. Prolonged inhalation may be harmful.		
Skin contact	Dust or powder may irritate the skin.		
Eye contact	Dust may irritate the eyes		
Ingestion	Expected to be low ingestion hazard		
Symptoms related the physical, chemical and toxicological characteristics			
Skin corrosion/irritation	Prolonged skin contact may cause temporary irritation		
Serious eye damage/eye irritation	Direct contact with the eyes may cause temporary irritation		
Respiratory or skin sensitization	Respiratory sensitization: Not a respiratory sensitizer. Skin sensitization: This product is not expected to cause skin sensitization		
Germ cell mutagenicity	No data available to indicate this product or any components present at greater than 0.1% are mutagenic or genotoxic.		
Carcinogenic	This material has not been identified as a carcinogen by NTP, IARC, or OSHA.		
Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.		
Specific target organ toxicity – single exposure	Not classified		
Specific target organ toxicity – repeated exposure	Not classified		
Aspiration hazard	Not an aspiration hazard		
Chronic effects	Prolonged inhalation of dust may be harmful		
Numerical measures of toxicity, such as toxicity estimates (ATE)			
Acute Toxicity			
Product	Acute	Species	Results
Re-granulated product	Dermal LD <sub>50</sub>	Rat	6,230 mg/kg estimated
	Oral LD <sub>50</sub>	Rat	2,485 mg/kg estimated
Substance			
MAP (CAS 7722-76-1)	Dermal	Rat	>5,000 mg/kg
	Oral LD <sub>50</sub>	Rat	> 2,000 mg/kg
DAP (CAS 7783-28-0)	Dermal	Rat	>5,000 mg/kg
	Oral LD <sub>50</sub>	Rat	> 2,000 mg/kg


<b>SECTION 12</b>		<b>ECOLOGICAL INFORMATION</b>		
Ecotoxicology	Aquatic and terrestrial where available			
May release ammonium ions that are toxic to fish. Un-ionized ammonia concentrations above 0.02 mg/l are considered toxic in fresh water. May release phosphates which will result in algae growth, increased turbidity, and depleted oxygen. At high concentrations, this may be hazardous to fish or other marine organisms. Release to watercourses may cause effects downstream.				
Aquatic Ammonium dihydrogen orthophosphate	Fish	LC <sub>50</sub>	Oncorhynchus mykiss	>85.9 mg/l, 96 hours

Aquatic Diammonium hydrogen orthophosphate	Fish	LC <sub>50</sub>	Rainbow trout	24.8-29.4 ng/L, 96 hours
Aquatic Sulfur	Fish	LC <sub>50</sub>	Western mosquitofish ( <i>Gambusia affinis</i> )	> 10000 mg/l, 96 hours
Aquatic Calcium Sulfate	Fish	LC <sub>50</sub>	Fathead minnow	>1970 mg/L, 96 hours
Persistence and degradability	No data available			
Bio accumulative potential	Not data available			
Mobility in soil	No data available			
Other adverse effects	No other adverse environmental effects are expected from this component.			

<b>SECTION 13</b>	<b>DISPOSAL CONSIDERATIONS</b>
	Recover or recycle if possible. 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.

<b>SECTION 14</b>	<b>TRANSPORT INFORMATION</b>			
This product is not subject to requirements of US DOT Hazardous Materials Regulations for transportation.				
	<b>US DOT</b>	<b>Canada TDG</b>	<b>IMO</b>	<b>ICAO/IATA</b>
Proper Shipping Name	Not regulated	Not regulated	Not Regulated	Not Regulated
Identification Number	Not applicable	Not applicable	Not applicable	Not applicable
Hazard Class	Not applicable	Not applicable	Not applicable	Not applicable
Packing Group	Not applicable	Not applicable	Not applicable	Not applicable
Special Provisions	Not applicable	Not applicable	Not applicable	Not applicable
Environmental hazard (e.g. Marine Pollutant Yes/No)).			No	
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: The product is not classified as Harmful to the Marine Environment (HME)				

<b>SECTION 15</b>	<b>REGULATORY INFORMATION</b>
US Regulations	
TSCA: Listed on the TSCA Inventory	
CERCLA Hazardous Substance List (40CFR 707, Sub D: Not listed)	

RCRA 261.33: Not listed					
SARA 302 Extremely hazardous substance: Not listed. TPQ: No					
SARA 304 Emergency release notification: Not regulated Reportable Quantity: No					
SARA 311/312 hazardous chemical: No					
Hazard categories	Immediate: Yes	Delayed: No	Fire: No	Pressure: No	Reactivity: No
Section 313: (TRI reporting) 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.					
Canada Regulations					
Canada DSL and NDSL:	DSL: Yes NDSL: Not listed				
WHMIS 2015. This SDS has been prepared according to the hazard criteria of the Hazardous Products Regulations (HPR) and the SDS contains all of the information required by the HPR.					
State Regulations					
California	Proposition 65: (Health & Safety Code Section 25249.5)  WARNING: Cancer and Reproductive Harm – <a href="http://www.P65Warnings.ca.gov">www.P65Warnings.ca.gov</a>				