KOCH AGRONOMIC SERVICES, LLC

SAFETY DATA SHEET

1. Identification

Product identifier **POLYON® NPK (N less than 15)**

Other means of identification

Product code KAS_POLYONNPK N -15_US_EN

Synonyms POLYON® NPK 13-13-13 * POLYON® NPK 13.5-13.5-13.5 * POLYON® NPK 14-14-14

Recommended use Fertilizer.

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer/Supplier
Koch Agronomic Services, LLC
4111 E 37th St N
Wichita, KS 67220 US
kochmsds@kochind.com
1.866.863.5550

Emergency
For Chemical Emergency
Call CHEMTREC day or night
USA/Canada - 1.800.424.9300
Mexico - 1.800.681.9531
Outside USA/Canada - 1.703.527.3887
(collect calls accepted)

2. Hazard(s) identification

Physical hazards Not classified.

Health hazards Not classified.

OSHA defined hazards Not classified.

Label elements

Hazard symbol None.

Signal word None.

Hazard statement The mixture does not meet the criteria for classification.

Precautionary statement

Prevention Observe good industrial hygiene practices.

Response Wash hands after handling.

Storage Store away from incompatible materials.

Disposal Dispose of waste and residues in accordance with local authority requirements.

Hazard(s) not otherwise classified (HNOC) None known.

Supplemental information Not applicable.

3. Composition/information on ingredients

Mixtures

Chemical name	CAS number	%
Ammonium nitrate	6484-52-2	30 - 40
Potassium sulphate	7778-80-5	20 - 30
Ammonium Dihydrogenorthophosphate	7722-76-1	10 - 20
Polymer coating	Mixture	4 - 13

Diammonium phosphate	7783-28-0	5 - 10
Non-hazardous ingredients	Proprietary	< 7

Composition comments

All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

This Safety Data Sheet is not a guarantee of product specification or NPK value(s). NPK content is on specified sales orders, customer invoices, or product specification sheets obtained from supplier.

4. First-aid measures

Inhalation

Move to fresh air. Get medical attention if any discomfort continues.

Skin contact

Wash with soap and water. Get medical attention if irritation develops or persists.

Eye contact

Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if irritation develops or persists.

Ingestion

Rinse mouth. Get medical attention if any discomfort continues.

Most important symptoms/effects, acute and delayed

Eye contact: Symptoms can include irritation, redness, scratching of the cornea, and tearing.
Skin contact: Mild skin irritation.
Dust may irritate throat and respiratory system and cause coughing.

Indication of immediate medical attention and special treatment needed

Treat symptomatically.

General information

Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media

Water fog. Water spray. Carbon dioxide (CO2). Foam.

Unsuitable extinguishing media

Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical

Fire may produce irritating, corrosive and/or toxic gases. Heating may cause the release of ammonia vapors.

Special protective equipment and precautions for firefighters

Selection of respiratory protection for firefighting: follow the general fire precautions indicated in the workplace. Self-contained breathing apparatus and full protective clothing should be worn when fighting chemical fires.

Fire fighting equipment/instructions

Use standard firefighting procedures and consider the hazards of other involved materials. Cool material exposed to heat with water spray and remove it if no risk is involved.

General fire hazards

The product is not flammable.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Avoid inhalation of dust and contact with skin and eyes. Ensure adequate ventilation. Wear suitable protective clothing. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up

Stop the flow of material, if this is without risk. Prevent entry into waterways, sewer, basements or confined areas. Avoid dust formation. Sweep up or vacuum up spillage and collect in suitable container for disposal. If sweeping of a contaminated area is necessary use a dust suppressant agent which does not react with the product. After removal flush contaminated area thoroughly with water.

Never return spills to original containers for re-use.

Environmental precautions

Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Do not contaminate water. Do not allow to enter drains, sewers or watercourses.

7. Handling and storage

Precautions for safe handling

Avoid generation and spreading of dust. Avoid inhalation of dust and contact with skin and eyes. Use only with adequate ventilation. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

Keep container tightly closed. Store in a cool, dry, well-ventilated place. Store away from incompatible materials.

8. Exposure controls/personal protection

Occupational exposure limits

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Dust	TWA	3 mg/m3	Respirable particles.
		10 mg/m3	Inhalable particles.

Biological limit values No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls Provide adequate general and local exhaust ventilation.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear dust-resistant safety goggles where there is danger of eye contact.

Skin protection

Hand protection For prolonged or repeated skin contact use suitable protective gloves. Suitable gloves can be recommended by the glove supplier.

Skin protection

Other Normal work clothing (long sleeved shirts and long pants) is recommended.

Respiratory protection If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Wear air supplied respiratory protection if exposure concentrations are unknown. In the United States of America, if respirators are used, a program should be instituted to assure compliance with OSHA 29 CFR 1910.134 and ANSI Z88.2.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

Appearance

Physical state Solid.

Form Solid.

Color Green.

Odor Not available.

Odor threshold Not available.

pH Not available.

Melting point/freezing point Not available.

Initial boiling point and boiling range Not available.

Flash point Not applicable.

Evaporation rate Not available.

Flammability (solid, gas) Not available.

Upper/lower flammability or explosive limits

Flammability limit - lower (%) Not available.

Flammability limit - upper (%) Not available.

Vapor pressure Not available.

Vapor density Not applicable.

Relative density Not available.

Solubility(ies)

Solubility (water) Not available.

Partition coefficient (n-octanol/water) Not applicable.

Auto-ignition temperature Not available.

Viscosity	Not applicable.

Other information

Explosive properties	Not explosive.
Oxidizing properties	Not oxidizing.

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	The product is stable under normal conditions of use, storage and transport.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	Elevated temperatures.
Incompatible materials	Strong acids. Strong oxidizing agents. Reducing agents. Combustible material.
Hazardous decomposition products	Ammonia. Nitrogen oxides (NOx). Potassium oxides. Sulfur oxides (SOx.).

11. Toxicological information

Information on likely routes of exposure

Inhalation	Dust may irritate respiratory system.
Skin contact	May cause irritation through mechanical abrasion.
Eye contact	May cause irritation through mechanical abrasion.
Ingestion	Ingestion may cause irritation and malaise.
Symptoms related to the physical, chemical and toxicological characteristics	Eye contact: Symptoms can include irritation, redness, scratching of the cornea, and tearing. Skin contact: Mild skin irritation. Dust may irritate throat and respiratory system and cause coughing.

Information on toxicological effects

Acute toxicity	May cause discomfort if swallowed.

Components	Species	Test Results
Ammonium Dihydrogenorthophosphate (CAS 7722-76-1)		
Acute		
Dermal		
LD50	Rat	> 5000 mg/kg
Inhalation		
LD50	Rat	> 5000 mg/m³
Oral		
LD50	Rat	> 2000 mg/kg
Ammonium nitrate (CAS 6484-52-2)		
Acute		
Dermal		
LD50	Rat	> 5000 mg/kg
Inhalation		
Dust		
LC50	Rat	> 88.8 mg/l, 4 Hours
Oral		
LD50	Rat	> 2000 mg/kg
Diammonium phosphate (CAS 7783-28-0)		
Acute		
Dermal		
LD50	Sprague-Dawley rat	> 5000 mg/kg
Inhalation		
LC50	Rat	> 5000 mg/m³, 4 hours
Oral		
LD50	Sprague-Dawley rat	> 2000 mg/kg

Components	Species	Test Results
Potassium sulphate (CAS 7778-80-5)		
Acute		
Dermal		
LD50	Rat	> 2000 mg/day, 24 hours
Inhalation		
LC50	Sprague-Dawley rat	3.6 mg/m3, 4 hours
Oral		
LC50	Sprague-Dawley rat	> 2000 mg/kg

Skin corrosion/irritation May cause irritation through mechanical abrasion.

Serious eye damage/eye irritation Dust may irritate the eyes.

Respiratory or skin sensitization

Respiratory sensitization Based on available data, the classification criteria are not met.

Skin sensitization Not a skin sensitizer.

Germ cell mutagenicity Based on available data, the classification criteria are not met.

Carcinogenicity This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

IARC Monographs. Overall Evaluation of Carcinogenicity

Not listed.

NTP Report on Carcinogens

Not listed.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not regulated.

Reproductive toxicity Based on available data, the classification criteria are not met.

Specific target organ toxicity - single exposure Inhalation of dusts may cause respiratory irritation.

Specific target organ toxicity - repeated exposure Based on available data, the classification criteria are not met.

Aspiration hazard Not applicable.

Chronic effects Frequent inhalation of dust over a long period of time increases the risk of developing lung diseases. Prolonged exposure may cause chronic effects.

Further information No other specific acute or chronic health impact noted.

12. Ecological information

Ecotoxicity The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Components		Species	Test Results
Ammonium nitrate (CAS 6484-52-2)			
Aquatic			
Acute			
Crustacea	EC50	Daphnia magna	555 mg/l, 24 Hours
Fish	LC50	Oncorhynchus mykiss	> 100 mg/l, 96 Hours
Diammonium phosphate (CAS 7783-28-0)			
Aquatic			
Algae	EC50	Selenastrum capricornutum	> 97.1 mg/l, 72 hours
Crustacea	LC50	Daphnia	1790 mg/l, 96 hours
Fish	LC50	Carp, hawk fish (Cirrhinus mrigala)	1700 mg/l, 96 hours
Potassium sulphate (CAS 7778-80-5)			
Aquatic			
Algae	EC50	Chlorella vulgaris	2700 mg/l, 18 days
Crustacea	LC50	Daphnia magna	720 mg/l, 48 hours
Fish	LC50	Lepomis macrochirus	2550 mg/l, 96 hours

Components	Species	Test Results
	Pimephales promelas	680 mg/l, 96 hours

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential Not expected to bioconcentrate or bioaccumulate.

Mobility in soil This product is water soluble and may disperse in soil.

Other adverse effects No data available.

13. Disposal considerations

Disposal instructions Do not allow this material to drain into sewers/water supplies. Dispose in accordance with all applicable regulations.

Hazardous waste code The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products Disposal recommendations are based on material as supplied. Disposal must be in accordance with current applicable laws and regulations, and material characteristics at time of disposal.

Contaminated packaging Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable. This product is a solid. Therefore, bulk transport is governed by IMSBC code.

15. Regulatory information

US federal regulations This product is not hazardous according to OSHA 29CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - No
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical Yes

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
Ammonium Dihydrogenorthophosphate	7722-76-1	10 - 20
Ammonium nitrate	6484-52-2	30 - 40
Diammonium phosphate	7783-28-0	5 - 10

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

US state regulations This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

US. Massachusetts RTK - Substance List

Ammonium nitrate (CAS 6484-52-2)

US. New Jersey Worker and Community Right-to-Know Act

Ammonium nitrate (CAS 6484-52-2)

US. Pennsylvania Worker and Community Right-to-Know Law

Ammonium nitrate (CAS 6484-52-2)

US. Rhode Island RTK

Not regulated.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date 25-September-2017

Revision date -

Version # 01

Further information HMIS® is a registered trade and service mark of the NPCA.

HMIS® ratings Health: 1
Flammability: 0
Physical hazard: 0

NFPA ratings

List of abbreviations LC50: Lethal Concentration, 50%.
LD50: Lethal Dose, 50%.

References IARC Monographs. Overall Evaluation of Carcinogenicity
HSDB® - Hazardous Substances Data Bank

Disclaimer

NOTICE: The information presented herein is based on data considered to be accurate as of the date of preparation of this Safety Data Sheet (SDS) and was prepared pursuant to Government regulation(s) that identify specific types of information to be provided. This SDS may not be used as a commercial specification sheet of manufacturer or seller, and no warranty or representation, expressed or implied, is made as to the accuracy or comprehensiveness of the foregoing data and safety information, nor is any authorization given or implied to practice any patented invention without a license. Additional information may be needed to evaluate other uses of the product, including use of the product in combination with any materials or in any processes other than those specifically referenced. Information provided herein with respect to any hazards that may be associated with the product is not meant to suggest that use of the product in a given application will necessarily result in any exposure or risk to workers or the general public. No responsibility can be assumed by vendor for any damage or injury resulting from abnormal use, from any failure to adhere to recommended practices, or from any hazards inherent in the nature of the product. Purchasers and users assume all risk of use, storage and handling of the product in compliance with applicable federal, state and local laws and regulations. Purchasers and users of the product specifically should advise all of their employees, agents, contractors and customers who will use the product of this (M)SDS.