

SAFETY DATA SHEET

1. Identification

Product identifier POLYON® NPK (N greater than 15)

Other means of identification

Product code KAS_POLYONNPK_US_EN

Synonyms NG POLYION NPK® 18-6-12 * NG POLYION NPK® 19-6-12 * POLYON® NPK 19-6-13 * POLYON® NPK 18-6-12 * POLYON® NPK 20-6-13 * POLYON® NPK 17-6-12 * POLYON® NPK 19-6-12 * POLYON® NPK 16-5-11

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 | 40 - 60 |
| Potassium sulphate | 7778-80-5 | 20 - 30 |

| | | |
|-----------------------------------|-------------|--------|
| Polymer coating | Mixture | 4 - 18 |
| Ammonium Dihydrogenorthophosphate | 7722-76-1 | 5 - 10 |
| Diammonium phosphate | 7783-28-0 | < 5 |
| Non-hazardous ingredients | Proprietary | < 4 |

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/m ³ 10 mg/m ³ | Respirable particles. 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.

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 | | |
| <i>Dermal</i> | | |
| LD50 | Rat | > 5000 mg/kg |
| <i>Inhalation</i> | | |
| LD50 | Rat | > 5000 mg/m ³ |
| <i>Oral</i> | | |
| LD50 | Rat | > 2000 mg/kg |
| Ammonium nitrate (CAS 6484-52-2) | | |
| Acute | | |
| <i>Inhalation</i> | | |
| LC50 | Rat | > 88.8 mg/l, 4 Hours |
| <i>Oral</i> | | |
| LD50 | Rat | 4500 mg/kg |
| Diammonium phosphate (CAS 7783-28-0) | | |
| Acute | | |
| <i>Dermal</i> | | |
| LD50 | Sprague-Dawley rat | > 5000 mg/kg |
| <i>Inhalation</i> | | |
| LC50 | Rat | > 5000 mg/m ³ , 4 hours |
| <i>Oral</i> | | |
| LD50 | Sprague-Dawley rat | > 2000 mg/kg |
| Potassium sulphate (CAS 7778-80-5) | | |
| Acute | | |
| <i>Dermal</i> | | |
| LD50 | Rat | > 2000 mg/day, 24 hours |

| Components | Species | Test Results |
|---|--|---------------------------------|
| <i>Inhalation</i> LC50 | Sprague-Dawley rat | 3.6 mg/m ³ , 4 hours |
| <i>Oral</i> 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. | |
| OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050) | | |
| Not listed. | | |
| 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 |
|--------------------------------------|---------|---|
| 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 |
| | | 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 hazardous according to OSHA 29 CFR 1910.1200.

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

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

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 nitrate | 6484-52-2 | 40 - 60 |
| Ammonium Dihydrogenorthophosphate | 7722-76-1 | 5 - 10 |
| Diammonium phosphate | 7783-28-0 | < 5 |

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

Ammonium nitrate (CAS 6484-52-2)

US. California Proposition 65

Not Listed.

International Inventories

| Country(s) or region | Inventory name | On inventory (yes/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 | 27-May-2015 |
| Revision date | - |
| Version # | 01 |
| Further information | HMIS® is a registered trade and service mark of the NPCA. |
| HMIS® ratings | Health: 2 Flammability: 1 Physical hazard: 0 |

NFPA ratings



List of abbreviations

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.