KOCH FERTILIZER

SAFETY DATA SHEET

1. Identification

Product identifier **NPS + Zn**

Other means of identification

SDS number KF_NPSZn_B_CA_EN

Synonyms 12-45-0 + 5S + 1Zn ; NPSZn

Recommended use Fertiliser.

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Company name Koch Fertilizer, LLC
4111 E 37th Street North
PO Box 2219
Wichita, KS, 67201-2219
kochmsds@kochind.com
1-316-828-7672

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

2. Hazard identification

Physical hazards Not classified.

Health hazards Not classified.

Environmental hazards

Hazardous to the aquatic environment, acute hazard	Category 3
Hazardous to the aquatic environment, long-term hazard	Category 3

Label elements

Hazard symbol None.

Signal word None.

Hazard statement Harmful to aquatic life with long lasting effects.

Precautionary statements

Prevention Observe good industrial hygiene practices. Avoid release to the environment.

Response Wash hands after handling. Collect spillage.

Storage Store away from incompatible materials.

Disposal Dispose of contents/container in accordance with local/regional/national/international regulations.

Other hazards None known.

Supplemental information None.

3. Composition/information on ingredients

Mixtures

Chemical name	CAS number	%
Monoammonium phosphate	7722-76-1	40 - 90
Ammonium sulfate	7783-20-2	10 - 30

Other Mg, Fe, Al combined with phosphates	-	10 - 30
Calcium sulphate	7778-18-9	3 - 7
Zinc oxide	1314-13-2	< 2
Ammonium hexafluorosilicate	16919-19-0	0.1 - 1

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

Skin contact Wash off with plenty of water. Get medical attention if irritation develops or persists.

Eye contact Do not rub eye. Remove contact lenses, if present and easy to do. Flush thoroughly with water. If irritation occurs, get medical assistance.

Ingestion Rinse mouth thoroughly if dust is ingested. Get medical attention if any discomfort occurs.

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 Dry chemical, CO2, water spray or alcohol resistant foam.

Unsuitable extinguishing media High volume water jet.

Specific hazards arising from the chemical The product is non-combustible. During fire, gases hazardous to health may be formed.

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, operated in positive pressure mode and full protective clothing must be worn in case of fire.

Fire fighting equipment/instructions Move containers from fire area if you can do it without risk.

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. For waste disposal, see section 13 of the SDS.

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 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
Calcium sulphate (CAS 7778-18-9)	TWA	10 mg/m3	Inhalable fraction.
Zinc oxide (CAS 1314-13-2)	STEL	10 mg/m3	Respirable fraction.
	TWA	2 mg/m3	Respirable fraction.

Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)

Components	Type	Value	Form
Calcium sulphate (CAS 7778-18-9)	TWA	10 mg/m3	
Zinc oxide (CAS 1314-13-2)	STEL	10 mg/m3	Respirable.
	TWA	2 mg/m3	Respirable.

Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)

Components	Type	Value	Form
Calcium sulphate (CAS 7778-18-9)	TWA	10 mg/m3	Inhalable
Zinc oxide (CAS 1314-13-2)	STEL	10 mg/m3	Respirable.
	TWA	2 mg/m3	Respirable.

Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act)

Components	Type	Value	Form
Calcium sulphate (CAS 7778-18-9)	TWA	10 mg/m3	Inhalable fraction.
Zinc oxide (CAS 1314-13-2)	STEL	10 mg/m3	Respirable fraction.
	TWA	2 mg/m3	Respirable fraction.

Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents)

Components	Type	Value	Form
Calcium sulphate (CAS 7778-18-9)	TWA	10 mg/m3	Inhalable fraction.
Zinc oxide (CAS 1314-13-2)	STEL	10 mg/m3	Respirable fraction.
	TWA	2 mg/m3	Respirable fraction.

Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety)

Components	Type	Value	Form
Calcium sulphate (CAS 7778-18-9)	TWA	5 mg/m3	Respirable dust.
		10 mg/m3	Total dust.
Zinc oxide (CAS 1314-13-2)	STEL	10 mg/m3	Fume.
	TWA	5 mg/m3	Fume.
		10 mg/m3	Total dust.

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

Appropriate engineering controls Provide adequate general and local exhaust ventilation. Observe occupational exposure limits and minimise the risk of inhalation of dust.

Individual protection measures, such as personal protective equipment

Eye/face protection Risk of contact: Wear dust goggles.

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 case of inadequate ventilation or risk of inhalation of dust, use suitable respiratory equipment with particle filter.
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 practices.

9. Physical and chemical properties

Appearance	Gray or white granular solid.
Physical state	Solid.
Form	Granules.
Colour	Gray or white.
Odour	Odourless.
Odour threshold	Not available.
pH	4 (10% solution).
Melting point/freezing point	197 °C (386.6 °F) @ 1013 hPa (Decomposes before melting.)
Flash point	Not available.
Evaporation rate	Not applicable.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not applicable.
Flammability limit - upper (%)	Not applicable.
Vapour pressure	Not applicable.
Vapour density	Not applicable.
Relative density	Not available.
Solubility(ies)	
Solubility (water)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	190 °C (374 °F)
Viscosity	Not applicable.
Other information	
Bulk density	920 - 980 kg/m³ @ 20 °C Loose. 970 - 1040 kg/m³ @ 20 °C tapped.
Explosive properties	Not explosive.
Oxidising properties	Not oxidising.

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Stable at normal conditions. Decomposes at high temperatures giving ammonia and polyphosphoric acid.
Possibility of hazardous reactions	Will not occur.
Conditions to avoid	Avoid dust formation. High temperatures.
Incompatible materials	Strong oxidising agents. Strong acids. Strong bases. Sodium hypochlorite. Copper bearing alloys.
Hazardous decomposition products	Phosphorus oxides. Nitrogen Oxides. Ammonia.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Dust may irritate respiratory system.
Skin contact	Dust may irritate skin.
Eye contact	Dust may irritate the eyes.
Ingestion	May cause discomfort if swallowed.
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 sulfate (CAS 7783-20-2)		
Acute		
Inhalation		
LC50	Rat	> 1000 mg/m3, 8 hours
Oral		
LD50	Rat	2840 mg/kg
Calcium sulphate (CAS 7778-18-9)		
Acute		
Inhalation		
LC50	Rat	> 3.26 mg/l, 4 Hours
Oral		
LD50	Rat	> 1581 mg/kg
Monoammonium phosphate (CAS 7722-76-1)		
Acute		
Dermal		
LD50	Rat	> 5000 mg/kg
Inhalation		
LD50	Rat	> 5000 mg/m³
Oral		
LD50	Rat	> 2000 mg/kg
Zinc oxide (CAS 1314-13-2)		
Acute		
Oral		
LD50	Rat	> 5 g/kg

Skin corrosion/irritation	Dust may irritate skin.
Serious eye damage/eye irritation	Dust may irritate the eyes.
Respiratory or skin sensitisation	
Respiratory sensitisation	No data available.
Skin sensitisation	Not a skin sensitiser.
Germ cell mutagenicity	No data available.
Carcinogenicity	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA. Not classified.
Reproductive toxicity	No data available.
Specific target organ toxicity - single exposure	No data available.
Specific target organ toxicity - repeated exposure	No data available.
Aspiration hazard	Not applicable.

Chronic effects Frequent inhalation of dust over a long period of time increases the risk of developing lung diseases.

12. Ecological information

Ecotoxicity Harmful to aquatic life with long lasting effects.

Components		Species	Test Results
Ammonium sulfate (CAS 7783-20-2)			
Fish	LC50	Salmo gairdneri	173 mg/l, 96 hours
Aquatic			
Algae	EC50	Chlorella vulgaris	2700 mg/l, 18 days
Crustacea	EC50	Water flea (Daphnia magna)	> 100 mg/l, 96 hours
Zinc oxide (CAS 1314-13-2)			
Aquatic			
Crustacea	LC50	Water flea (Daphnia magna)	0.098 mg/l, 48 Hours

Persistence and degradability No data available.

Bioaccumulative potential No data available.

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

Other adverse effects Fertilisers, particularly those containing nitrogen and/or phosphorus, can stimulate weed and algal growth in static surface waters. Nitrogen fertilisers may contain or form nitrate which can contaminate surface and ground-water. High nitrate concentrations may render the water unsuitable for human and livestock consumption.

13. Disposal considerations

Disposal instructions Collect and reclaim or dispose in sealed containers at licensed waste disposal site.

Local disposal regulations 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 Dispose in accordance with applicable regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

TDG

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 This substance/mixture is not intended to be transported in bulk.

15. Regulatory information

Canadian regulations This product has been classified in accordance with the hazard criteria of the HPR and the SDS contains all the information required by the HPR.

Controlled Drugs and Substances Act

Not regulated.

Export Control List (CEPA 1999, Schedule 3)

Not listed.

Greenhouse Gases

Not listed.

Ontario. Toxic Substances. Toxic Reduction Act, 2009. Regulation 455/09 (July 1, 2011)

Zinc oxide (CAS 1314-13-2)

Precursor Control Regulations

Not regulated.

International regulations

Stockholm Convention

Not applicable.

Rotterdam Convention

Not applicable.

Kyoto Protocol

Not applicable.

Montreal Protocol

Not applicable.

Basel Convention

Calcium sulphate (CAS 7778-18-9)

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)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	Yes
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

Issue date 18-July-2018

Revision date -

Version No. 01

List of abbreviations

LD50: Lethal Dose, 50%.
LC50: Lethal Concentration, 50%.

References

ACGIH Documentation of the Threshold Limit Values and Biological Exposure Indices
EPA: Acquire database
NLM: Hazardous Substances Data Base
US. IARC Monographs on Occupational Exposures to Chemical Agents
HSDB® - Hazardous Substances Data Bank
IARC Monographs. Overall Evaluation of Carcinogenicity
National Toxicology Program (NTP) Report on Carcinogens

Disclaimer

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