

SAFETY DATA SHEET

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Material name NG CB 35% P42 + 65% P40 + SOP + TE
Recommended use Fertiliser.
Version No. 01
CAS No. Mixture
Product code 5947191
Manufacturer
Manufacturer: Agrium Advanced Technologies
Address: 2915 Rocky Mountain Avenue
Loveland, CO. 80538
e-mail: EHS@agriumat.com
General Information: Please contact your sales representative
24 Hour Emergency: Transportation: 1-800-792-8311
Medical: 1-877-615-0015

2. HAZARDS IDENTIFICATION

HAZARDOUS SUBSTANCE. NON-DANGEROUS GOODS.

Classification R52/53
Risk phrase(s) R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Safety phrase(s) S61 Avoid release to the environment. Refer to special instructions/ Safety data sheets.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS No.	Percent
Urea	57-13-6	40-50
Potassium sulphate	7778-80-5	20-30
Ammonium dihydrogenorthophosphate	7722-76-1	10-20
Magnesium oxide	1309-48-4	6-10
Tetraborate pentahydrate	12179-04-3	3-<6
Zinc oxide	1314-13-2	0.5-<1.5
Zinc sulfate	7733-02-0	0.5-<1.5
Dicopper oxide	1317-39-1	<1
Molybdenum trioxide	1313-27-5	<1

4. FIRST-AID MEASURES

Inhalation If symptomatic, move to fresh air. Get medical attention if symptoms persist.
Skin contact Wash skin with soap and water. Get medical attention promptly if symptoms occur after washing.
Eye contact Any material that contacts the eye should be washed out immediately with water. If easy to do, remove contact lenses. Get medical attention if symptoms persist.
Ingestion Seek medical advice.
General advice Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.
Notes to physician Treat symptomatically. Symptoms may be delayed.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media Extinguish with foam, carbon dioxide, dry powder or water fog.
Extinguishing media which must not be used for safety reasons None known.
Specific hazards During fire, gases hazardous to health may be formed.

Special protective equipment for fire-fighters Self-contained breathing apparatus and full protective clothing must be worn in case of fire. Selection of respiratory protection for firefighting: follow the general fire precautions indicated in the workplace.

Hazchem Code None

6. ACCIDENTAL RELEASE MEASURES

Personal precautions Keep unnecessary personnel away. Wear appropriate protective equipment and clothing during clean-up. Avoid inhalation of dust from the spilled material. Ensure adequate ventilation.

Environmental precautions Prevent further leakage or spillage if safe to do so. Avoid release to the environment.

Containment procedures If sweeping of a contaminated area is necessary use a dust suppressant agent which does not react with the product.

Methods for cleaning up Minimise dust generation and accumulation. Sweep or vacuum up spillage and collect in suitable container for disposal. For waste disposal, see section 13.

7. HANDLING AND STORAGE

Handling Use work methods which minimise dust production. Avoid inhalation of dust and contact with skin and eyes. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

Storage Store away from incompatible materials.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational exposure limits

ACGIH

Components	Type	Value	Form
Molybdenum trioxide (CAS 1313-27-5)	TWA	3 mg/m ³	Respirable fraction.
		10 mg/m ³	Inhalable fraction.

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Magnesium oxide (CAS 1309-48-4)	TWA	10 mg/m ³	Inhalable fraction.
Tetraborate pentahydrate (CAS 12179-04-3)	STEL	6 mg/m ³	Inhalable fraction.
	TWA	2 mg/m ³	Inhalable fraction.
Zinc oxide (CAS 1314-13-2)	STEL	10 mg/m ³	Respirable fraction.
	TWA	2 mg/m ³	Respirable fraction.

Australia

Components	Type	Value
Molybdenum trioxide (CAS 1313-27-5)	TWA	10 mg/m ³

Australia. OELs. (Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment)

Components	Type	Value	Form
Magnesium oxide (CAS 1309-48-4)	TWA	10 mg/m ³	Fume.
Tetraborate pentahydrate (CAS 12179-04-3)	TWA	1 mg/m ³	
Zinc oxide (CAS 1314-13-2)	STEL	10 mg/m ³	Fume.
	TWA	5 mg/m ³	Fume.
		10 mg/m ³	Inspirable dust.

Recommended monitoring procedures

Additional exposure data Not available.

Engineering measures Provide adequate ventilation.

Personal protective equipment

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. Respirator type: Air-purifying respirator with an appropriate, government approved (where applicable), air-purifying filter, cartridge or canister.

Hand protection Chemical resistant gloves are recommended.

Eye protection Wear safety glasses with side shields (or goggles).

Skin and body protection	Wear chemical-resistant gloves, footwear and protective clothing appropriate for risk of exposure. Contact chemical protective clothing manufacturer for specific information.
Environmental exposure controls	Contain spills and prevent releases and observe national regulations on emissions.
Hygiene measures	Handle in accordance with good industrial hygiene and safety practices.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Granular solid.
Physical state	Solid.
Form	Granules.
Colour	Multiple Colours.
Odour	Slight sulfur.
Odour threshold	Not available.
pH	Not available.
Vapour pressure	Not available.
Vapour density	Not available.
Boiling point	Not available.
Melting point/freezing point	Not available.
Solubility (water)	Not available.
Flash point	Not available.
Flammability limits in air, upper, % by volume	Not available.
Flammability limits in air, lower, % by volume	Not available.
Auto-ignition temperature	Not available.

10. STABILITY AND REACTIVITY

Chemical stability	The product is stable and non reactive under normal conditions of use, storage and transport.
Conditions to avoid	Humidity. Contact with incompatible materials.
Materials to avoid	Strong oxidising substances.
Hazardous decomposition products	No hazardous decomposition products are known.
Hazardous polymerisation	Hazardous polymerisation does not occur.

11. TOXICOLOGICAL INFORMATION

Toxicological data

Components	Species	Test results
Molybdenum trioxide (CAS 1313-27-5)		
Acute		
<i>Dermal</i>		
LD50	Rat	> 20000 mg/kg
<i>Inhalation</i>		
LC50	Rat	> 5.84 mg/l, 4 hours
<i>Oral</i>		
LD50	Rat	> 2000 mg/kg
Tetraborate pentahydrate (CAS 12179-04-3)		
Acute		
<i>Dermal</i>		
LD50	Rabbit	> 1055 mg/kg
<i>Inhalation</i>		
LC50	Rat	> 0.002 mg/l, 4 Hours
<i>Oral</i>		
LD50	Rat	2660 mg/kg

Routes of exposure	Inhalation. Ingestion. Skin contact. Eye contact.
Chronic toxicity	Occupational exposure to the substance or mixture may cause adverse effects.

Carcinogenicity	Not classifiable as to carcinogenicity to humans.
Mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Reproductivity	This product is not expected to cause reproductive or developmental effects.
Local effects	Product dust may be irritating to eyes, skin and respiratory system.

12. ECOLOGICAL INFORMATION

Ecotoxicological data

Components	Species	Test results
Tetraborate pentahydrate (CAS 12179-04-3)		
Aquatic		
Fish	LC50	Western mosquitofish (<i>Gambusia affinis</i>) 104 mg/l, 96 hours
Zinc oxide (CAS 1314-13-2)		
Aquatic		
Crustacea	LC50	Water flea (<i>Daphnia magna</i>) 0.098 mg/l, 48 Hours
Zinc sulfate (CAS 7733-02-0)		
Aquatic		
Crustacea	EC50	Rotifer (<i>Philodina acuticornis</i>) 0.3 mg/l, 48 hours
Fish	LC50	Rainbow trout, donaldson trout (<i>Oncorhynchus mykiss</i>) 0.162 mg/l, 96 hours

Ecotoxicity Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Bioaccumulation

Bioaccumulative potential

Octanol/water partition coefficient log Kow

Urea (CAS 57-13-6) -2.11

13. DISPOSAL CONSIDERATIONS

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site.
Waste from residues / unused products	Dispose of in accordance with local 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

ADG

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Hazchem Code None

15. REGULATORY INFORMATION

National regulations This Material Safety Data Sheet was prepared in accordance with the Australia National Code of Practice for the Preparation of Material Safety Data Sheets (NOHSC: 2011.)

Australia HVIC: Listed substance

Ammonium dihydrogenorthophosphate (CAS 7722-76-1)	Listed.
Magnesium oxide (CAS 1309-48-4)	Listed.
Potassium sulphate (CAS 7778-80-5)	Listed.
Tetraborate pentahydrate (CAS 12179-04-3)	Listed.
Urea (CAS 57-13-6)	Listed.
Zinc oxide (CAS 1314-13-2)	Listed.
Zinc sulfate (CAS 7733-02-0)	Listed.

Australia Medicines & Poisons Schedule 4: Use/Concentration (%) / Exceptions

Dicopper oxide (CAS 1317-39-1)	for human use Exception may apply, see the regulation for relevance.
Zinc oxide (CAS 1314-13-2)	for human internal use Exception may apply, see the regulation for relevance.

Zinc sulfate (CAS 7733-02-0)

for human internal use Exception may apply, see the regulation for relevance.

Australia Medicines & Poisons Schedule 6: Use/Concentration/Exceptions

Zinc sulfate (CAS 7733-02-0)

Exception may apply, see the regulation for relevance.

Inventory status

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	No
Canada	Domestic Substances List (DSL)	No
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)	No
Korea	Existing Chemicals List (ECL)	No
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	No

*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**Disclaimer**

The information and recommendations contained in this Safety Data Sheet relate only to the specific material referred to herein (the "Material") and does not relate to the use of such Material in combination with any other material or process. The information and recommendations contained herein are believed to be current and correct as of the date prepared. However, the information and recommendations are presented without warranty, representation or license of any kind, express or implied, with respect to its accuracy, correctness or completeness, and the seller, supplier and manufacturer of the Material and their respective affiliates disclaim all liability for reliance on such information and recommendations. This Data Sheet is not a guarantee of safety. A buyer or user of the Material (a "Recipient") is responsible for ensuring that it has all current information necessary to safely use the Material for its specific purpose. Furthermore, the Recipient assumes all risk in connection with the use of the Material. The Recipient assumes all responsibility for ensuring the Material is used in a safe manner in compliance with applicable environmental, health, safety and security laws, policies and guidelines. The Supplier does not warrant the merchantability of the Material or the fitness of the Material for any particular use and assumes no responsibility for injury or damage caused directly or indirectly by or related to the use of the Material.

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