

Retention 46-0-0, 00331150, 00331240

Safety Data Sheet

Nu-Tec Specialty Product
2720 Couch Road
Putnam, Ontario, N0L 2B0
Canada

24 h. EMERGENCY TELEPHONE NUMBER
CHEMTREC (U.S.) 1-800-424-9300
CHEMTREC (International) 1-703-527-3887
Non-Emergency Calls
1-800-265-1902

Retention™

Section 1. Identification

Product identifier: Retention™
Other means of identification: Stabilized Nitrogen Fertilizer (Blue)
Synonyms: Coated Urea*Treated Urea
Recommended use: Fertilizer.
Recommended restrictions: Use in accordance with supplier's recommendations.

Section 2. Hazards 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: Use personal protective equipment as required. Do not use as an animal feed.
Response: Wash hands after handling.
Storage: Store away from incompatible material.
Disposal: Dispose of waste and residues in accordance with local authority requirements.

Hazard(s) not otherwise classified (HNOC) Not classified.
Supplemental information: Not applicable.

Section 3. Composition/information on ingredients

Mixture

Chemical Name	CAS Number	%
Urea	57-13-6	60-100
Non hazardous dye	Proprietary	<1
Dicyandiamide	461-58-5	0.1-1
N-(n-butyl) thiophosphoric triamide	94317-64-3	<0.1

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.

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Section 4. First aid measures

Eye contact:	Dust in the eyes: Do not rub eyes. Flush immediately with copious amounts of water or normal saline (minimum of 15 minutes), holding eyelids apart to ensure complete irrigation of the eye and eyelid tissue. Take exposed individual to a health care professional, preferably an ophthalmologist, for further evaluation.
Skin contact:	Remove contaminated clothing, shoes and equipment. Wash exposed area with plenty of soap and water. Repeat washing. If redness or irritation occurs, seek medical attention. Wash contaminated clothing before reuse.
Inhalation:	No adverse effects anticipated. If necessary, move victim to fresh air and loosen clothing. Get medical attention.
Ingestion:	Rinse mouth thoroughly if dust is ingested. Get medical attention if any discomfort occurs.
Most important symptoms/effects, acute and delayed:	Symptoms can include irritation, redness, scratching of the cornea, and tearing.
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.

Section 5. Fire-fighting measures

Suitable extinguishing media:	Use fire-extinguishing media appropriate for surrounding materials.
Unsuitable extinguishing media:	None known.
Specific hazards arising from the chemical:	Urea is non-combustible under most conditions. However, during a fire, irritating/toxic gases may be generated. The dust can be ignited at very high temperatures, but not expected to explode (minimum ignition temperature cloud = 900°C).
Special protective equipment and precautions for firefighters:	Self-contained breathing apparatus and full protective clothing should be worn when fighting chemical fires. Selection of respiratory protection for firefighting follow the general fire precautions indicated in the workplace.
Fire-fighting equipment/instructions:	Use standard firefighting procedures and consider the hazards of other involved materials. Move containers from the fire area if you can do so without risk.

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Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedure: 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: Prevent further leakage or spillage if safe to do so. Do not contaminate water. Do not allow to enter drains, sewers or watercourses.

Section 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. Long term storage at temperatures above 100°F (36°C) can adversely affect the efficacy of products containing N-(n-butyl)-thiophosphoric triamide.

Section 8. Exposure controls/personal protection

Occupational exposure limits

Components	Type	Value	Form
Urea (CAS 57-13-6)	TWA	10 mg/m ³	Total particulate.

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

Exposure guidelines: Follow standard monitoring procedures.

Appropriate engineering controls: Provide adequate general and local exhaust ventilation. Observe Occupational Exposure Limits and minimize the risk of inhalation of dust.

Individual protection measures such as personal protective equipment:

Eye/face protection Use tight fitting goggles if dust is generated.

Skin Protection

Hand protection: Risk of contact: Wear protective gloves. Suitable gloves can be recommended by the glove supplier.

Other: No skin protection is ordinarily required under normal conditions of use. In accordance with good industrial hygiene practices, precautions should be taken to avoid skin contact.

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 vapors, use suitable respiratory equipment. 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 consideration: 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

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equipment to remove contaminants. Handle in accordance with good industrial hygiene and safety practice.

Section 9. Physical and chemical properties

Appearance.	Light to medium blue granules
Physical State	Solid.
Form	Granular. Pellets.
Color	Light to medium blue.
Odor	Ammonia-like. Faint, characteristic.
Odor threshold	Not available.
pH	7.2 (10% solution)
Melting point/freezing point	270.86°F (132.7°C)
Initial boiling point and boiling range	Not available.
Flash point	Not flammable.
Evaporation Rate	Not available.
Flammability (solid, gas)	Not available.
Vapor pressure	Not available.
Vapor Density (Air=1)	Not available.
Relative density	1.33 (water=1)
Solubility	Soluble
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Viscosity	Not available.
Other information	
Bulk Density	48 – 52 lb/ft ³ (Packed)
Molecular weight	60.06 g/mol

Section 10. Stability and reactivity

Reactivity:	Reacts violently with strong oxidants, nitrites, inorganic chlorides, chlorites and perchlorates causing fire and explosion hazard.
Chemical stability:	Normally stable. May gradually give off ammonia. The product is hygroscopic and will absorb water by contact with the moisture in the air.

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Possibility of hazardous reactions: Hazardous polymerization does not occur.

Conditions to avoid: Moisture. High temperatures. Contact with incompatible materials.

Incompatible materials: Strong oxidizing agents. Nitric acid. Nitrites.

Hazardous decomposition products: Nitrogen oxides (NOx). Carbon oxides. Ammonia. Biuret.

Section 11. Toxicological information

Information on likely routes of exposure

Ingestion: May cause discomfort if swallowed.

Inhalation: Dust may irritate throat and respiratory system and cause coughing.

Skin contact: Dust may irritate skin.

Eye contact: Dust may cause eye irritation on direct contact.

Symptoms related to the physical, chemical and toxicological characteristics: Symptoms can include irritation, redness, scratching of the cornea and tearing.

Information on toxicological effects:

Acute toxicity: May cause discomfort if swallowed.

Components	Species	Test Results
N-(n-butyl)-thiophosphoric triamide (CAS 94317-64-3)		
Acute		
<i>Dermal</i>		
LD50	Rat	> 2000 mg/kg
<i>Oral</i>		
LD50	Rat	> 2823 mg/kg
Urea (CAS 57-13-6)		
Acute		
<i>Oral</i>		
LD50	Rat	14300 mg/kg

Skin corrosion/irritation: May cause irritation through mechanical abrasion.

Serious eye damage/eye irritation: May cause irritation through mechanical abrasion.

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.

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 an aspiration hazard.

Chronic effects: Prolonged exposure may cause chronic effects.

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

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Section 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

Section 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.

Section 14. Transport information

DOT:	Not regulated as a hazardous material by DOT.
IATA:	Not regulated as a dangerous goods.
IMDG:	Not regulated as a dangerous goods.
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:	Not applicable. However, the product is covered under Appendix I of the IMSBC Code

Section 15. Regulatory information

US federal regulations: This product is not known to be a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

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

N-(n-butyl)-thiophosphoric triamide (CAS 94317-64-3) 1.0% One-Time Export Notification only.

US 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 - Yes Delayed Hazard - Yes Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No
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SARA 302 Extremely hazardous substance: No

SARA 311/312 Hazardous chemical: No

SARA 313 (TRI reporting): Not regulated.

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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.

Food and Drug Administration (FDA): 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:

Not regulated.

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

Not regulated.

US Pennsylvania RTK – Hazardous Substances:

Not regulated.

US Rhode Island RTK:

Not regulated.

US California Proposition 65:

US – California Proposition 65 – Carcinogens & Reproductive Toxicity (CRT): Listed substances

Not listed.

International Inventories:

Country(s) or region	Inventory name	On inventory (yes/no)*
United States & Puerto Rico	Toxic Substances Control Act 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).

Section 16. Other information

NFPA Ratings



List of abbreviations: LC50: Lethal concentration, 50%.

LD50: Lethal Dose, 50%.

References:

EPA: Acquire database

HSDB® – Hazardous Substances Data Bank

IARC Monographs. Overall Evaluation of Carcinogenicity

RTECS

National Toxicology Program (NTP) Report on Carcinogens

ACGIH Documentation of the Threshold Limit Value and Biological Exposure Indices

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Preparation: The preparation of this MSDS was in accordance with ANSI Z400.1-2010.

Disclaimer:

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