
SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Product name: Nucleon liquid fertilizer enzyme additive

Other means of identification: Liquid fertiliser

Uses of the substance: Enhances the uptake of water and broad nutrient acquisition by plant roots with resultant improvements in soil and plant health, growth and yield

Distributed by: Agreva Sustainable Agriculture,
18 Raymond Road,
Laverton North, Victoria, Australia, 3026.

Telephone: 1800 575 040

Emergency telephone NO: 1300 274 007

SECTION 2: HAZARDS IDENTIFICATION

Signal word: Warning



Classification: Skin sensitisation Category 1

Hazard statements: May cause an allergic skin reaction

Precautionary statements:
 Avoid breathing mist/spray
 Contaminated work clothing should not be allowed out of the workplace
 Wear protective gloves

Hazards not otherwise: Proteins may have the potential to provoke sensitizing reactions

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-NO.	Concentration % by weight
3(2H)-Isothiazolinone, 5-chloro-2-methyl-, mixt. with 2-methyl-3(2H)-isothiazolone	55965-84-9	>0.05%
Other ingredients		To 100%

SECTION 4: FIRST AID MEASURES

Inhalation: Move to fresh air. If experiencing respiratory symptoms: Call a POISON CENTRE or doctor/physician.

Eyes: Rinse with water for several minutes. Remove contact lenses, if present and safe to do so. If eye irritation occurs seek medical advice/attention.

Skin: Wash with plenty of soap and water. If skin irritation occurs get medical advice/attention. Irritation occurs, obtain medical attention.

Ingestion: Treat symptomatically and supportively. Seek medical attention if you feel unwell. Rinse mouth. Do not induce vomiting.

Advice to doctor: Treat symptomatically

SECTION 5: FIREFIGHTING MEASURES

Suitable extinguishing media: Determined by surrounding material. In case of fire, use water fog, dry chemical, CO₂, or "alcohol" foam. Firefighting should be attempted only by those who are adequately trained and equipped with proper protective equipment

Hazchem code: Not applicable

Explosion hazard: Not applicable

Reactivity: No Information available

Special protective equipment and Precautions for fire fighter's: In case of fire and/or explosion do not breathe fumes. Wear self-contained breathing apparatus and chemical-protective clothing. Keep containers cool by spraying with water if exposed to fire. Collect contaminated extinguishing water

separately. Do not allow contaminated water to reach

sewage or effluent systems. Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions: Slippery when spilt. Avoid accidents, clean up immediately. Wear protective equipment to prevent skin and eye contact and breathing in vapours. Ventilate spillage area.

Environmental precautions: Collect the spillage. Prevent further spillage and product from entering waterways.

Methods and materials for containment and cleaning up: Contain - prevent run off into drains and waterways.

Procedure for spill:

- (1) Keep all bystanders away
- (2) Wear full length clothing and PVC gloves
- (3) Reposition any leaking containers to minimise leakage
- (4) Sweep spilt material into a pile
- (5) Shovel into drums
- (6) Disposal of material will depend upon the extent of the spill:
 - For quantities up to 50 kg of product bury in a secure landfill site.
 - For quantities greater than 50 kg seek advice from the manufacturer (use emergency contact number below) before attempting disposal. Contain in a secure location until disposal method is established.
- (7) Decontaminate spill area with detergent and water and rinse with the smallest volume of water practicable.

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling: Handle container in a manner to prevent spillage. Avoid breathing vapors. Avoid skin and eye contact.

Hygiene measures: Wash hands after use.

Storage: Store in the original container, in a cool dry well-ventilated, locked place out of the reach of children. DO NOT store in direct sunlight. DO NOT store at temperatures below 0°C or exceeding 35°C. Keep containers closed when not in use - check regularly for leaks.

Incompatible materials: Acids, bases, oxidizing agents, reducing agents and disinfectants may inactivate.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Component exposure limits: No occupational exposure limit values under normal use conditions.

Engineering controls: Ensure adequate ventilation and maintain good industrial hygiene and safety practices.

Respiratory protection: None is needed under adequate ventilation conditions.

Eye protection: No specific PPE required but for good hygiene practices avoid contact with eyes.

Skin protection: Wear protective gloves. Avoid contact with skin and wash hands after use.

Other information: Follow manufacturer's instructions for cleaning/maintaining PPE. Wear clothing appropriate to for all working conditions and all chemicals being handled. Do not eat, drink or smoke during use.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Amber liquid

Odour: Minimal; yeasty, earthy

Odour threshold: No data available

Physical state: Liquid

ph as supplied: 5.0-10.0

Boiling point: No data available

Melting point: No data available

Freezing point: No data available

Vapor pressure (mmHg): No data available

Specific gravity (H2O = 1): 1.0

Evaporation rate: No data available

Solubility in water: Dispersible in water

Decomposition temperature: No data available

Density: 8.35 lbs/gal (Bottle Method)

Percent volatile: No data available

Viscosity: No data available

Flash point: No data available

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Auto-ignition temperature: No data available
Lower explosion limit: No data available
Upper explosion limit: No data available
Explosivity: No data available

Other information: Further safety related physical-chemical data are not known.

SECTION 10: STABILITY AND REACTIVITY

Reactivity: None under normal conditions.
Stability: Stable under normal conditions
 Susceptible to extreme conditions and prolonged or excessive heat.
Conditions to avoid: Prolonged or excessive heat and open flame, direct sunlight, and freezing.
Incompatibility (material/conditions to avoid): Strong oxidizing agents, strong reducing agents, acids, bases, direct sunlight, nitrates.
Possibility of hazardous reactions: No hazardous polymerization will occur.
Hazardous decomposition or by-products: None under normal conditions.

SECTION 11: TOXOLOGICAL INFORMATION

No toxicity data is available for this specific product. Classification of Nucleon has been completed by calculating the properties of the formulation based on the properties and concentrations of its hazardous ingredients.

Acute toxicity (oral) : Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (dermal) : Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (inhalation) : Not classified (Based on available data, the classification criteria are not met)
Skin corrosion/irritation: : Not classified (Based on available data, the classification criteria are not met)
Eye irritation: : Not classified (Based on available data, the classification criteria are not met)
Respiratory or skin sensitisation: : Classified as a skin sensitizer Category 1
Germ cell mutagenicity: : Not classified (Based on available data, the classification criteria are not met)
Carcinogenicity: : Not classified (Based on available data, the classification criteria are not met)
Reproductive: : Not classified (Based on available data, the classification criteria are not met)
Specific target organ toxicity: : Not classified (Based on available data, the classification criteria are not met)
Aspiration hazard: : Not classified (Based on available data, the classification criteria are not met)
Other information:

SECTION 12: ECOLOGICAL INFORMATION

Ecological information: Do not empty into drains.
Persistence and degradability: Persistence is unlikely based on available information.
Bioaccumulative potential: No additional information available.
Mobility in soil: Likely to be mobile in the environment due to water solubility.
Other adverse effects: No additional information available.

SECTION 13: DISPOSAL CONSIDERATIONS

Container disposal: Triple rinse containers before disposal. Add rinsings to spray tank. DO NOT reuse this container for any other purpose. If recycling, replace cap and return clean container to recycler or designated collection point. If not recycling, break, crush or puncture and deliver to an approved waste management facility. If an approved waste management facility is not available bury the empty packaging 500mm below the surface in a disposal pit specifically marked and set up for this purpose. Do not burn empty containers or product.
Product disposal: Do not dispose of undiluted chemicals on site. Dispose of this product only by using according to the label, or at an approved landfill. DO NOT contaminate water supply with chemical or empty container.

SECTION 14: TRANSPORT INFORMATION

Road and Rail Transport: Not classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for transport by Road and Rail; NON-DANGEROUS GOODS.
Marine Transport: Not classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea; NON-DANGEROUS GOODS.
Air Transport: Not classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air; NON-DANGEROUS GOODS.

SECTION 15: REGULATORY INFORMATION

AICIS Inventory: All the constituents of this material are either listed on the Australian Inventory of Industrial Chemicals (Inventory), not required due to the nature of the chemical, or have been reported under the Industrial Chemicals Act 2019 as amended.

SECTION 16: OTHER INFORMATION

General Information: None
Issue Number: 002
Issue Date: 24 January 2023
Key abbreviations or acronyms used: ADG Code - Australian Code for the Transport of Dangerous Goods by Road and Rail (7th edition)
IMDG Code – International Maritime Dangerous Goods Code
IATA - International Air Transport Association
AIIIC - Australian Inventory of Industrial Chemicals.
Preparation of Safety Data Sheets for Hazardous Chemicals Code of Practice (July 2020)
CAS – Chemical Abstracts Service.
GHS – Globally Harmonized System.