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Safety Data Sheet **THI NITRO 23**

1. IDENTIFICATION

Synonyms none
 CAS# see Part 3, below
 Material Use nitrogenous fertilizer

IN AN EMERGENCY CALL: INFOTRAC 1-800-535-5053

2. HAZARD IDENTIFICATION

GHS Class **NOT HAZARDOUS**

(Category)

Signal Words **NONE**

Hazard Statements **NONE**

GHS Precautionary Statements for Labeling **NONE**

3. COMPOSITION

	CAS NUMBER	%	TLV mg/m ³	LD ₅₀ (mg/kg) ORAL	LD ₅₀ (mg/kg) SKIN	LC ₅₀ ppm INHALATION
Urea	57-13-6	40-60%	not listed	8470	not known	not known
Calcium Chloride	10043-52-4	10-20%	not listed	>1000	>5000	not known
Water	7732-18-5	balance	not toxic	90,00	not toxic	not toxic

4. FIRST AID

SKIN: Wash with plenty of water. Remove contaminated clothing and do not reuse until laundered. Seek medical help promptly if there is persistent itching or redness in the affected area.

EYES: Wash eyes with plenty of water, holding eyelids open. Seek medical assistance if there is persistent irritation.

INHALATION: Remove from contaminated area promptly. **CAUTION: Rescuer must not endanger himself!** If victim's breathing stops, administer artificial respiration and seek medical aid promptly.

INGESTION: Give plenty of water to dilute product. Do not induce vomiting (NOTE below). Keep victim quiet. If vomiting occurs, lower victim's head below hips to prevent inhalation of vomited material. Seek medical help promptly.

NOTE: Inadvertent inhalation of vomited material may seriously damage the lungs. The danger of this is greater than the risk of poisoning through absorption of this non-toxic product.

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5. FLAMMABILITY & FIRE-FIGHTING

Flash Point	cannot burn
Autoignition Temperature	cannot burn
Flammable Limits	cannot burn
Combustion Products	oxides of calcium & nitrogen
Firefighting Precautions	as for materials sustaining fire; compatible with water; firefighters must wear SCBA
Static Discharge	cannot accumulate a static charge

6. ACCIDENTAL RELEASE MEASURES

Leak Precaution	dike to control spillage and prevent environmental contamination
Handling Spill	recover free liquid with explosion-proof pumps; absorb residue on an inert sorbent, sweep, shovel & store in closed containers for disposal

7. HANDLING & STORAGE

No special storage or handling instructions.

8. EXPOSURE CONTROL & PERSONAL PROTECTION

ACGIH TLV	not listed	ACGIH STEL	not listed
OSHA PEL	not listed	OSHA STEL	not listed
Ventilation	no special mechanical ventilation required		
Hands	no special protective gloves required; <i>rubber or nitrile gloves are resistant</i>		
Eyes	safety glasses with side shields – <i>always protect eyes!</i>		
Clothing	no special protective clothing required		

9. PHYSICAL AND CHEMICAL PROPERTIES

NOTE: for Flash Point, Autoignition Temperature & Flammable Limits see Part 5.

Odor & Appearance	clear, colorless, odorless liquid
Odor Threshold	not known – <i>odorless</i>
Vapor Pressure	as for water
Evaporation Rate (<i>Butyl Acetate = 1</i>)	as for water
Vapor Density (air = 1)	0.6 (<i>water</i>) – <i>no other volatile material present</i>
Boiling Point	above 110°C / 230°F
Freezing Point	not measured; approx. -20°C / -4°F
Decomposition Temperature	not known – <i>no decomposition below the boiling point</i>
Specific Gravity	not measured; approx. 1.2 (20/20°C)
Water Solubility	complete
Viscosity	not measured – <i>mobile liquid</i>
pH	8-9 – <i>slightly alkaline</i>

10. REACTIVITY

Dangerously Reactive With	none known
Also Reactive With	none known
Chemical Stability	stable; will not polymerize
Decomposes in Presence of	no decomposition triggers known
Decomposition Products	none apart from Hazardous Combustion Products
Mechanical Impact	not sensitive

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11. TOXICITY INFORMATION**i. ACUTE EXPOSURE**

Skin Contact	little to no effect
Skin Absorption	yes, slowly; toxic effects unlikely by this route
Eye Contact	may irritate – <i>concentrated solution may irritate, but without damage</i>
Inhalation	no effect
Ingestion	not known; no symptoms expected – <i>calcium chloride is bitter & very aversive, deliberate ingestion unlikely</i>
Calculated LD ₅₀ (oral)	>4000mg/kg (rat)
LD ₅₀ (skin)	<i>insufficient information to calculate</i>
LC ₅₀ (inhalation)	<i>insufficient information to calculate</i>

ii. CHRONIC EXPOSURE

General	no symptoms known or anticipated
Sensitizing	not a sensitizer
Carcinogen/Tumorigen	not known to be a tumorigen or a carcinogen in humans or animals
Reproductive Effect	no known effect on humans or animals
Mutagen	not known to be a mutagen or teratogen in humans or animals
Synergistic With	not known

12. ECOLOGICAL INFORMATION**Urea:**

Bioaccumulation	not a bioaccumulator
Biodegradation	biodegrades readily & very rapidly in the presence of oxygen; 96% in 16 days & 100% in 21 days
Abiotic Degradation	reacts with atmospheric hydroxyl radicals; estimated ½-life in air is 10 hours
Mobility in soil, water	water soluble; moves readily in soil and water

Aquatic Toxicity

LC ₅₀ (Fish, 96hr)	6810mg/liter (Leuciscus idus), 9100mg/liter (Barilius barna)
NOEC (Fish, 96hr)	>10,000mg/liter (Leuciscus idus)
EC ₅₀ (Crustacea, 24hr)	>60,000mg/liter (Aedes aegypti), >10,000mg/liter (Daphnia magna)
NOAEC (Algae)	>10,000mg/liter (Scenedesmus quadricauda)
EC ₅₀ (Bacteria)	>10,000mg/liter (Pseudomonas putida)

Calcium Chloride:

Bioaccumulation	not a bioaccumulator
Biodegradation	inorganic salt – cannot biodegrade
Abiotic Degradation	highly stable salt – ion exchange with other solutes in the environment
Mobility in soil, water	water soluble; likely to move readily in soil and water

Aquatic Toxicity

LC ₅₀ (Fish, 96hr)	13,400mg/liter (Gambusia affinis), 10,650mg/liter (Lepomis macrochirus)
LC ₅₀ (Amphibian, 72hr)	6360mg/liter (Rana breviceps – frog)
EC ₅₀ (Crustacea, 48hr)	464, 759, 1285 & 3005mg/liter (Daphnia magna), 7000 & 19,400mg/liter (Cyclops abyssorum), 3000 & 8300mg/liter (Daphnia hyalina), 11,190mg/liter (Eudiaptomus padanus),
EC ₅₀ (Algae)	3130mg/liter (Nitzschia linearis)
EC ₅₀ (Bacteria)	no data available

13. DISPOSAL CONSIDERATIONS

Waste Disposal	do not flush to sewer; harmless material; local regulations may permit disposal in sanitary landfill; if uncontaminated by toxic materials, may be spread on agricultural land
Containers	Drums should be reused. Recondition and pressure test by a licensed reconditioner prior to re-use. Pails must be vented and thoroughly dried prior to crushing and recycling. IBCs (intermediate bulk containers): polyethylene bottle must be pressure tested & recertified at 30 months. Replace at 60 months (5 years). Steel containers must be inspected, pressure tested & recertified every 5 years. Warning: never cut, drill, weld or grind on or near this container, even if empty.

cont'd next page**PLEASE ENSURE THAT THIS SDS IS GIVEN TO, AND EXPLAINED TO PEOPLE USING THIS PRODUCT.****EMERGENCY INFORMATION: INFOTRAC 1-800-535-5053**

14. TRANSPORT INFORMATION**USA 49 CFR & Canada/International TDG**

Product Identification Number	UN – not regulated for transport
Shipping Name	not regulated for transport
Classification	not regulated for transport
<i>Marine Pollution</i>	<i>not a marine pollutant</i>
<i>ERAP Required</i>	<i>No</i>
<i>Reportable Quantity (RQ)</i>	<i>none</i>

15. REGULATIONS

Canada DSL	on inventory
U.S.A. TSCA	on inventory
Europe EINECS	on inventory

16. OTHER INFORMATION

Date of Preparation **June 2015**

Date of Revision -

Prepared for Tomco-Harwel, by **Peter Bursztyn**

With data from the Registry of Toxic Effects of Chemical Substances (RTECS), Hazardous Substance Data Base (HSDB), Cheminfo (CCOHS), OSHA, IUCLID Datasheets (European Chemical Substance Information System - ESIS), & others sources (below if used), as required/available

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