



Material Safety Data Sheet

NZN™ 15-0-0

MSDS Number 40800 (Revised: 5/6/02)

6 Pages

Section 1: CHEMICAL PRODUCT and COMPANY IDENTIFICATION

- 1.1 Product Name** **NZN™ 15-0-0**
Chemical Family Aqueous, inorganic salt solution
Synonyms Aqueous solution of ammonium and zinc nitrate and Urea
Formula N/A - blend
- 1.2 Manufacturer** **Tessenderlo Kerley Inc.**
2255 N. 44th Street, Suite 300
Phoenix, Arizona 85008-3279
Information (602) 889-8300
- 1.3 Emergency Contact** (800) 877-1737 (Tessenderlo Kerley)
(800) 424-9300 (CHEMTREC)

Section 2: COMPOSITION, INFORMATION ON INGREDIENTS

2.1 Chemical Ingredients (% by wt.)

NZN™ is a proprietary blend of urea (CAS # 57-13-6), ammonium nitrate (CAS # 6484-52-2), zinc nitrate (CAS # 7779-88-6) and water (CAS # 7732-18-5)

(See Section 8 for exposure guidelines)

Section 3: HAZARDS IDENTIFICATION
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NFPA: **Health - 1** **Flammability - 0** **Reactivity - 0**

<p style="text-align: center;">EMERGENCY OVERVIEW</p> <p>Contact with solution or mist may cause eye irritation. Repeated/prolonged skin contact with solution or mist may cause irritation. Ingestion may irritate gastrointestinal tract. Excessive heating may cause ammonia gas to evolve.</p>

Section	3:	HAZARDS IDENTIFICATION (Cont.)
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3.1 POTENTIAL HEALTH EFFECTS

EYE: Contact with the eyes by product mist or solution may cause irritation or a burning sensation.

SKIN CONTACT: Prolonged or repeated contact with product mist or solution may cause skin irritation.

SKIN ABSORPTION: Absorption is unlikely to occur.

INGESTION: Ingestion of product solution may cause irritation of the gastrointestinal tract to include nausea, vomiting and diarrhea. These blends are considered to have a low toxicity to humans.

INHALATION: Inhalation of product mist may cause irritation of the nose, throat and respiratory tract.

CHRONIC EFFECTS/CARCINOGENICITY: Not listed as a carcinogen by NTP, IARC or OSHA.

Section	4:	FIRST AID MEASURES
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4.1 EYES: Immediately flush with large quantities of water for 15 minutes. Hold eyelids apart during irrigation to insure thorough flushing of the entire area of the eye and lids. Obtain medical attention.

4.2 SKIN: Immediately flush with large quantities of water. Remove contaminated clothing under a safety shower. Obtain medical attention if irritation occurs.

4.3 INGESTION: If victim is conscious, give 2 to 4 glasses of water and induce vomiting by touching finger to back of throat. Obtain medical attention.

4.4 INHALATION: Remove victim from contaminated atmosphere. If breathing is labored, administer oxygen. If breathing has ceased, clear airway and start mouth to mouth resuscitation. If heart has stopped beating, external heart massage should be applied. Obtain medical attention.

Section	5:	FIRE FIGHTING MEASURES
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5.1 FLAMMABLE PROPERTIES

FLASH POINT: Not flammable

METHOD USED: NA

5.2 FLAMMABLE LIMITS

LFL: NA

UFL: NA

5.3 EXTINGUISHING MEDIA: As appropriate for combustibles involved in fire.

5.4 FIRE & EXPLOSIVE HAZARDS: Heating to dryness may cause the release of ammonia and carbon dioxide. The released ammonia, NH₃, may form flammable mixtures (16-25%) with air.

Keep containers/storage vessels in fire area cooled with water spray. Heating may cause the release of ammonia vapors.

Section	5:	FIRE FIGHTING MEASURES (Cont.)
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5.5 FIRE FIGHTING EQUIPMENT: As in any fire, wear self-contained breathing apparatus, pressure demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

Section	6:	ACCIDENTAL RELEASE MEASURES
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6.1 Small releases: Confine and absorb small releases on sand earth or other inert absorbent. Use water spray to dilute to weak fertilizer solution.

6.2 Large releases: Confine area to qualified personnel. Shut off release if safe to do so. Dike spill area to prevent runoff into sewers, drains or surface waterways (potential aquatic toxicity). Recover as much of the solution as possible. Treat remaining material as a small release (above).

Section	7:	HANDLING and STORAGE
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7.1 Handling: Avoid contact with eyes. Use only in a well ventilated area. Wash thoroughly after handling. Avoid prolonged or repeated breathing of vapors or mist. Avoid prolonged or repeated contact with the skin.

7.2 Storage: Store in well ventilated areas. Do not store combustibles in the area of storage vessels. Keep away from any sources of heat or flame. Store tote and smaller containers out of direct sunlight at moderate temperatures less than 105°F (41°C) but greater than 18°F (-8°C) to avoid crystallization. (See Section 10.4 for materials of construction)

Section	8:	EXPOSURE CONTROLS, PERSONAL PROTECTION
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8.1 RESPIRATORY PROTECTION: None generally required. If conditions exist where mist may be generated, a NIOSH/MSHA approved mist respirator should be worn.

8.2 SKIN PROTECTION: Neoprene rubber gloves and apron should be worn to prevent repeated or prolonged contact with the liquid. Wash contaminated clothing prior to reuse.

8.3 EYE PROTECTION: Chemical goggles and a full face shield

8.4 EXPOSURE GUIDELINES:

	OSHA		ACGIH	
	<u>TWA</u>	<u>STEL</u>	<u>TLV</u>	<u>STEL</u>
None	N/A	NA	NA	NA

8.5 ENGINEERING CONTROLS: Use adequate exhaust ventilation to prevent inhalation of product vapors.

Section 9: PHYSICAL and CHEMICAL PROPERTIES

9.1 APPEARANCE:	clear, red solution
9.2 ODOR:	odorless
9.3 BOILING POINT:	230°F (110 °C)
9.4 VAPOR PRESSURE:	Not Determined
9.5 VAPOR DENSITY:	Not determined
9.6 SOLUBILITY IN WATER:	Complete
9.7 SPECIFIC GRAVITY:	1.316 (10.9 lbs/gal)
9.8 MELTING POINT:	Salt out temperature 16° F (-9°C)
9.9 pH:	Typically 4.0 - 4.5
9.10 VOLATILE:	Not applicable

Section 10: STABILITY and REACTIVITY

10.1 STABILITY: This is a stable material

10.2 HAZARDOUS POLYMERIZATION: Will not occur

10.3 HAZARDOUS DECOMPOSITION PRODUCTS: Heating this product will evolve ammonia. Heating to dryness will cause the production of ammonia, oxides of carbon and oxides of nitrogen. Ammonia (16-25%) may form flammable mixtures with air.

10.4 INCOMPATIBILITY: Heating in confined spaces such as piping should be avoided (dry ammonium nitrate salts can be explosive). NZN™ is not compatible with copper, zinc or their alloys (i.e. bronze, brass, galvanized metals, etc.). These materials of construction should not be used in piping, handling systems or storage containers for this product. (SEE Section 7.2, Storage)

Section 11: TOXICOLOGICAL INFORMATION

11.1 ORAL: Oral-Rat LD₅₀: > 1,430 mg/kg

11.2 DERMAL: Dermal-Rabbit LD₅₀: >10,000 mg/kg

11.3 INHALATION: Inhalation-Rat LC₅₀: > 217 mg/L (1 Hour)

11.4 CHRONIC/CARCINOGENICITY: No evidence available

11.5 TERATOLOGY: Data not available

11.6 REPRODUCTION: Data not available

11.7 MUTAGENICITY: Data not available

Section 12: ECOLOGICAL INFORMATION

No data available.

Section 13: DISPOSAL CONSIDERATIONS
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The product NZN™ is not considered hazardous waste under Federal Hazardous Waste Regulations, 40 CFR 261. Consult state and local regulations for different or more restrictive disposal regulations.

Section 14: TRANSPORT INFORMATION
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14.1 DOT Shipping Name: Urea, ammonium and zinc nitrate fertilizer solution

14.2 DOT Hazard Class: NA

14.3 UN/NA Number: NA

14.4 Packing Group: NA

14.5 DOT Placard: NA

14.6 DOT Label(s): NA

14.7 IMO Shipping Name: Urea, ammonium and zinc nitrate fertilizer solution

14.8 RQ (Reportable Quantity): NA

14.9 RR STCC Number: Unk

Section 15: REGULATORY INFORMATION

15.1 OSHA: This product is listed as a hazardous material under criteria of the Federal OSHA Hazard Communication Standard, 29 CFR 1910.1200.

15.2 SARA TITLE III:

a.	EHS (Extremely Hazardous Substance) List:	No
b.	Section 311/312, (Tier I,II) Categories:	Immediate (acute) Yes
	Fire	No
	Sudden release	No
	Reactivity	No
	Delayed (chronic)	No
c.	Section 313 (Toxic Release Reporting-Form R):	Yes

<u>Chemical Name</u>	<u>CAS Number</u>	<u>Wt. Concentration</u>
Nitrate Compounds		33%

Section	15: REGULATORY INFORMATION (Cont.)
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d. TPQ (Threshold Planning Quantity):	No
15.3 CERCLA/SUPERFUND: RQ (Reportable Quantity)	Yes 1,000 lb for Zinc
15.4 TSCA (Toxic Substance Control Act) Inventory List:	Yes
15.5 RCRA (Resource Conservation and Recovery Act) Status:	NA
15.6 WHMIS (Canada) Hazard Classification:	NA
15.7 DOT Hazardous Material: (See Section 14)	No
15.8 CAA Hazardous Air Pollutant (HAP)	No

Section	16: OTHER INFORMATION
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REVISIONS: The entire MSDS was reformatted to comply to ANSI Standard Z400.1-1993, by Technical Services-Tessenderlo Kerley, Inc.

Address updated, 4/30/99

Revised Section 8.3, Eye Protection and company logo, 5/6/02

<p>THE INFORMATION PUBLISHED IN THIS MATERIAL SAFETY DATA SHEET HAS BEEN COMPILED FROM OUR EXPERIENCE AND OSHA, ANSI, NFPA, DOT, ERG, AND CHRIS. IT IS THE USER'S RESPONSIBILITY TO DETERMINE THE SUITABILITY OF THIS INFORMATION FOR THE ADOPTION OF NECESSARY SAFETY PRECAUTIONS. WE RESERVE THE RIGHT TO REVISE MATERIAL SAFETY DATA SHEETS PERIODICALLY AS NEW INFORMATION BECOMES AVAILABLE.</p>
