MATERIAL SAFETY DATA SHEET

CHEM-N 28-0-0

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

UNITED SUPPLIERS, INC.
BOX 538
Eldora, IA 50627

PRODUCT NAME: **CHEM-N 28-0-0**
CHEMICAL NAME: Urea Ammonium Nitrate Solution
CHEMICAL FAMILY: Fertilizer - Adjuvant
EMERGENCY CONTACT: In the event of chemical emergencies involving a spill, leak, fire exposure, or accident involving chemicals -- call **CHEMTREC (800) 424-9300**.

2. HAZARDS IDENTIFICATION SUMMARY

KEEP OUT OF REACH OF CHILDREN – CAUTION:
EYE: May cause eye irritation.
SKIN: Contact may cause mild irritation.
INHALATION: Inhalation may cause respiratory tract irritation.
INGESTION: Ingestion may irritate the digestive tract.
OTHER INSTRUCTIONS: Read all precautions of products being handled and follow the most restrictive language for all products to provide the safest work environment.

3. COMPOSITION, INFORMATION ON INGREDIENTS

Chemical Ingredients:	Percentage by Weight:	CAS No.	TLV (Units)
Ammonium Nitrate	37.00 - 41.00	6484-52-2	None Established
Urea	29.00 - 32.00	57-13-6	None Established

4. FIRST AID MEASURES

If in Eyes: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes then continue rinsing eye. Call a poison control center or doctor for treatment advice.
If on Skin or Clothing: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.
If Swallowed: Immediately call a poison control center or doctor. Do not induce vomiting unless told to do so by the poison control center or doctor. Have person sip a glass of water if able to swallow. Do not give anything by mouth to an unconscious person.
If Inhaled: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for treatment advice.
FOR A MEDICAL EMERGENCY INVOLVING THIS PRODUCT have the product container or label with you when calling a poison control center or doctor.

5. FIRE FIGHTING MEASURES

FLASH POINT (^{O}F): >200°F
FLAMMABLE LIMITS (LFL & UFL): Not established
EXTINGUISHING MEDIA: Use foam, dry chemical, carbon dioxide, water spray or fog.
HAZARDOUS COMBUSTION PRODUCTS: Toxic fumes may be emitted in a fire situation.
SPECIAL FIRE FIGHTING PROCEDURES: Evacuate area and fight fire upwind from a safe distance to avoid hazardous vapors and decomposition products. Fire exposed containers can build up pressure and should be kept cool with water spray if possible. Explosive vapor could form from ruptured containers.
UNUSUAL FIRE AND EXPLOSION HAZARDS: No specific explosion hazards are identified or expected.
FIRE FIGHTING EQUIPMENT: Wear fire fighting gear appropriate for surrounding fire.
HAZARDOUS COMBUSTION PRODUCTS: Normal combustion forms carbon dioxide, water vapor and may produce oxides of carbon, nitrogen and phosphorous.

6. ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED: In case of leak or spill, contain material and dispose as waste. Do not contaminate any body of water. Pick up spilled liquid with absorbent material and sweep up for disposal. Place it and damaged unusable containers in a landfill appropriate for non hazardous chemical waste. Check local, state and federal regulations for proper disposal. **NOTE:** Prevent spilled material from flowing onto adjacent land, or into municipal sewers and open bodies of water. Always wear proper protective equipment when working with the product.

7. HANDLING AND STORAGE

HANDLING: Wash hands after handling, and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

STORAGE: Do not store using brass, bronze, copper, zinc or alloys of these, contact with UAN solution causes corrosion; cast iron, malleable iron or ductile iron are much more susceptible to corrosion than aluminum or carbon steel. Pay extra close attention to plugs and fittings on storage tanks. If stored below freezing, thoroughly thaw and agitate before use, store above 0°F. Keep containers tightly closed. Store in original container. Do not allow water or other chemicals to be introduced into contents of container. Do not contaminate water sources with equipment wash water, spray disposal wastes or by cleaning of equipment. Do not store near feed or food products. Do not use or store near open flame.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS: Follow engineering controls appropriate for the pesticide(s) being mixed.

RESPIRATORY PROTECTION: Work in a well ventilated area. Decomposition of UAN may produce oxides of nitrogen and ammonia; if it is necessary to enter a confined space monitor for ammonia vapors and wear the proper protective equipment. Always follow the Confined Space Entry program.

EYE PROTECTION: Wear chemical goggles or shielded safety glasses when handling and mixing product.

SKIN PROTECTION: Wear protective clothing: long-sleeved shirts and pants, shoes plus socks and chemical-resistant gloves.

Personal Protective Equipment (PPE): Eye protection, long sleeved shirt and long pants, shoes plus socks and chemical resistant gloves. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry. Always refer to the label of the pesticide(s) in the tank mix and follow the most restrictive requirements.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR: Clear colorless liquid, Slight ammonia **SOLUBILITY:** Soluble **pH:** 6.8 - 7.5

SPECIFIC GRAVITY (Water=1): 1.23 - 1.33g/ml **BULK DENSITY:** 10.26 - 11.09 lbs/gal.

VAPOR PRESSURE: 8.6 -17.5mm Hg @100°F **BOILING POINT:** >212°F

PERCENT VOLATILE (by volume): Not established **EVAPORATION RATE:** Not established

Note: These physical data are typical values based on material tested but may vary from sample to sample. Typical values should not be construed as a guaranteed analysis of any specific lot or as specification items.

10. STABILITY AND REACTIVITY

STABILITY: Stable

CONDITIONS TO AVOID: None Known

IMCOMPATIBILITY: Do not mix with chlorine or hypochlorites. Refer to Storage in Section 7 for metal incompatibilities.

HAZARDOUS POLYMERIZATION: Will not occur.

HAZARDOUS DECOMPOSITION PRODUCTS: Decomposition of UAN may produce oxides of nitrogen and ammonia

11. TOXICOLOGICAL INFORMATION

Acute Oral LD_{50}: >2,000 mg/kg **Acute Dermal LD_{50}:** Not Established

Eye Irritation: May cause moderate irritation **Skin Irritation:** May cause mild irritation

Inhalation LC_{50}: Not Established **Skin sensitization:** Not a contact sensitizer
Carcinogenic Potential: None listed in OSHA, NTP, IARC, or ACGIH

12. ECOLOGICAL INFORMATION

ENVIRONMENTAL SUMMARY: This product is considered practically non-toxic.
***Oncorhynchus mykiss* (Rainbow Trout) LC50:** 103 mg/L (96 hours)
Pimephalas promelas (Fathead Minnow) LC50: 100 to 500 mg/L (96 hours)

13. DISPOSAL CONSIDERATIONS

Do not reuse product containers. Triple rinse (or equivalent), then offer for recycling at an ACRC site (go to http:www.acrecycle.org/ for locations) or by reconditioning, or puncture and dispose of in a sanitary landfill or by other procedures approved by local, state and federal regulations.

14. TRANSPORT INFORMATION

DOT HAZARD CLASS: Not regulated by DOT
UN NUMBER: Not Applicable
DOT PACKING GROUP: Not Applicable
DOT PRIMARY/SECONDARY LABEL: None
DOT PRIMARY/SECONDARY PLACARD: None

15. REGULATORY INFORMATION

NFPA RATINGS: Least = 0 Slight = 1 Moderate = 2 High = 3 Severe = 4
Ratings for this product: Health – 1 Flammability – 0 Instability – 0
Special Hazards – None Specified

SARA Title III Hazard Category: Immediate __Y__ Fire __N__
Sudden Release of Pressure __N__ Delayed __N__ Reactive __N__

Reportable Quantity (RQ) under U.S. CERCLA: Not listed

SARA, Title III, Section 313: UAN contains ammonia and nitrate ions from ammonium nitrate which are subject to reporting requirements.

CA Proposition 65: Not listed

16. OTHER

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