

APACHE NITROGEN PRODUCTS, INC.  
MATERIAL SAFETY DATA SHEET

DATE PREPARED: 1/28/88 BY: R. C. Sittig  
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SECTION I - PRODUCT IDENTIFICATION

TRADENAME: UAN-28, 30 or 32

SYNONYMS: UREA - Ammonium Nitrate Solution, 28%, 30%, 32% Nitrogen

CHEMICAL FAMILY: Nitrogenous Fertilizer Solutions  
FORMULA:  $(\text{NH}_2)_2\text{CO} + \text{NH}_4\text{NO}_3 + \text{H}_2\text{O}$

MANUFACTURERS NAME: Apache Nitrogen Products, Inc.  
ADDRESS: P.O. Box 700  
Benson, AZ 85602

INFORMATION AND EMERGENCY:  
CONTACT: Shift Supervisors (available 24 hours a day)  
PHONE: (520) 720-2217, extension 161

SECTION II - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

	OSHA <u>PEL</u>	ACGIH <u>TLV</u>
UREA	Not established	Not established
Ammonium Nitrate	Not established	Not established

SECTION III - PHYSICAL DATA

BOILING POINT: Greater than 212 SPECIFIC GRAVITY: 1.3 @ 60EF  
(Degrees F.) (Where: Water = 1)

VAPOR PRESSURE: 5mmHg @ 68EF PERCENT VOLATILE: Unknown  
VAPOR DENSITY: 1 EVAPORATION RATE: 1  
SOLUBILITY IN WATER: Miscible (Where: Water = 1)  
OTHER: Combustible at temperatures above 500EF if water in product evaporates.

APPEARANCE AND ODOR: Clear to slightly cloudy liquid with faint ammonia odor.

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (METHOD USED): Not Flammable  
FLAMMABLE LIMITS: LEL: N/A UEL: N/A

EXTINGUISHING MEDIA: Flood with water.

SPECIAL FIRE FIGHTING PROCEDURES: Wear self-contained breathing apparatus and protective clothing. Fight fires from protected location. Guard against falls as solution is slippery.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Material under normal conditions of storage and use is non-flammable and non-explosive. Concentrated or dry material can detonate if subjected to strong shocks, heating under conditions of confinement or high temperatures unconfined. Dry material on heating can give off toxic gases, such as hydrogen cyanide, nitrogen oxides, ammonia and carbon monoxide.

#### **SECTION V - REACTIVITY DATA**

STABLE: Yes  
CONDITIONS TO AVOID: High heat and contamination.

INCOMPATIBILITY (MATERIALS TO AVOID): Soluble heavy metal salts, chlorides, strong acids or bases, strong oxidizing or reducing agents, powdered or active metals.

HAZARDOUS POLYMERIZATION: Does not occur.  
CONDITIONS TO AVOID: N/A

HAZARDOUS DECOMPOSITION PRODUCTS: Hydrogen cyanide, nitrogen oxides, ammonia, carbon monoxide, cyanuric acid and biuret.

#### **SECTION VI - HEALTH HAZARD DATA**

ROUTE(S) OF ENTRY:  
INHALATION: No, unless free ammonia is present.  
SKIN: No  
INGESTION: Yes

HEALTH HAZARDS (ACUTE AND CHRONIC):

ACUTE: Can be slightly irritating to eyes, nose and throat if sufficient free ammonia is present. Ingestion can cause gastrointestinal disturbances, headache, weakness, sore throat, drowsiness, slurred speech, collapse.

CHRONIC: Prolonged contact with skin can cause reddening, itching and inflammation.

CARCINOGENICITY:  
NTP: No  
IRAC MONOGRAPHS: No  
OSHA REGULATED: No

#### **SIGNS AND SYMPTOMS OF EXPOSURE:**

INHALATION: Irritation of nose and throat if free ammonia is present.

SKIN CONTACT: Reddening, inflammation, itching

EYE CONTACT: Reddening, irritation

INGESTION: Nausea, vomiting, sore throat, diarrhea, abdominal pain, weakness, irritation, collapse. Only slightly toxic unless large amounts are ingested.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: Lung disease, open wounds, allergic sensitivity.

#### **EMERGENCY AND FIRST AID PROCEDURES:**

INHALATION of Nitrous Fumes/Ammonia: Remove patient to fresh air and keep warm.

EYES: Flush with water or eyewash solution for 30 minutes.

SKIN: Wash thoroughly with soap and water.

INGESTION: If victim is conscious, have victim drink water or milk. Seek medical attention.

#### **SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE**

SPILL OR LEAK PROCEDURES: Do not flush into sewers. Place spilled solution into containers for proper disposal. Absorb liquid into sand or clay and remove solid residue. If necessary, contact local police, fire department, National Response Center and/or CHEMTREC.

WASTE DISPOSAL METHOD: Apply to ground as fertilizer. Avoid contamination of surface water or groundwater. Contact state, federal or local environmental regulatory agencies for proper disposal procedures and locations.

HANDLING AND STORAGE PRECAUTIONS: Store in tanks in a well-ventilated building or out-of-doors. Avoid storage with combustible materials. Wear goggles/face shield, rubber gloves and protective clothing when moving product or when the possibility of splashing exists.

OTHER PRECAUTIONS: Do not store in unlabeled or recycled containers without adequate precautions.

#### **SECTION VIII - CONTROL MEASURES**

RESPIRATORY PROTECTION (SPECIFY TYPE): Generally, none needed. If free ammonia is present, ammonia cartridge respirators are indicated.

VENTILATION:

LOCAL EXHAUST: In confined areas if free ammonia is present.

MECHANICAL: Satisfactory      SPECIAL: N/A      OTHER: N/A

PROTECTIVE GLOVES: Non-absorbent rubber or equivalent.

EYE PROTECTION: Goggles, face shield

OTHER PROTECTIVE CLOTHING/EQUIPMENT: Long sleeved shirts are recommended.

WORK/HYGENIC PRACTICES: Wash hands thoroughly after handling. Do not let product contaminate food or drink. Do not smoke around product. Do not let combustible materials accumulate around product storage.

#### **SECTION IX - TRANSPORTATION REQUIREMENTS (OPTIONAL)**

D.O.T. PROPER SHIPPING NAME: N/A

DEPARTMENT OF TRANSPORTATION REQUIREMENTS: None

**SECTION X - SPECIAL PRECAUTIONS (OPTIONAL)**

Concentrated or dried UAN solutions can detonate under conditions of severe heat, fire or shock. The dried mixture is combustible and will increase the severity of a fire if mixed into combustible materials such as wood, straw, coal or flammable liquids.

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