



KOCH FERTILIZER CANADA LTD

## MATERIAL SAFETY DATA SHEET

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### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

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**Koch Fertilizer Canada Ltd.**  
**1400 17th Street East**  
**Brandon, MB R7A 7C4**  
**1-204-729-2898**

**SPILL/EMERGENCY CONTACT:**  
**CHEMTREC: 1-800-424-9300 (U.S.)**  
**CANUTEC: 613-996-6666 (Canada, call collect)**  
**Emergency Response Assistance Plan:**  
**1-204-729-2999**  
**To Request An MSDS: 1-316-828-7672**

**MSDS NUMBER:** 232106

**TRADE NAMES:**  
UREA AMMONIUM NITRATE SOLUTION

**SYNONYMS:**  
UREA AMMONIUM NITRATE SOLUTION 28-0-0; UAN 28% NITROGEN; UN-28; URAN; TRI-N-28; STCC 2871315

**PRODUCT USE:** fertilizer

**REVISION DATE:** Sep 01 2006

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### 2. COMPOSITION, INFORMATION ON INGREDIENTS

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**COMPONENT:** AMMONIUM NITRATE  
**CAS NUMBER:** 6484-52-2  
**PERCENTAGE:** 40.1

**COMPONENT:** UREA  
**CAS NUMBER:** 57-13-6  
**PERCENTAGE:** 30

**COMPONENT:** WATER  
**CAS NUMBER:** 7732-18-5  
**PERCENTAGE:** 29.9

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### 3. HAZARDS IDENTIFICATION

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**NFPA RATINGS (SCALE 0-4):** HEALTH=1 FIRE=1 REACTIVITY=0



**EMERGENCY OVERVIEW:**

**SIGNAL WORD:** CAUTION!

**MAJOR HEALTH HAZARDS:** respiratory tract irritation, skin irritation, eye irritation

**POTENTIAL HEALTH EFFECTS:**

**INHALATION:**

**SHORT TERM EXPOSURE:** irritation, sore throat, cough, difficulty breathing, bluish skin color, lung congestion, kidney damage, blood disorders

**LONG TERM EXPOSURE:** lung damage, kidney damage, blood disorders

**SKIN CONTACT:**

**SHORT TERM EXPOSURE:** irritation, itching, absorption may occur

**LONG TERM EXPOSURE:** irritation, itching, absorption may occur

**EYE CONTACT:**

**SHORT TERM EXPOSURE:** irritation, eye damage

**LONG TERM EXPOSURE:** irritation, eye damage

**INGESTION:**

**SHORT TERM EXPOSURE:** gastrointestinal irritation, sore throat, nausea, vomiting, stomach pain, bluish skin color, blood disorders, kidney damage

**LONG TERM EXPOSURE:** blood disorders, kidney damage

#### 4. FIRST AID MEASURES

**INHALATION:** If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing. Get immediate medical attention.

**SKIN CONTACT:** Wash with soap or mild detergent and large amounts of water until no evidence of chemical remains (at least 15-20 minutes). Get medical attention if irritation develops or persists. Place contaminated clothing in a closed container until laundered or discarded. Contaminated clothing should be removed and laundered before reuse. Notify person laundering clothing of contaminant's hazardous properties. Discard contaminated leather goods.

**EYE CONTACT:** Flush eyes with plenty of water for at least 15 minutes. Hold eyelids away from the eyeball to ensure thorough rinsing. Get immediate medical attention.

**INGESTION:** If a large amount is swallowed, get medical attention.

#### 5. FIRE FIGHTING MEASURES

**FIRE AND EXPLOSION HAZARDS:** Slight fire hazard. When water evaporates from this product, residues may contain ammonium nitrate and urea. Solid ammonium nitrate when sensitized during decomposition, may become unstable and explosive.

**EXTINGUISHING MEDIA:** carbon dioxide, regular dry chemical, regular foam, water

**FIRE FIGHTING:** Move container from fire area if it can be done without risk. Avoid inhalation of material or combustion by-products. Stay upwind and keep out of low areas. Cool containers with water

spray until well after the fire is out. Apply water from a protected location or from a safe distance.

**SENSITIVITY TO MECHANICAL IMPACT:** No

**SENSITIVITY TO STATIC DISCHARGE:** No

**FLASH POINT:** not flammable, liquid

**HAZARDOUS COMBUSTION PRODUCTS:**

Thermal decomposition products or combustion: oxides of nitrogen, ammonia, ammonium compounds, cyanide compounds, biuret

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## 6. ACCIDENTAL RELEASE MEASURES

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**WATER RELEASE:**

Keep out of water supplies and sewers. Collect with absorbent into suitable container.

**OCCUPATIONAL RELEASE:**

Stop leak if possible without personal risk. Small spills: Absorb with sand or other non-combustible material. Collect spilled material in appropriate container for disposal.

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## 7. HANDLING AND STORAGE

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**STORAGE:** Store and handle in accordance with all current regulations and standards. Store in a tightly closed container. Store in a cool, dry place. Store above 32 F. Protect from freezing. Store in a well-ventilated area. Avoid heat, flames, sparks and other sources of ignition. Keep separated from incompatible substances. Do not allow material to become dry.

**HANDLING:** Do not cut, puncture, or weld on or near this container. Do not breathe gas, fumes, vapor, or spray. When using, do not eat, drink or smoke.

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## 8. EXPOSURE CONTROLS, PERSONAL PROTECTION

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**EXPOSURE LIMITS:**

**UREA:**

No occupational exposure limits established.

**VENTILATION:** General or local exhaust ventilation and other forms of engineering controls are the preferred means for controlling exposures. If ventilation cannot reduce airborne concentrations below acceptable limits, appropriate respiratory protection should be used.

**EYE PROTECTION:** Wear splash resistant safety goggles with a faceshield. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

**CLOTHING:** Wear appropriate chemical resistant clothing.

**GLOVES:** Wear appropriate chemical resistant gloves.

**PROTECTIVE MATERIAL TYPES:** rubber

**RESPIRATOR:** A NIOSH approved air-purifying respirator with an appropriate cartridge or canister may be appropriate under certain circumstances where airborne concentrations are expected to exceed exposure limits. Appropriate respirator selection should be made by a qualified professional as part of a comprehensive respiratory protection program as described in 29 CFR 1910.134. Protection provided by air-purifying respirators is limited and should not be used in atmospheres deficient in oxygen or where airborne concentrations are immediately dangerous to life or health. Use a positive-pressure air-supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air-purifying respirators may not provide adequate protection.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

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**PHYSICAL STATE:** liquid

**APPEARANCE:** clear

**COLOR:** colorless, blue or green

**PHYSICAL FORM:** solution

**ODOR:** faint odor, ammonia odor

**BOILING POINT:** Not available

**FREEZING POINT:** Not available

**VAPOR PRESSURE:** Not available

**VAPOR DENSITY:** Not available

**SPECIFIC GRAVITY (water=1):** 1.283 @ 16 C

**WATER SOLUBILITY:** 100%

**PH:** 6.5-7.5

**VOLATILITY:** Not available

**ODOR THRESHOLD:** Not available

**EVAPORATION RATE:** Not available

**COEFFICIENT OF WATER/OIL DISTRIBUTION:** Not available

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## 10. STABILITY AND REACTIVITY

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**REACTIVITY:** Stable at normal temperatures and pressure.

**CONDITIONS TO AVOID:** Avoid heat, flames, sparks and other sources of ignition. Avoid contact with incompatible materials. UAN will form urea nitrate when mixed with nitric acid at low pH. Urea nitrate may become unstable and/or explosive under certain conditions.

**INCOMPATIBILITIES:** oxidizing materials, metal salts, metals, acids, bases, combustible materials

**HAZARDOUS DECOMPOSITION:**

Thermal decomposition products or combustion: oxides of nitrogen, ammonia, ammonium compounds, cyanide compounds, biuret

**POLYMERIZATION:** Will not polymerize.

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## 11. TOXICOLOGICAL INFORMATION

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**UREA AMMONIUM NITRATE SOLUTION - 28:**

**MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:** blood system disorders, skin disorders, kidney disorders, respiratory disorders

**AMMONIUM NITRATE:****TOXICITY DATA:**

2217 mg/kg oral-rat LD50

**LOCAL EFFECTS:**

Irritant: inhalation, skin, eye

**ACUTE TOXICITY LEVEL:**

Moderately Toxic: ingestion

**UREA:****IRRITATION DATA:**

22 mg/3 day(s)-intermittent skin-human mild; 20 percent/24 hour(s) skin-human moderate

**TOXICITY DATA:**

>2100 mg/kg skin-rabbit LD50; 8471 mg/kg oral-rat LD50

**LOCAL EFFECTS:**

Irritant: eye

**ACUTE TOXICITY LEVEL:**

Slightly Toxic: ingestion

**MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:** eye disorders, kidney disorders, respiratory disorders, skin disorders and allergies

**TUMORIGENIC DATA:** Available.

**MUTAGENIC DATA:** Available.

**REPRODUCTIVE EFFECTS DATA:** Available.

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## 12. ECOLOGICAL INFORMATION

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**ECOTOXICITY DATA:**

**FISH TOXICITY:** This material is practically non-toxic to aquatic life. >103 mg/L 96 hours LC50 Fish

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## 13. DISPOSAL CONSIDERATIONS

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This product, as supplied, when discarded or disposed of, is not a hazardous waste according to 40 CFR 261. Dispose in accordance with all applicable regulations.

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## 14. TRANSPORT INFORMATION

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**U.S. DEPARTMENT OF TRANSPORTATION:** No classification assigned.

**CANADIAN TRANSPORTATION OF DANGEROUS GOODS:** No classification assigned.

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## 15. REGULATORY INFORMATION

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**U.S. REGULATIONS:**

**CERCLA SECTIONS 102a/103 HAZARDOUS SUBSTANCES (40 CFR 302.4):** Not regulated.

**SARA TITLE III SECTION 302 EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355.30):**  
Not regulated.

**SARA TITLE III SECTION 304 EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355.40):**  
Not regulated.

**SARA TITLE III SARA SECTIONS 311/312 HAZARDOUS CATEGORIES (40 CFR 370.21):**  
ACUTE: No  
CHRONIC: No  
FIRE: No  
REACTIVE: No  
SUDDEN RELEASE: No

**SARA TITLE III SECTION 313 (40 CFR 372.65):** Not regulated.

**OSHA PROCESS SAFETY (29CFR1910.119):** Not regulated.

**CLEAN AIR ACT:** This product does not contain any component listed as a hazardous air pollutant under Title III of the Clean Air Act Amendment of 1990.

**STATE REGULATIONS:**

**California Proposition 65:** Not regulated.

**NEW JERSEY WORKER AND COMMUNITY RIGHT TO KNOW:** This MSDS was prepared in accordance with the New Jersey Worker and Community Right-to-Know Act.

**PENNSYLVANIA RIGHT TO KNOW:** This MSDS was prepared in accordance with the Pennsylvania Worker and Community Right-to-Know Act.

**CANADIAN REGULATIONS:**

**CONTROLLED PRODUCTS REGULATIONS (CPR):** This product has been classified in accordance with the criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

**WHMIS CLASSIFICATION:** D2B.

**NATIONAL INVENTORY STATUS:**

**U.S. INVENTORY (TSCA):** All the components of this substance are listed on or are exempt from the inventory.

**TSCA 12(b) EXPORT NOTIFICATION:** Not listed.

**CANADA INVENTORY (DSL/NDSL):** All components of this product are listed on the DSL.

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**16. OTHER INFORMATION**

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**NOTICE:** The information presented herein is based on data considered to be accurate as of the date of preparation of this Material Safety Data Sheet. However, MSDS may not be used as a

**commercial specification sheet of manufacturer or seller, and no warranty or representation, expressed or implied, is made as to the accuracy or comprehensiveness of the foregoing data and safety information, nor is any authorization given or implied to practice any patented invention without a license. In addition, no responsibility can be assumed by vendor for any damage or injury resulting from abnormal use, from any failure to adhere to recommended practices, or from any hazards inherent in the nature of the product.**