Section 1 – CHEMICAL PRODUCT AND COMPANY INFORMATION

MANUFACTURED FOR: Mar Vista Resources
745 North Ave
Corcoran, CA 93212

EMERGENCY TELEPHONE NO.:
DAYS: (559) 992-4535
24 Hour Emergency HAZMAT Response: (800) 424-9300
EPA National Response Center: (800) 424-9300

PRODUCT NAME: Urea, Urea Fertilizer Grade, Urea RBU, Urea Feed Grade
PRODUCT SYNONYMS: 46-0-0, Carbamide, Carbonyldiamide, Aquadrate, Ureqphil, Ureophil, CO (NH₂)₂
CHEMICAL NAME/CLASS: Urea
PRODUCT USE: Various Industrial and Agricultural Applications

Section 2 - COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>INGREDIENT NAME</th>
<th>CAS REGISTRY NUMBER</th>
<th>TYPICAL WT %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urea</td>
<td>57-13-6</td>
<td>98+%</td>
</tr>
<tr>
<td>Biuret</td>
<td>108-19-0</td>
<td>0.1%-1.2%</td>
</tr>
<tr>
<td>Reaction biproducts (primarily Methylene Diurea)</td>
<td>68611-64-3</td>
<td>0%-2%</td>
</tr>
</tbody>
</table>

Section 3 – HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW
APPEARANCE: White to colorless
ODOR: Odorless to feint odor to ammonia
PHYSICAL FORM: Crystal, Prill, or Powder
SIGNAL WORD: None

EMERGENCY OVERVIEW: This solid is expected to low hazard in typical operation. Powder or dust can be irritating to Skin, Eyes, and Respiratory Tract.

SYMPTOMS OF OVEREXPOSURE BY ROUTE OF EXPOSURE: The primary routes of overexposure for this material are via inhalation and contact with skin and eyes. The following paragraphs describe the symptoms of overexposure to this material.

INHALATION: Excessive inhalation of dust may cause sore throat, coughing, and irritation of mucous membranes and respiratory tract.

CONTACT WITH SKIN or EYES: Dust may cause eye irritation. Frequent or prolonged skin contact may aggravate preexisting dermatitis.

SKIN ABSORPTION: Skin absorption is not significant route of overexposure for Urea.

INGESTION: Abdominal pain, nausea, vomiting and gastrointestinal irritation may occur. (Urea is a protein to ruminants, animals with enzyme Urease in their digestive systems. It is moderately toxic when ingested by humans)

ACUTE: None known.

CHRONIC: Unknown.

<table>
<thead>
<tr>
<th>HEALTH:</th>
<th>REACTIVITY:</th>
<th>FLAMMABILITY:</th>
<th>ENVIRONMENT:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

(0=Insignificant 1=Slight 2=Moderate 3=High 4=Extreme)

Section 4 – FIRST AID MEASURES

Contaminated individuals must be taken for medical attention if any adverse reaction occurs. Rescuers should be taken for medical attention, if necessary. Take a copy of MSDS to health professional with contaminated individual.

SKIN EXPOSURE: Wash effected area with soap and water for 15 minutes. If irritation continues, obtain medical advice. Completely decontaminate clothing, shoes and leather goods before reuse or else discard.

EYE EXPOSURE: Do not allow victim to rub eye(s). Immediately rinse with lukewarm water for 15 minutes while holding eyelid(s) open. If irritation persists, repeat flushing. Obtain medical attention. DO NOT attempt to manually remove anything stuck to the eye.

INHALATION: If dust or mists of this product are inhaled, remove source of contamination or move contaminated individual to fresh air. If necessary, obtain medical attention.
MATERIAL SAFETY DATA SHEET

Urea
46-0-0

INGESTION: Do not induce vomiting. Obtain medical attention and bring this MSDS. Never induce vomiting or give diluents (milk or water) to someone who is unconscious, having convulsions, or unable to swallow.

Section 5 – FIRE FIGHTING MEASURES

FLASH POINT: Not Applicable.  
AUTOIGNITION TEMPERATURE: Not Applicable.  
FLAMMABLE LIMITS (in air by volume, %):  
Lower (LEL): Not applicable.  
Upper (UEL): Not applicable.  
FIRE EXTINGUISHING MATERIALS:  
Carbon Dioxide: YES  
Dry Chemical: YES  
Foam: YES

UNUSUAL FIRE AND EXPLOSION HAZARDS: Urea will not burn or support combustion, but will decompose to noxious, poisonous gas when exposed to high temperature or fire.

SPECIAL FIRE-FIGHTING PROCEDURES: In the event of a fire, wear protective clothing and NIOSH-approved self-contained breathing apparatus with full face-piece operated in pressure demand or other positive pressure mode.

Section 6 – ACCIDENTAL RELEASE MEASURES

IN CASE OF SPILL OR LEAK: Use proper personal protective equipment. Prevent waterway contamination. Construct a dike to prevent spreading. Collect run-off and transfer to drums or tanks for later disposal. Consult with regulatory specialists to determine appropriate state of Local reporting requirements, for assistance in waste characterization and/or hazardous waste disposal and other requirements listed in pertinent Environmental permits. Contaminated dirt may be spread as fertilizer.

Section 7 – HANDLING AND STORAGE

WORK PRACTICES AND HYGIENE PRACTICES: As with all chemicals, avoid getting this product on you or in you. Wash hands after handling this product. Do not eat, drink, smoke or apply cosmetic while handling this product. All work practices should minimize the generation of spills, splashes and aerosols. Remove contaminated clothing immediately.

STORAGE AND HANDLING PRACTICES: All employees who handle this material should be trained to handle it safely. Avoid breathing dust or mists generated by this product. Use in a well-ventilated location. Open containers slowly, on a stable surface. Containers of this product must be properly labeled. Empty containers may contain residue, therefore, empty containers should be handled with care. Store containers in a cool, dry location, away from direct sunlight, or water contact. Keep container tightly closed when not in use. Inspect all incoming containers before storage, to ensure containers are properly labeled and not damaged.

PROTECTIVE PRACTICES DURING MAINTENANCE OF CONTAMINATED EQUIPMENT: Follow practices indicated in Section 6 (Accidental Release Measures). Make certain that equipment is locked and tagged-out safely, if necessary. Collect all spills, dust residues, rinsates and dispose of according to applicable U.S. Federal, State, or local procedures, or the applicable Canadian standards.

Section 8 – EXPOSURE CONTROL, PERSONAL PROTECTION

AMMONIUM CHLORIDE: Airborne Exposure Limits: ACGIH Threshold value (TLV): 10 mg/m3 (TWA): 10 mg/m3 (STEL): Fume

VENTILATION AND ENGINEERING CONTROLS: Use adequate local or general ventilation where necessary to maintain the concentrations of Urea dust well below the recommended occupational exposure limits.

RESPIRATORY PROTECTION: Where dust or fumes are generated and cannot be controlled to within acceptable levels by engineering means, use appropriate NIOSH approved respiratory protection equipment (a 42CFR84 Class N -95 particulate filter cartridge or better).

EYE PROTECTION: Wear safety glasses or splash goggles to prevent contact with this product. As a general rule, do not wear contact lenses when handling.

HAND PROTECTION: Wear appropriate gloved for routine handling of the material to prevent contact.

BODY PROTECTION: The hazard potential of this material is low. Where there is large scale use of this material and significant potential for worker contact, gloves and long sleeved work clothes or disposable coveralls may be necessary. Use body protection appropriate for task.

Section 9 – PHYSICAL AND CHEMICAL PROPERTIES

VAPOR DENSITY: Not Applicable  
SPECIFIC GRAVITY: 0.74-0.83 g/cc (46-52 lb/ft³)  
SOLUBILITY IN WATER: 112 g/100 g water @ 20°C  
VAPOR PRESSURE: Not Applicable  
ODOR THRESHOLD: Not Applicable  
EVAPORATION RATE (n-BuAc = 1): Not Applicable  
MELTING POINT or RANGE: 271°C, 133°C  
BOILING POINT: Decomposes  
PH @ 15°C: Neutral to slightly alkaline  
LOG WATER/OIL DISTRIBUTION COEFFICIENT: Not available
APPEARANCE AND COLOR: White to Colorless solid
HOW TO DETECT THIS SUBSTANCE (warning properties): There are easily distinguishing characteristics of this product.

Section 10 – STABILITY AND REACTIVITY

STABILITY: Stable under normal temperatures and pressures.
DECOMPOSITION PRODUCTS: Thermal decomposition of products may include toxic and hazardous ammonia and hydrogen carbon monoxide gas.
MATERIALS WITH WHICH SUBSTANCE IS INCOMPATIBLE: Nitric acid, gallium perchlorate, strong oxidizing agent, caustics and alkalis.
HAZARDOUS POLYMERIZATION: Will not occur.
CONDITIONS TO AVOID: Extreme heat and contact with oxidizers.

Section 11 – TOXICOLOGICAL INFORMATION

<table>
<thead>
<tr>
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<th>Test</th>
<th>Result</th>
<th>Route</th>
<th>Species</th>
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GENERAL: In the form in which this product is being sold, it is relatively non-toxic. See SECTION 3 – HAZARDS IDENTIFICATION in the MSDS for additional information of Health Effects.

SUSPECTED CANCER AGENT: The components of this product are not found on the following lists: U.S FEDERAL OSHA Z LIST, NTP, IARC, and CAL/OSHA and therefore are not considered to be, nor suspected to be, cancer causing agents by these agencies.

IRRITANCY OF PRODUCT: This product is moderately irritating to contaminated tissue.

SENSITIZATION OF PRODUCT: This product contains no known skin or respiratory sensitizers.

ACGIH BIOLOGICAL EXPOSURE INDICES: Currently, there are no ACGIH Biological Exposure Indices (BEIs) determined for the components of this product.

Section 12 – ECOLOGICAL INFORMATION

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<th>Species</th>
</tr>
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ALL WORK PRACTICES MUST BE AIMED AT ELIMINATING ENVIRONMENTAL CONTAMINATION

This product had high water solubility and is a nitrogen source and enhances growth in biological systems.

Section 13 – DISPOSAL CONSIDERATIONS

Consult with environmental engineer or professional to determine if neutralization is appropriate and for handling procedures for residual material.

Note: Chemical additions to, processing of; or otherwise altering this material may make this waste management information incomplete, inaccurate, or otherwise inappropriate. Furthermore, state and local waste disposal requirements may be more restrictive or otherwise different from federal laws and regulation. Contaminated dirt may be spread as a fertilizer.

Section 14 – TRANSPORT INFORMATION

This product is not regulated by DOT for Transportation

DOT PROPER SHIPPING NAME:

DOT HAZARD CLASS:
DOT IDENTIFICATION NUMBER:
DOT PACKING GROUP:
DOT REPORTABLE QUANTITIES:
DOT LABELLING REQUIREMENTS:
MARINE POLLUTANT (US):

Section 15 – REGULATORY INFORMATION

UNITED STATES:

INGREDIENTS LISTED ON TSCA INVENTORY……………………………………………………………………..YES

HAZARDOUS UNDER HAZARD COMMUNICATION STANDARD……………………………………………NO
U.S. CERCLA REPORTABLE QUANTITY (RQ)………………………………………………………………………………………………N/A
EPCRA SECTION 302 EXTREMELY HAZARDOUS SUBSTANCE…………………………NO INGTRFRNYD QUALIFY
EPCRA SECTION 311/312 HAZARDOUS CATEGORIES………………………………………………………NONE
EPCRA SECTION 313 TOXIC RELEASE INVENTORY…………………………………………………………N/A

CANADIAN:

INGREDIENTS LISTED ON DSL………………………………………………………………………………………………YES
WHMIS CLASSIFICATION……………………………………………………………………………………………..NOT A CONTROLLED PRODUCT, D2A

CALIFORNIA SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT (PROPOSITION 65)…………………………YES

All information contained in this Material Safety Data Sheet is furnished free of charge and is intended for your evaluation. In our opinion the information is, as of the date of this Material Safety Data Sheet, reliable, however, it is your responsibility to determine the suitability of the information for your use. You are advised not to construe the information as absolutely complete since additional information may be necessary or desirable when particular, exceptional or variable conditions or circumstances exist or because of applicable laws or government regulations. Therefore, you should use this information only as a supplement to other information gathered by you, and you must make independent determinations of the suitability and completeness of the information from all sources to assure both proper use of the material described herein and the safety and health of employees. Accordingly, no guarantee is expressed or implied as to the results to be obtained based upon your use of the information.