

Safety Data Sheet **DRY BASE 14-0-0**

SDS Number: 673 **Revision:** July 17, 2024

Section 1 • IDENTIFICATION

Product Name Dry Base 14-0-0

Other Identification Solid (granules)

Recommended Use Agricultural Industry – Fertilizer use

Manufacturer

Company Name Custom Ag Formulators

Address 3430 S Willow Ave
Fresno, CA 93725

Telephone (559) 435-1052

Emergency Contacts CHEMTREC (800) 424-9300 (Domestic)
(703) 527-3887 (International)

Section 2 • HAZARD(S) IDENTIFICATION

Hazard Categories Acute Toxicity (Oral) – Category 4
Serious Eye Damage / Irritation – Category 1

Signal Word Danger

Pictograms



Hazard Statement **H302** – Harmful if swallowed
H318 – Causes serious eye damage

Precautionary Statement **P280** – Wear protective gloves / protective clothing / eye protection / face protection
P270 – Do not eat, drink or smoke when using this product
P264 – Wash face, hands, and any exposed skin thoroughly after handling

Response **P305 + P351 + P338** – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P310 – Immediately call POISON CENTER or doctor / physician
P301 + P312 – IF SWALLOWED: Call a POISON CENTER or doctor / physician if you feel unwell.
P330 – Rinse Mouth



Disposal **P501** - Dispose of contents/container in accordance with local, regional, national, and international regulations.

Storage Store locked up

Section 3 • *COMPOSITION/INFORMATION ON INGREDIENTS*

Mixtures

<i>Chemical Name</i>	<i>Common Name & Synonyms</i>	<i>CAS Number</i>	<i>%</i>
Calcium Ammonium Nitrate	N/A	15245-12-2	Proprietary
Nitric Acid, Ammonium Salt	N/A	6484-52-2	Proprietary
Nitric Acid, Calcium Salt	N/A	15245-12-2	Proprietary
Water	N/A	7732-18-5	Proprietary

Section 4 • *FIRST-AID MEASURES*

Inhalation	Remove victim from exposure to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. DO NOT USE MOUTH TO MOUTH METHOD. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Seek medical attention immediately
Skin Contact	Remove contaminated clothing. Wash with soap and water for at least 15 minutes. Obtain medical attention if irritation develops or persists. Wash contaminated clothing before reuse. If irritation persists contact physician
Eye Contact	Rinse cautiously with water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing, if eye irritation persists, get medical attention.
Swallowed	Rinse mouth and get medical attention. Never give anything by mouth to an unconscious person. Toxic if swallowed
General Information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Treat symptomatically based on judgement of doctor and individual reactions of patient.
Medical Conditions Aggravated by Exposure	Persons with other blood dyscrasias, especially anemia might have increased sensitivity. Persons exposed to other oxidizing agents or other agents known to induce methemoglobinemia, such as nitrobenzene or other nitrates, or those exposed to agents known to deprive the body of oxygen, such as carbon monoxide, hydrogen sulfide or asphyxiates, might be hyper susceptible. Pre-existing heart disease might be aggravated from exposure to this product.

Section 5 • *FIRE-FIGHTING MEASURES*

General Measures	Clear fire area of all non-emergency personnel. Stay upwind. Keep out of low areas. Eliminate ignition sources. Move fire exposed containers from fire area if it can be done without risk
-------------------------	--

Flammability Conditions	Non-combustible solid. But substance is a strong oxidizer and its heat of reaction with reducing agents or combustibles may cause ignition
Extinguishing Media	In case of fire, use flooding quantities of water for extinction. DO NOT use chemical extinguisher or foam or attempt to smother the fire with steam or sand
Fire and explosion hazard	Can cause explosions in contact with combustible dust or vapors, occasionally explosive by shock or friction. Sensitive to mechanical impact
Hazardous products of combustion	When involved in a fire, this product may generate oxides of nitrogen and metal oxides.
Special Firefighting instructions	DO NOT allow fire fighting water to reach waterways, drains, or sewers. Store firefighting water for treatment
Personnel protective equipment	Firefighters should wear a positive-pressure self-container breathing apparatus (SCBA) and protective fire fighting clothing

Section 6 • ACCIDENTAL RELEASE MEASURES

General Response Procedure	Avoid accidents, clean up immediately. Slipper when spilled. Ensure adequate ventilation, especially in confined areas. Remove all sources of ignition. Avoid contact with skin, eyes, and inhalation of vapors.
Clean up Procedures	
<i>Large Spills</i>	Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements, or confined areas. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.
<i>Small Spills</i>	Move containers from spill area. Vacuum or sweep up material and place in a designated, labeled waste container. Disposed of via a licensed waste disposal contractor.
Containment	Stop leak if safe to do so, isolate the danger area
Decontamination	Residual traces can be wiped away
Environmental precautions	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil, or air)
Evacuation Criteria	Evacuate all unnecessary personnel
Personnel Precautionary Measures	Personnel involved in the clean up should wear full protective clothing as listed in section 8

Section 7 • HANDLING & STORAGE

Precautions for safe handling	Do not handle until all safety precautions have been read and understood. Use appropriate personal protection equipment (PPE). Avoid contact with skin, eyes and clothing. Avoid breathing vapors, mist, and spray. Hygiene Measures: Handle in accordance with good industrial hygiene and safety
--------------------------------------	--

procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking, or smoking and again when leaving work. Do not eat, drink or smoke when using this product. Wash hands and forearms thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Always wash your hands immediately after handling this product, and once again before leaving the workplace.

Conditions for safe storage, including any incompatibilities

Storage Conditions: Store in a dry, cool and well-ventilated place. Keep container closed when not in use. Keep/Store away from direct sunlight, extremely high or low temperatures and incompatible materials. Store locked up.

Incompatible Products: Strong oxidizers. This product is not compatible with lead or mercury or their alloys. These materials of construction should not be used in handling systems or storage containers for this product.

Section 8 • EXPOSURE CONTROLS/PERSONAL PROTECTION

General	Exposure Pattern	DNEL (Workers)	DNEL (General Population)
	Oral	N/A	8.3 mg/kg bw/d
	Dermal	13.9 mg/kg bw/day	8.3 mg/kg bw/day
	Inhalation	24.5 mg/m3	6.3 mg/m3

As an acute toxicity hazard leading to Classification and Labeling of the substance has not been identified, the long term DNEL is considered sufficient to ensure that effects from acute exposure to the substance do not occur (in accordance with ECHA guidance on information requirements and chemical safety assessment: Chapter R.8: Characterization of dose [concentration] -response for human health, May 2008 and Part B: Hazard Assessment, Draft new chapter B.8 Scope of Exposure Assessment, March 2010).

PNEC (freshwater): 0.0011 mg/L for free Ammonia.

Exposure Limits

No Data Available

Biological Limits

No information available on biological limit values for this product.

Engineering Measures

A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into general work area. Adequate ventilation should be provided so that exposure limits are not exceeded.

Personal protective equipment (PPE)

Eye/face protection Wear safety glasses with side shields (or goggles) and a full-face shield where splashing or dust is possible (AS1336/1337).

Skin protection Neoprene rubber gloves and apron should be worn to prevent repeated or prolonged contact with the liquid. Long-sleeved protective clothing and safety footwear (AS3765/2210).

Hand protection Wear appropriate chemical resistant impervious gloves (AS2161).

Respiratory protection If conditions exist where mist/dust/vapours may be generated and engineering controls are inadequate, a NIOSH/MSHA approved mist respirator should be worn (AS1715/1716).

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

Work Hygienic Practices Ensure eyewash and safety shower facilities are available. Do not eat, drink or smoke in work areas. Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory, and at the end of the work period. Remove contaminated clothing and protective equipment before entering eating areas. Wash contaminated clothing before reuse.

Section 9 • PHYSICAL & CHEMICAL PROPERTIES

Appearance	Solid, granules
Odor	N/A
Odor threshold	N/A
pH	5-7 (10% Solution in water)
Melting point	< 400 °C
Freezing point	N/A
Initial boiling point and boiling range	N/A
Flash point	N/A
Evaporation rate	N/A
Flammability (solid, gas)	N/A
Upper/lower flammability or explosive limits	
<i>Flammability limit - lower (%)</i>	N/A
<i>Flammability limit - upper (%)</i>	N/A
<i>Explosive limit - lower (%)</i>	N/A
<i>Explosive limit - upper (%)</i>	N/A
Vapor density	N/A
Bulk density	1100 kg/m ³
Density	2.05 g/cm³ (20°C)
Specific gravity	N/A
Solubility(ies)	Very soluble (> 10000 mg/L) 25°C
Partition coefficient (n-octanol/water)	N/A
Auto-ignition temperature	Will not auto ignite between room temperature and melting temperature (based on molecular structure)
Potential for Dust Explosion	Can cause explosions in contact with combustible dust or vapours
Decomposition temperature	N/A
Viscosity	N/A

Section 10 • STABILITY & REACTIVITY

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions
Possibility of hazardous reactions	Hazardous polymerization will not occur

Conditions to avoid	Direct sunlight. Extremely high or low temperatures. Sources of ignition. Incompatible materials. Avoid contamination by any source including metals, dust and organic materials.
Incompatible materials	Incompatible with oxidizing agents, organic materials, powdered metals, ammonia, hydrazine, reducing agents, combustible materials, acids, alkalis, and sources of ignition. Other calcium nitrate compounds are strong oxidizers and react violently upon contact with many organic substances, particularly textile and paper
Hazardous decomposition products	Under normal conditions, hazardous decomposition should not be produced.

Section 11 • *TOXICOLOGICAL INFORMATION*

General Information:

Oral LD50 > 300 < 2000 mg/kg bw OECD Guideline 423 (Acute Oral toxicity – Acute Toxic Class Method)
 Dermal LD50 > 2000 mg/kg bw OECD Guideline 402 (Acute Dermal Toxicity)
 Calcium Nitrate; Oral LD50 Rat: >2000mg/kg
 Ammonium Nitrate; Oral LD50 Rat: 2217mg/kg
 Calcium Nitrate tetrahydrate; Oral LD50 Rat: 3900mg/Kg
 Eye Irritation: 500mg/24hr Mild (rabbit)
 Acute inhalation toxicity: No data, vapor pressure considered to be low, particle size is high.
 Sub-acute toxicity: Oral 28-day NOAEL \geq 1000mg/kg bw (OECD422 with potassium pentacalcium nitrate decahydrate)
 Reproductive Toxicity: Oral 28-day NOAEL \geq 1500 mg/kg bw/day (OECD422 with potassium nitrate)

Eye Irritant	Risk of serious eye damage. Causes irritation, redness, pain.
Ingestion	Harmful if swallowed. Causes irritation to the gastrointestinal tract. Symptoms may include nausea, vomiting and diarrhea. Small amounts are unlikely to cause toxic effects. Large amounts may give rise to gastrointestinal disorders and in extreme cases, formation of the methemoglobin (blue bay syndrome) and cyanosis (indicated by blueness around the mouth) may occur.
Inhalation	Inhalation of product dust/vapors may cause respiratory tract irritation, coughing and shortness of breath. Inhalation of nitrous gases (decomposition product) may cause edema of the lungs, symptoms may be delayed up to 48 hours.
Skin corrosion/irritation	Can cause itching, redness, and pain.
Carcinogen Category	No Data Available.

Section 12 · *ECOLOGICAL INFORMATION*

Ecotoxicity

Toxicity:

Fish: 48h LC50 447 mg/L

Daphnia Magna 48h EC50 > 100 mg/L

Algae: 72h EC50 > 100 mg/L NOEC 100 mg/L (OECD202)

Inhibition of microbial activity: 3h EC50 > 1000 mg/L NOEC 180 mg/L (OECD209, with sodium nitrate)

Persistence and degradability

Ammonium ions are toxic to plants in large concentrations. Ammonium ions will convert to the nitrate form with accompanying acidification of the soil. Nitrate ions will leach more easily than ammonium ions, and may pollute the water courses and are toxic to people (especially children) at high concentrations (methemoglobinemia). Nitrate ions will become part of the natural nitrogen cycle by converting to nitrogen gas (N₂) or by becoming part of the organisms

Biodegradation: Standard test is not applicable as the substance is inorganic. In addition, in the anaerobic transformation of ammonium, one group of bacteria oxidizes ammonium to nitrate while another group oxidizes nitrate into nitrate. The average biodegradation rate in wastewater plant at 20 deg C is 52g N/kg dissolved solid/day

Hydrolysis: No hydrolysable group is present, will completely dissociate into ions.

Mobility

Ammonium and nitrate ions are mobile (the nitrate ions more so than the ammonium) and will leach from soils and into water courses. Calcium ion is less mobile and will remain attached to the soil constituents.

Environmental Fate

Avoid contaminating waters, drains and sewers

Bioaccumulation potential

According to Annex XIII of Regulation (EC) No 1907/2006, no BTB and vPvB assessment has been conducted since nitric acid, ammonium calcium salt is inorganic.

Environmental impact

No data available

Section 13 · *DISPOSAL CONSIDERATION*

Disposal instructions

Consult federal, state and local regulations for disposal requirements.

Local disposal regulations

Dispose in accordance with all applicable regulations.



Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

Section 14 • TRANSPORT INFORMATION

General	Not DOT regulated in domestic (USA ground) transportation.
DOT - Basic shipping requirements:	
<i>UN number</i>	Not regulated for transport
<i>DOT Label</i>	Not regulated for transport
<i>Proper shipping name</i>	Not regulated for transport
<i>Hazard class</i>	Not regulated for transport
<i>Packing group</i>	Not regulated for transport
IMGD - Basic shipping requirements:	
<i>UN number</i>	Not regulated for transport
<i>IMGD Label</i>	Not regulated for transport
<i>Proper shipping name</i>	Not regulated for transport
<i>Hazard class</i>	Not regulated for transport
<i>Packing group</i>	Not regulated for transport
<i>EMS NO</i>	Not regulated for transport
IATA - Basic shipping requirements:	
<i>UN number</i>	Not regulated for transport
<i>Proper shipping name</i>	Not regulated for transport
<i>Hazard class</i>	Not regulated for transport
<i>Packing group</i>	Not regulated for transport
<i>OCAP</i>	Not regulated for transport
Environmental hazards	
<i>Marine pollutant</i>	N/A
Special precautions	Read safety instructions, SDS and emergency procedures before handling.

Section 15 • REGULATORY INFORMATION

US federal regulations	This product is not known to be a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
Proposition 65 (CA)	Warning: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.
TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)	Not regulated
CERCLA Hazardous Substance List (40 CFR 302.4)	
	<i>Reportable Quantity</i> Not applicable
SARA 304 Emergency release notification	Not regulated
OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)	Not listed
Superfund Amendments and Reauthorization Act of 1986 (SARA)	
	<i>Hazard categories</i> Immediate Hazard Yes



SARA 302 Extremely hazardous substance
SARA 311/312 Hazardous chemical

Delayed Hazard	No
Fire Hazard	No
Pressure Hazard	No
Reactivity Hazard	No
Immediate (acute)	Not listed

Section 16 • *OTHER INFORMATION*

Issue date July, 14, 2024

Disclaimer The above information is based on data of which the manufacturer is aware and is believed to be correct as of the date hereon. Since the information contained herein may be applied under conditions beyond the manufacturer's control and which may be unfamiliar and since data made available subsequent to the date hereof may suggest modifications of the information, the manufacturer does not assume any responsibility for the results of its use. This information is furnished upon the condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose.