

Section 1 – CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name	Pro Core
Product Type/Description	Solid, granules
Other means of Identification	Nitrates, and inorganic minerals in aqueous solution.
Emergency Number	1.844.333.1818
Manufacturer	Athena Products Inc 3811 Wacker Drive Mira Loma, CA 91752
Telephone	1.844.333.1818

Section 2 – HAZARD IDENTIFICATION

GHS classification	Acute Toxicity (Oral) – Category 4 Serious Eye Damage / Irritation – Category 1 classified as hazardous
Hazard Statements	Not classified as hazardous
Pictogram: None / Signal Word	  Danger

PRECAUTIONARY STATEMENTS:

General	H302 – Harmful if swallowed H318 – Causes serious eye damage
Prevention	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
Storage	P410: Protect from sunlight
Disposal	P501: Dispose of contents/ container in accordance with local/ regional/ national/ international regulations.

Section 3 – COMPOSITION/ INFORMATION ON INGREDIENTS

Components:	CAS-No:	% Concentration by Weight
Calcium Ammonium Nitrate	15245-12-2	Proprietary
Nitric Acid, Ammonium Salt	6484-52-2	Proprietary
Nitric Acid, Calcium Salt	15245-12-2	Proprietary
Proprietary micronutrient package	N/A	Proprietary
Water	7732-18-5	Proprietary

Section 4: FIRST-AID MEASURES

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.
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.
Ingestion	Rinse mouth and get medical attention. Never give anything by mouth to an unconscious person. Toxic if swallowed.
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.
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.

<i>Small Spills</i>	Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor. 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 AND 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	<u>Storage Conditions:</u> 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. <u>Incompatible Products:</u> 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) <i>Eye/face protection</i>	Wear safety glasses with side shields (or goggles) and a full-face shield where splashing or dust is possible (AS1336/1337).
<i>Skin protection</i>	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).
<i>Hand protection</i>	Wear appropriate chemical resistant impervious gloves (AS2161).
<i>Respiratory protection</i>	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).
<i>Thermal hazards</i>	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 AND CHEMICAL PROPERTIES:

Appearance	Solid, granules
Odor	N/A
Odor threshold	N/A
pH	5-7 (10% Solution in water)
Melting point	N/A
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/cm ³ (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 AND 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	<p>Oral LD50 > 300 < 2000 mg/kg bw OECD Guideline 423 (Acute Oral toxicity –Acute Toxic Class Method)</p> <p>Dermal LD50 > 2000 mg/kg bw OECD Guideline 402 (Acute Dermal Toxicity)</p> <p>Calcium Nitrate; Oral LD50 Rat: >2000mg/kg</p> <p>Ammonium Nitrate; Oral LD50 Rat: 2217mg/kg</p> <p>Calcium Nitrate tetrahydrate; Oral LD50 Rat: 3900mg/Kg</p> <p>Eye Irritation: 500mg/24hr Mild (rabbit)</p> <p>Acute inhalation toxicity: No data, vapor pressure considered to be low, particle size is high</p> <p>Sub-acute toxicity: Oral 28-day NOAEL ≥1000mg/kg bw (OECD422 with potassium pentacalcium nitrate decahydrate)</p> <p>Reproductive Toxicity: Oral 28-day NOAEL ≥1500 mg/kg bw/day (OECD422 with potassium nitrate)</p>
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	<p>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)</p> <p>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</p>
Persistence and degradability	<p>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 nitrite. The average biodegradation rate in wastewater plant at 20 deg C is 52g N/kg dissolved solid/day</p> <p>Hydrolysis: No hydrolysable group is present, will completely dissociate into ions.</p>
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 CONSIDERATIONS

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

US DOT	Not regulated as hazardous material
IMGD	Not regulated as hazardous material
IATA	Not regulated as hazardous material
RID/ADR	Not regulated as hazardous material
Canadian TDG	Not regulated as hazardous material
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)	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
	Delayed Hazard	No
	Fire Hazard	No
	Pressure Hazard	No
	Reactivity Hazard	No
SARA 302 Extremely hazardous substance	Not listed	
SARA 311/312 Hazardous chemical	Immediate (acute)	

Section 16: OTHER INFORMATION

To the extent of our knowledge, the information herein is accurate as of the date of this document. However, neither **Athena Products** nor any of its affiliates make any warranty, expressed or implied, or accept any liability in connection with the information or its use. The information is for use by technically skilled persons at their own discretions and risk. This is not a license or a patent. The user alone must finally determine suitability or any information or materials for any contemplated use, the manner or use and whether any patents are infringed.



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visit www.athenaproducts.com

