

SAFETY DATA SHEET

Section 1 - Identification of the substance/mixture and of the supplier

Trade Name: Pennamin® Perfect-K

Product Code: PennPerfK

Chemical Name: Amino acid blend containing 8% N, 9% K, 5% Ca, 2% Mg, 0.1% Fe, 0.05% Cu, 0.05% Mn, 0.05% Zn and 0.005% B

Application/Uses: Fertilizing Compound

Restrictions: Do not mix with phosphates

Distributor Information: PERFORMANCE NUTRITION - A Division of LidoChem LLC 20 Village Court, Hazlet, NJ 07730
Phone: (732) 888 8000 • Fax: (732) 264 2751 • email: info@lidochem.com

Emergency Phone Number: CHEMTREC - Day or Night - at 800 424 9300

Section 2 - Hazard Identification

Classification of the substance or mixture (GHS-US)

Reproductive Toxicity 2
Skin corrosion/irritation 2
Serious eye damage/irritation 2B

Physical Hazards

None

Hazard Statements

H315: Causes skin irritation

H320: Causes eye irritation

H361: Suspected of damaging fertility or the unborn child

Precautionary Statements:

Precautionary Statements - Prevention, Response, Storage, Disposal

P202: Do not handle until all safety precautions have been read and understood.

P264: Wash skin thoroughly after handling.

P280: Wear protective gloves/protective clothing/eye protection/face protection.

P302 + P352: IF ON SKIN: Wash with plenty of soap and water.

P332+313: If skin irritation occurs: Get medical advice/attention

P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.

P308 + P313: If exposed or concerned: Get medical advice/attention.

P337 + P313: If eye irritation persists: Get medical advice/attention.

P362 + P364: Take off contaminated clothing and wash it before reuse.

P403: Store in a well-ventilated place.

P405: Store locked up.

P501: Dispose of contents/container to an approved waste disposal plant in accordance with local/regional/national regulations.

GHS Label elements

Hazard Pictograms



Signal Word

Warning

HNOC - Hazards Not Otherwise Classified

None

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Section 3 - Composition/Information on Ingredients

Chemical Identity: **8% N, 9% K₂O, 5% Ca, 2% Mg, 0.1% Fe, 0.05% Cu, 0.05% Mn, 0.05% Zn and 0.02% B**

CAS#:	Common Name/Synonyms:	% by Wt.
Mixture	L-Amino Acids	63-65%
10043-35-3	Boric acid	0.10-0.15%
1305-62-0	Calcium dihydroxide	Proprietary
1305-78-8	Calcium oxide	Proprietary

Section 4 - First Aid Measures

Description of first aid measures

General Advice:

Remove contaminated clothing and shoes. Seek medical advice immediately and show safety data sheet or product label to the doctor, if possible.

If Inhaled:

Remove person from contaminated area to fresh air. If not breathing, give artificial respiration. Seek medical attention if irritation or dizziness occurs.

In Case Of Skin Contact:

Remove contaminated clothing and wash before re-using. Flush skin with water and then wash with soap and water. Seek medical attention if irritation persists.

In Case Of Eye Contact:

Flush eyes with clean water for at least 15 minutes. Lift eyelids to facilitate irrigation. If present, remove contact lenses after 5 minutes and continue rinsing. Seek medical attention immediately.

If Swallowed:

Seek medical attention or call a poison control center immediately. Do not induce vomiting unless instructed to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed:

The most important known symptoms and effects are described in section 2. Further symptoms are possible.

Indication of any immediate medical attention and special treatment needed:

No additional information available.

Section 5 - Fire-fighting Measures

Extinguishing media:

Suitable extinguishing media: water spray, dry powder, carbon dioxide, foam.

Specific Hazards arising from the substance or mixture:

Carbon oxides, nitrogen oxides, manganese oxides, iron oxides, calcium oxides, sulfur oxides may form.

Advice for firefighters:

Fire fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face piece operated in positive pressure mode.

Further information:

Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

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Section 6 - Accidental release measures

Personal precautions, protective equipment and emergency procedures:

As outlined in section 8, wear appropriate respiratory protection. Avoid breathing dust, spray, vapours or mist. Use personal protective clothing. Ensure adequate ventilation. Evacuate personnel to safe areas.

Environmental precautions:

Do not allow spilled product to enter water supplies.

Methods and materials for containment and cleaning up:

Pick up and arrange disposal without creating dust. Sweep up and shovel. Avoid breathing dust.

Section 7- Handling and Storage

Precautions for safe handling:

Do not eat, drink or smoke when using this product. Wash hands and other exposed areas thoroughly after handling. Provide adequate ventilation. Protect packages against physical damage. Reseal containers immediately after use. Immediately remove and dispose of any spilled material.

Conditions for safe storage, including any incompatibilities:

Keep container tightly closed in a dry and well ventilated area.

Section 8 - Exposure Control / Personal Protection

Control parameters:

Chemical Identity:	CAS #:	ACGIH Threshold Limit Values		OSHA PEL		NIOSH REL	
		TWA	STEL	TWA	STEL	TWA	STEL
L-Amino Acids	Mixture	10 mg/m ³	NDA	NDA	NDA	15 mg/m ³	NDA
Boric acid	10043-35-3	2 mg/m ³	6 mg/m ³	NDA	NDA	NDA	NDA
Calcium dihydroxide	1305-62-0	5 mg/m ³	NDA	5 mg/m ³	NDA	5 mg/m ³	NDA
Calcium oxide	1305-78-8	2 mg/m ³	NDA	5 mg/m ³	NDA	2 mg/m ³	NDA

Appropriate engineering controls:

Provide sufficient ventilation to maintain airborne concentrations below the recommended exposure limits. Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of the workday.

Individual protection measures, such as personal protective equipment:

Eye protection:

Tightly fitting safety goggles or face shield if a splashing hazard exists. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH.

Skin protection:

Handle with chemical resistant protective gloves. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Wash and dry hands.

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Section 8 - Exposure Control / Personal Protection (cont.)

Body protection:

Body protection must be chosen depending on activity and possible exposure, i.e. apron, chemical resistant footwear plus socks, long sleeved shirt, long pants, chemical protection suit.

Respiratory protection:

Respiratory protection is not typically required if airborne concentrations are maintained below the established exposure limits. Wear a NIOSH-certified (or equivalent) organic vapour/particulate respirator. Do not exceed the maximum use concentration for the respirator facepiece/cartridge combination. For emergency or non-routine, high exposure situations, use a NIOSH-certified full facepiece pressure demand self-contained breathing apparatus (SCBA) or a full facepiece pressure demand supplied-air respirator (SAR) with escape provisions. Observe OSHA regulations for respirator use (29 CFR 1910.134)

General safety and hygiene measures:

Eye wash fountains and safety showers must be easily accessible. Employees should wash their hands and face before eating, drinking or using tobacco products.

Section 9 - Physical and Chemical Properties

Appearance (physical state, color, etc):	Off white powder
Odor:	Moderate
Odor threshold:	No data available.
pH:	No data available.
Melting point:	No data available.
Freezing point:	No data available.
Initial boiling point:	No data available.
Boiling range:	No data available.
Flash point:	No data available.
Evaporation rate:	No data available.
Flammability (solid, gas):	No data available.
Upper/lower flammability or explosive limits:	No data available.
Vapor pressure:	No data available.
Vapor density:	No data available.
Relative density:	No data available.
Solubility:	Soluble
Partition coefficient: n-octanol/water:	No data available.
Auto-ignition temperature:	No data available.
Decomposition temperature:	No data available.
Viscosity:	No data available.
Specific gravity:	No data available.
Bulk Density:	

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Section 10 - Stability and Reactivity

Reactivity:

No data available.

Chemical stability:

Product is stable at ambient temperature and pressure, under normal storage and handling conditions.

Possibility of hazardous reactions:

No data available.

Conditions to avoid (i.e. static discharge, shock or vibration):

Product is hygroscopic. Avoid exposure to moisture.

Incompatible materials:

No data available.

Hazardous decomposition products:

No data available.

Section 11- Toxicological Information

Likely routes of exposure:

Ingestion, inhalation, skin and eye contact.

Symptoms related to physical, chemical and toxicological characteristics and delayed and immediate effects and chronic effects from short and long term exposure:

Acute Toxicity:

No data available for the mixture.

Acute oral - Boric acid: Estimated LD50 = 2,660 mg/kg

Skin corrosion/irritation:

Immediate contact may cause irritation. Repeated exposure may lead to itch, rash, dermatitis or other reaction.

Serious eye damage/eye irritation:

May cause eye irritation, including redness and inflammation.

Respiratory or skin sensitization:

No data available.

Carcinogenicity:

No data available.

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Section 11- Toxicological Information (cont.)

Germ cell mutagenicity:

No data available.

Reproductive toxicity:

No data is available for this mixture. Boric acid has been demonstrated to have an effect on male fertility and the development of an unborn child.

Specific target organ toxicity - single or repeated exposure:

No data available.

Aspiration hazard:

No data available.

Symptoms after inhalation:

No data available.

Symptoms after skin contact:

May cause skin irritation.

Symptoms after eye contact:

May cause eye irritation including redness and inflammation.

Symptoms after ingestion:

May cause intestinal irritation if ingested.

Section 12- Ecological Information

Ecotoxicity (aquatic and terrestrial, where available):

Toxicity to fish (acute and chronic):

No data available for the mixture. Individual component data reported.

Calcium dihydroxide: LC50: 33.884 mg/l, exposure time: 96 h, species: *Clarias gariepinus*

Toxicity to daphnia and other aquatic invertebrates (acute and chronic):

No data available for the mixture. Individual component data reported.

Calcium dihydroxide: EC50: 49.1 mg/l, exposure time: 48 h, species: *Daphnia magna* (water flea), OECD Test Guideline 202

Toxicity to algae:

No data available for the mixture. Individual component data reported.

Calcium dihydroxide: EC50: 184.6 mg/l, exposure time: 72 h, species: *Pseudokirchneriella subcapitata* (green algae, OECD test guideline 201).

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Section 12- Ecological Information (cont.)

Persistence and degradability:

No data available.

Bioaccumulative potential:

No data available.

Mobility in the soil:

No data available.

Other adverse effects:

No data available.

Section 13 - Disposal Considerations

Waste treatment methods - product:

Dispose in accordance with all local, state and federal regulations. In unused condition, this product is not considered to be a RCRA defined hazardous waste by character/listings. It is the responsibility of the waster generator to evaluate whether this wastes are hazardous by characteristic/listing.

Waste treatment methods - container:

Containers should be cleaned of residual product before disposal. Empty containers should be disposed of in accordance with all applicable laws and regulations. Chemical additions, processing or otherwise altering this material may make the waste management information presented incomplete, inaccurate or otherwise inappropriate.

Section 14 - Transport Information - US DOT, IATA, IMO, ADR:

Proper Shipping Name:	Fertilizer Compound, NOI, Dry - Pennamin Perfect-K	NMFC Item No:	68140
D. O. T. Hazard Class:	Not Regulated by D.O.T.	UN #:	N/Ap
Label Requirement:	None	RQ:	N/Ap
Placard:	None	CAS:	Mixture
Packing Group:	N/Ap	ERG Book Information:	None
Environment Hazard:		Marine Pollutant:	
Special Precautions:		IATA:	

Section 15 - Regulatory Information

U.S. Federal - OSHA Status:

This product is hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29 CFR 1910.1200.

TSCA Status:

Not Listed/Non-reportable

SARA Title III Section 302 - EXTREMELY HAZARDOUS SUBSTANCES:

This product does NOT contain ingredients listed in Appendix A and B as Extremely Hazardous substances.

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Section 15 - Regulatory Information (cont.)

SARA Title III Sections 311/312:

N/Ap

SARA Section 313 Toxic Chemicals:

This product contains the following toxic chemical subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right to Know Act:

CAS#	Chemical Name:
	This material does NOT contain any chemical components with known CAS numbers that exceed the threshold reporting levels.

SARA Superfund Section 110:

This product does NOT contain ingredients listed as hazardous substances on the Priority List of CERCLA Hazardous substances.

CERCLA, 40 CFR 117, 302:

This product does NOT contain ingredients specified in the List of Extremely Hazardous Substances.

CERCLA listed substances are:

None listed

Other Federal Reporting Requirements:

CAA: This product does not contain any substances regulated as hazardous air pollutants (HAPS) under Section 112 of the Clean Air Act.

CWA: No chemicals in product are listed as Hazardous Substances, Priority Pollutants or Toxic Pollutants under the CWA.

RCRA: Not classified as a hazardous waste.

State Reporting Requirements:

State Right to Know Laws:

CAS#	State RTK	Chemical Name
	MA, PA, NJ, MN	Calcium dihydroxide

CALIFORNIA PROPOSITION 65:

To the best of our knowledge, this product does NOT contain any of the listed chemicals, which the state of California has found to cause cancer, birth defects or other reproductive harm. For more information, go to www.P65Warnings.ca.gov.

Michigan Critical Materials:

This product does NOT contain ingredients listed on the Michigan Critical Materials Register.

Global Lists/International Inventories:

Canada CEPA: N/A

Canada WHMIS: Not controlled

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Section 16 - Other Information

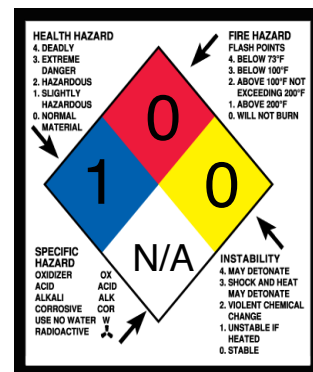
Note Section 3:

Any concentration shown as a range is to protect confidentiality or is due to batch variation.
Sources of potassium and calcium derived from a proprietary blend of the following (hazardous components listed in section 3)

Calcium carbonate
Calcium hydroxide
Calcium oxide
Calcium silicate
Calcium sulfate
Sulfate of potash

8-20-18 - Reviewed, updated California Proposition 65 statement, this replaces all previous SDS's.

4-15-2024, Reviewed, updated Distributor name. The replaces all previous SDS's,
5/7/25 changed logo



te of last revision:
5/7/2025

NOTICE: OSHA STANDARD 29 CFR 1910.1200 requires that information be provided to employees regarding the hazards of chemicals by means of a Hazard Communication Program including training, labeling, Safety Data Sheets, and access to written records. We request that you, and it is your legal duty, make all information in this Safety Data Sheet available to your employees.

Key Legend Information:

N/Ap:	Not Applicable	ND:	Not Determined
N/R:	Not Rated	NDA:	No Data Available
ACGI:	American Conference of Gov'rntal Industrial Hygienists	TLV:	Threshold Limit Value
OSHA:	Occupational Safety and Health Administration	TWA:	Time Weighted Average
PEL:	Permissible Exposure Limit	NTP:	National Toxicology Program
STEL:	Short Term Exposure Limit	TSCA:	Toxic Substance Control Act
IARC:	International Agency for Research on Cancer	CERCLA:	Comprehensive Response, Compensation and
SARA Title III:	Superfund Amendments and Reauthorization Act		
Liability Act		CWA:	Clean Water Act
CAA:	Clean Air Act		
RCRA:	Resource Conservation Recovery Act	IMO:	International Maritime Organization Shipping Info.
IATA:	International Air Transport Association Shipping Info.	WHMIS:	Workplace Hazardous Materials Information System
DSL:	Domestic Substance List (Canada)		

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind expressed or implied is made with respect to the information contained herein. This Safety Data Sheet was prepared to comply with OSHA Hazard Communication standard. (29 CFR 1910.1200 HazCom 2012). This supersedes any previous information. Since the actual use by others is beyond our control, no guarantee, expressed or implied, is made by LidoChem, Inc. as to the effects of such use or the results to be obtained, nor does LidoChem LLC assume any liability arising out of use, by others, of the products referred to herein. Nor is the information herein to be construed as absolutely complete since additional information may be necessary or desirable when particular or exceptional conditions or circumstances exist because of applicable laws or government regulations. All LidoChem LLC SDS's are reviewed every three years or sooner if necessary. Please check the Review Date on Page 1 for most current version. Please request a new SDS from LidoChem LLC. if the date is older than 3 years.