

# GROSTRONG<sup>®</sup> Minerals for Horses

A Vitamin-Mineral Supplement for All Classes of Horses

Product Numbers: 641 - Granular; 642 - Block



GROSTRONG Minerals provide the necessary minerals and vitamins to complement forages and grains, enabling horses to reach their performance potential. GROSTRONG Minerals are the result of unsurpassed formulation expertise and leading edge technology. Over 100 years of formulation and manufacturing expertise back the reliability and nutritional soundness of GROSTRONG Minerals. Along with good-quality forage, GROSTRONG Minerals provide the cornerstone of Forage First<sup>®</sup> programs. With Forage First programs horses can be healthy and perform at their best.

## Product Description

GROSTRONG Minerals is a vitamin-mineral supplement for all classes of horses; available in granular (5-lb, 25-lb, and 50-lb bags), or block (33.3-lb) form.

## Features

## Benefits

Balanced, scientifically formulated complex of 28 minerals and vitamins, including natural-source vitamin E

Ensures horses receive needed major minerals, trace minerals, vitamins, and electrolytes (including salt) in the correct amounts and ratios for maintenance, growth, reproduction, and performance.

Formulated specifically for horses

Horse nutrient requirements can be specifically addressed, which allows products to be designed to provide the amounts of vitamins and minerals needed specifically by horses.

100+ years of livestock nutrition research and manufacturing experience

Assures horse owners of commitment to ensuring high-quality products that perform.

Optimum amounts of vitamins and minerals

Enables horses to reach their genetic potential by providing key vitamins and minerals lacking in feedstuffs.

Added Biotin

Support hoof integrity and hair health.

Choice of product forms

Matches feeding situation with best form of product, making supplementation easy.



## Recommended Consumption

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- 1 to 3 oz per horse daily (see Feeding Directions).

## Product Form/Packaging

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**Granular form:** Feed free-choice, top-dressed on feed, or incorporated into grain mix.

**Block form:** Feed free-choice to horses on pasture.

GROSTRONG Minerals®: 5-lb bag granular form (5 bags/case; 641AAADU); 25-lb bag granular form (641BT); 50-lb bag of granular form (641AP); or 33.3-lb block (642).

## Guaranteed Analysis

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Calcium (Ca), min./max. . . . .	15.2-18.2%
Phosphorus (P), min. . . . .	8.0%
Salt (NaCl), min./max. . . . .	26.0-31.0%
Sodium (Na), min./max. . . . .	10.0-12.0%*
Copper (Cu), min. . . . .	3600 ppm
Selenium (Se), min./max. . . . .	30-36 ppm
Zinc (Zn), min. . . . .	11,500 ppm
Biotin, min. . . . .	83 mg/lb
Vitamin A, min. . . . .	300,000 IU/lb
Vitamin D3, min. . . . .	30,000 IU/lb
Vitamin E, min. . . . .	3,000 IU/lb

\*GROSTRONG Mineral block sodium guarantee is 9.0-10.8%.

## Ingredients: 641 Granular GROSTRONG Minerals

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Salt, Defluorinated Phosphate, Calcium Carbonate, Monocalcium Phosphate, Dicalcium Phosphate, Dehulled Soybean Meal, Vegetable Oil, Cane Molasses, Zinc Oxide, Magnesium Oxide, Manganous Oxide, Copper Sulfate, d-alpha Tocopherol Acetate and dl-alpha Tocopherol Acetate (Sources of Vitamin E), Ferrous Sulfate, Vitamin A Acetate, Calcium Pantothenate, Thiamine Mononitrate, Riboflavin Supplement, Biotin, Niacin Supplement, Cobalt Carbonate, Sodium Selenite, Cholecalciferol (Source of Vitamin D3), Potassium Iodide, Vitamin B12 Supplement, Menadione Sodium Bisulfite Complex (Source of Vitamin K Activity), Natural and Artificial Flavors.

## Ingredients: 642 Block GROSTRONG Minerals

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Salt, Defluorinated Phosphate, Monocalcium Phosphate, Dicalcium Phosphate, Calcium Carbonate, Cane Molasses, Zinc Oxide, Dehulled Soybean Meal, Vegetable Oil, Magnesium Oxide, Lignin Sulfonate, Manganous Oxide, Copper Sulfate, d-alpha Tocopherol Acetate and dl-alpha Tocopherol Acetate (Sources of Vitamin E), Ferrous Sulfate, Vitamin A Acetate, Calcium Pantothenate, Thiamine Mononitrate, Riboflavin Supplement, Biotin, Niacin Supplement, Cobalt Carbonate, Sodium Selenite, Cholecalciferol (Source of Vitamin D3), Potassium Iodide, Vitamin B12 Supplement, Menadione Sodium Bisulfite Complex (Source of Vitamin K Activity).



## Feeding Directions: 641 Granular GROSTRONG®

GROSTRONG Minerals for Horses, a cornerstone of ADM feeding programs, provide 28 vitamins, minerals and electrolytes in a proprietary formula balanced for horses.

Feed GROSTRONG Minerals for Horses by the following methods:

**FREE CHOICE:** When starting to feed, remove salt and other mineral products and feed GROSTRONG Minerals free choice near the water source and, preferably, protected from rain. Monitor intake to determine that the recommended amounts of Minerals are consumed.

**MIXED WITH FEED:** For horses expected to consume 5 lb of concentrate mix per horse daily, add 50 lb of granular GROSTRONG Minerals for Horses per ton of mix. For horses expected to consume 10 lb of concentrate mix per horse daily, add 25 lb of granular GROSTRONG Minerals for Horses per ton of mix, etc.

**TOP DRESSED OVER FEED:** Feed GROSTRONG Minerals as follows: (1 oz is 2 level tablespoons):

### Age and work Daily amount of load of horse GROSTRONG Minerals

Foal (up to one year of age).....	1 oz
Yearling .....	2 oz
Two-year old .....	3 oz
Pony .....	1 oz
Bred mare or stallion.....	3 oz
Lactating mare .....	3 oz
Pleasure or show horse .....	2 oz
Moderate to hard-working horse.....	3 oz*
Race or performance horse .....	3 oz*

\*Additional salt should be offered to hard-working horses to offset losses through perspiration.

Consumption of GROSTRONG Minerals for Horses will vary according to each individual horse's appetite, age, size, and body condition, as well as contribution of other nutrient sources in the diet.

**CAUTION: Consumption of this product by sheep and goats may result in copper toxicity. Follow label directions. Feeding selenium at levels in excess of 0.3 ppm in the total diet is prohibited.**

## Feeding Directions: 642 Block GROSTRONG Minerals

GROSTRONG Mineral Block for Horses, a cornerstone of ADM feeding programs, provides 28 vitamins, minerals, and electrolytes (including salt) in a proprietary formula balanced for horses.

When starting to feed, remove other salt and mineral products and feed GROSTRONG Mineral Block for Horses free-choice. Feed continuously near horses' source of water and, preferably, protected from heavy rain.

When consumed in the recommended amounts, GROSTRONG Mineral Block will supply adequate minerals and salt for horses under average conditions. Horses at moderate to heavy work should also be offered salt free-choice due to heavy salt losses in perspiration. Should consumption of the GROSTRONG Mineral Block be less than recommended, change to GROSTRONG Minerals for Horses granular form; provide mineral in several locations or locate near water supply. Should consumption of the GROSTRONG Mineral Block be more than recommended, feed salt beside GROSTRONG Mineral Block for Horses, move the blocks to areas less frequented by horses, or remove the block.

### Recommended

#### Consumption (per head): lb per month

Foal.....	1.9
Yearling.....	3.8
Two-year old.....	5.6
Pony.....	1.9
Bred mare or stallion.....	5.6
Lactating mare.....	5.6
Pleasure or show horse.....	3.8
Moderate to hard-working horse.....	5.6*
Race or performance horse.....	5.6*

\* Additional salt should be offered to hard-working horses to offset losses through perspiration.

Consumption of GROSTRONG Mineral Block will vary according to each individual horse's appetite, age, size, and body condition, as well as contribution of other nutrient sources in the diet.

**CAUTION: Consumption of this product by sheep and goats may result in copper toxicity. Follow label directions. Feeding added selenium at levels in excess of 0.3 ppm in the total diet is prohibited.**



## Functions of Minerals and Vitamins

Nutrient	Function
Calcium	bone, muscle, and heart contraction; blood clotting; enzymes; hormones; nerve function
Phosphorus	bone; energy utilization; metabolism of proteins, fats, nucleic acids
Salt	maintain acid-base balance, osmotic pressure, waste removal, fat and carbohydrate digestion
Copper	formation of hemoglobin, cartilage, bone, elastin, hair pigment, utilization of iron
Selenium	antioxidant, conserves vitamin E, immune function
Zinc	enzymes; hormones; metabolism of proteins, fats, and carbohydrates; immune system; skin; hair
Magnesium	bones and teeth, enzymes, energy metabolism
Manganese	utilization of carbohydrates and fats; cartilage synthesis; bone development; enzymes for growth, reproduction, and lactation
Iron	hemoglobin (oxygen-carrying blood component)
Pantothenic Acid (vitamin B5)	protein, carbohydrate, and fat utilization
Thiamine (vitamin B1)	carbohydrate metabolism, nerve function
Riboflavin (vitamin B2)	energy metabolism, nerve function
Niacin	cellular respiration and metabolism
Biotin	plays a role in keratin-protein synthesis and is needed in the intracellular matrix of the hoof
Cobalt	component of vitamin B12
Iodine	reproduction, thyroid hormones, metabolism
Cyanocobalamin (vitamin B12)	production of red blood cells; utilization of carbohydrates, fats, and proteins
Vitamin A	skin, eyes, bone
Vitamin D	proper absorption, transportation, and metabolism of calcium and phosphorus
Vitamin E	antioxidant, immune function, growth, muscle development and function, oxygen transport, red blood cell stability

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