Biosol Forte

Product Data Sheet

PROPERTIES OF BIOSOL FORTE, A NATURE-BASED SOLUTION

Biosol Forte's beneficial bacterial biomass and fungal biomass enhance soil health and microbial life. This unique slow-release nutrient formulation provides vital plant nutrients throughout the entire growing season due to the fermented organic material. There is an increased effect on the formation of humus, root mass and the living microbial biomass in the soils. Promoting a healthy balance of microbial life ensures long-term plant color and plant health. This results in far lower concentrations of nitrates or phosphorous in groundwater than mineral fertilizers. Biosol Forte will not burn seed or vegetation.

Biosol Forte is safe to be used around pets, animals, children, lakes and streams.

COMPOSITION OF BIOSOL FORTE

Biosol Forte is 96% fungal & bacterial biomass and 4% water.

SPECIFICATION

Nutrient Ratio: N-P-K = 7-2-1

Guaranteed Analysis:

Total Nitrogen (N)	7%
Water Soluble Nitrogen	0.50%
Water Insoluble Nitrogen*	6.50%
Available Phosphate (P_2O_5)	2%
Soluble Potash (K_2O)	1%

**6.5% slowly available nitrogen from fermented Cottonseed Meal and Soybean Meal*

Nutrients Derived from Fermented Cottonseed Meal & Soybean Meal:

Organic Matter	> 74%
Carbon/Nitrogen Ratio	5:1
pH Level	7.1

Biosol Forte does not contain any animal waste, animal by-products or any chemicals.
Any heavy metal contents are within the tolerance limits for animal feed.

MANUFACTURING OF BIOSOL FORTE

A beneficial fungal biomass (mycelium) is obtained by the fermentation of raw materials such as soybean meal, cottonseed meal, sucrose, lactose, trace elements and vitamins under constant sterile conditions. The fungus strain used is Penicillium Chrysogenum (dry mycelium). A nutrient broth of active ingredients is extracted from that fungal biomass and is mixed with a bacterial biomass (from the manufacturing of various antibiotics, enzymes, proteins, etc.). This broth then undergoes a second fermentation of 20-24 hours in which the dissolved nutrients are bound in a bacterial biomass. The biomass is dried at 110°-130° C for approximately 4-6 hours.

Biosol Forte is not certified for organic crop or organic food production.
Biosol Forte is a fermented plant based organic fertilizer, sterilized and free of weed seeds.

Contact Us
10801 E. 54th Avenue, Denver, CO 80239
303.696.8960
wefixdirt.com | info@wefixdirt.com

Rocky Mountain Bio Products
A Division of Bowman Construction Supply, Inc.

MATERIAL COMPARISONS

Product Benefits	Biosol	Biosol Forte	Poultry Manure	Chemical Fertilizer	Composted Fert/Mix	Compost
Positively affects soil fertility & structure	+++	+++	+	---	--	++
Positively affects soil microorganisms	+++	+++	+	---	--	++
Derived from 100% plant product	Yes	Yes	No	No	No	Some
Provides beneficial bacteria & fungal biomass	+++	+++	---	---	---	---
Topsoil alternative	+++	+++	--	---	-	+++
High organic matter	+++	+++	+	---	--	+
Positive effect on humus content	+++	+++	-	--	-	+++
Contains chitin	+++	+++	---	---	---	---
Risk of nitrogen leaching	---	---	+	+++	+++	---
Nutrients available in 2nd growing season	+++	+++	-	---	--	++
Risk of plant disease / pathogens	---	---	+	+++	+++	+
EPA approved for water sensitive areas	+++	+++	--	---	---	---
USDA Bio Preferred Product	Yes	Yes	Some	No	No	No
Retains 3-4 times its weight in water	+++	+++	--	---	--	+++

RATINGS

Very, Very Strong	+++	Very, Very Low	---
Very Strong	++	Very Low	--
Strong	+	Low	-

OUR DISTRIBUTION CENTERS

- California (Carson, Tracy, Oakland, Carpinteria, Los Angeles)
- Colorado (Denver, Loveland, Colorado Springs)
- Idaho
- Indiana
- Iowa (Des Moines)
- Kansas (Kansas City, Wichita)
- Maine
- Massachusetts
- Minnesota
- Missouri (St. Louis, Kansas City)
- Nebraska (Omaha)
- New Hampshire (Concord)
- New York (Albany/Round Lake)
- North Dakota
- Ohio
- Oklahoma (Oklahoma City)
- Oregon (Portland)
- Rhode Island
- South Dakota
- Texas (Dallas, San Antonio, Houston, Austin)
- Utah (Salt Lake City)
- Washington (Seattle, Spokane)
- Canada (Vancouver)

STATE REGISTRATION NUMBERS

We are registered in other states as well. Information is available upon request.

California: License #12944 & Product #69248

Colorado: License #9008 & Product #83445

Oregon: License #AR0163559FPR

Washington: License #0281 & Product #0003

APPLICATIONS OF BIOSOL FORTE

Revegetation of Disturbed Soils

Biosol Forte is ideal for any application involving poor or disturbed soils, including mining reclamation, road cut revegetation, high altitude revegetation and soil restoration. Used for both primary and secondary fertilization in good soils, Biosol Forte can be dry broadcasted or applied with a hydroseeder. There is no difference in the results.

Lawns, Gardens, Flowers, Trees, Etc.

Biosol Forte will not burn vegetation but should be watered in (if possible) for best results.

Application Rates:

Lawns & Playing Fields:	13 - 25 lbs. per 1,000 sq. feet twice per year
Garden Preparation:	2 oz. per sq. yard (1/3 cup)
Seeded Row Crops:	1 1/3 lbs. per 100 sq. feet (3 ¾ cups)
Potted Flowers & Compost:	½ oz. per gallon (1/8 cup)
Vegetables:	2 oz. per sq. yard (1/3 cup)
Ornamental Trees/Shrubs:	6 oz. per sq. yard (1 cup)
Soil Mixes:	8 ½ lbs. per cu yard

Turf Grasses, Forestry (Trees and Shrubs) & Viticulture (Grape Cultivation)

The lasting efficacy of Biosol Forte is particularly beneficial for turf grasses, and Biosol Forte has been used and tested by Forestry Services and Departments all around the world. First year applications should always be the heaviest. Application rates after the first year may be reduced.

In viticulture, Biosol Forte has been used all over the world for many years with superior results. During thirteen years of experiments and trials (from 1988 to 2001), Biosol Forte was proven to increase sugar yields in grapes. The average yearly sugar yield increased by approximately 13%.

Fertilizing Young Plants

Good & proper farming practices should always be followed when using Biosol Forte. It is very important that Biosol Forte is spread on the soil surface. If you want to plant young plants, add Biosol Forte to the soil at least two weeks before planting actually occurs. This is especially important with tomatoes and peppers.

Biosol Forte is used for the following qualities:

- Enriches soil with quality nutrients.
- Stimulates micro-organism activity in the soil.
- Improves plant health (chlorosis, stem disease, blossom drop).
- Increases crop yields.
- Increases the sugar content (content is expressed as degree Oechsle, Brix, or Balling).
- It promotes quality ripening of fruits and vegetables.
- Biosol Forte should always be applied topically.

BIOSOL FORTE 7-2-1 NATURAL - ALL PURPOSE FERTILIZER

GUARANTEED ANALYSIS: Total Nitrogen (N) 7% (0.5% water soluble N & 6.5% water insoluble N) | Available Phosphate (P_2O_5) 2% | Soluble Potash (K_2O) 1%
PLANT NUTRIENTS DERIVED FROM: FERMENTATION OF SOYBEAN MEAL & COTTONSEED MEAL. Sterilized & free of weed seed.
*6.5% Slowly Available Nitrogen from Fermented Organic Material.
PROPERTIES: Biosol Forte is a natural, environmentally safe fertilizer with high organic content (all natural organic). Biosol Forte is a long acting, slow release nitrogen fertilizer with a well-blended nutrient ratio. Biosol Forte is dried, pelletized & bagged for convenient transportation, storage and application.

APPLICATION RATES

VEGETATION OR PLANT TYPE	BY WEIGHT	BY VOL. (DRY)	LBS PER 1000 sq.ft.	WHEN TO FERTILIZE
Home Use				
Lawns	1 Bag covers 2,000 - 4,000 sq. ft.		13 to 25	spring & fall
Garden Preparation	2 oz / square yard	1/3 cup	13.5 lbs	spring through fall
Seeded Row Crops	1 1/3 cup per 100 sq. ft., e.g., per 2" inch x 50' foot furrow. Sprinkle Biosol down row; plant seeds.			
House Plants - 8"-10" Pots	Mix 3 oz. (1/2 cup) into top 1-2 inches and lightly cover with potting mix or top soil.			
Unfortified potting soil mixes for potted plants all sizes	4 cups per 1 cubic yard. Use when planting (into) a pot, do not apply topically. Use for house plant repotting, window boxes, container growing, etc.			
From pony packs to B & B. Biosol is added in hole and in medium around plant. Whether flowers, vegetables, shrubs or trees.				
Pony Pack to 4 inch pots	1 oz per plant added to backfill			spring through fall
1 to 2 gallon pots	1 lb per plant added to backfill			spring through fall
3 to 5 gallon pots	2 lbs per plant added to backfill			spring through fall
B & B Root Ball & Burlap	1 cup per each foot diameter root ball. Mix in medium under and directly around the root ball.			
Flower Gardens (planting)	2 oz / square yard	1/3 cup	13.5 lbs	spring through fall
Vegetable Gardens (planting)	2 oz / square yard	1/3 cup	13.5 lbs	spring through fall
Compost Preparation	10-20 lbs/yd^3			all year
Farming, Gardening & Home Use Rates		**Per Plant**		
Vegetables (all types)	1 1/2 oz/square yard	2 tbs	14 to 20	spring through fall
Corn	450-715 lbs/acre	3/4 cup	10 to 16	prior to cultivation
Pulses, Cereals	500-900 lbs/acre	1 tbs	11 to 20	prior to cultivation
Potatoes	900-1,400 lbs/acre	1/4 cup	20 to 32	prior to cultivation
Sugar Beets	800-1,300 lbs/acre	2 tbs	18 to 30	prior to cultivation
Strawberries, Tomatoes	900-1,200 lbs/acre	2 tbs	20 to 28	late fall or spring
Vineyards	600-900 lbs/acre	3/4 cup	14 to 20	Feb.-April / Oct.-Dec.
Young Fruit Plantation	600-800 lbs/acre	1 cup	14 to 18	spring or fall
Fruit Plantation	500-700 lbs/acre	3/4 cup	11 to 16	spring or fall
Berry Shrubs	600-800 lbs/acre	1 1/2 cups	14 to 18	spring or fall
Meadows, Pastures	800-1,000 lbs/acre		11 to 16	spring or fall
Forestry Use				
Young Forests, Plants, Trees	3 oz/plant	1/2 cup	14 to 20	spring
Tree Nursery	1,000-1,400 lbs/acre	1/2 cup	23 to 32	before planting
Ornamental Trees & Shrubs	6 oz/square yard	1 cup	44 lbs	spring
Mature Trees	1,800-2,250 lbs/acre	1 lb per 3 ft.	42 to 52	spring & fall
Reclamation Use				
Reclamation (road banks, mines), Hydroseeding, Mulch, Dry Seeding	poor soils: 1,500-1,800 lbs/acre good soils: 1,000-1,300 lbs/acre		34 to 41 23 to 30	year round, except over snow
Maintenance Fertilization, Reclamation Sites	poor soils: 1,000-1,500 lbs/acre good soils: 800-1,100 lbs/acre		23 to 34 18 to 25	year round, except over snow
Compost Preparation	10-20 lbs/yd^3			all the year
Turf Grass				
Sports Fields & Parks	1,300 lbs/acre - for heavy traffic areas		30 lbs	spring & fall

IMPORTANT MEASUREMENTS – Equivalents: 0.5 oz = 2 tbs; 3 oz = 1/2 cup; 6 oz = 1 cup; 2 2/3 cups = 1 lb; 13 1/3 cups = 5 lbs

DIRECTIONS FOR USE: Biosol may be applied at any time, except over snow. Biosol should always be applied topically. The application rates may be adjusted to fit any special soil or nutrient requirements. Biosol will not burn vegetation when used properly. Biosol is used for primary and maintenance applications. It will stimulate the micro-organisms in the soil. Biosol can be dry broadcasted or applied with a hydroseeder.
Care should be taken when applying fertilizer, particularly when planting young green plants. For garden preparation, the fertilizer should be spread out at least two weeks before planting young plants. When fertilizing young plants, there should be a gap of 5 cm - 1-2 inches between plants and fertilizer.
Keep dry while storing and protect against UV-radiation.

MANUFACTURED FOR: **A PRODUCT OF AUSTRIA, MANUFACTURED BY SANDOZ G.M.B.H.**
ROCKY MOUNTAIN BIO PRODUCTS (a Division of Bowman Construction Supply, Inc.)
10801 E. 54th Avenue, Denver, CO 80239 | 303-696-8964 | www.rockymtnbioproducts.com **NET WEIGHT:** 50 lbs / 23 kg
Information regarding the contents and levels of metals in this product is available by visiting http://www.aapfco.org/metals.html