

Commercial Applications from DNB Designs

Plant Gel is a synthetic acrylic polyacrylamide with a potassium salt base. It is a safe, non-toxic polymer used in all horticultural applications. When used according to the application rates, **Plant Gel** can reduce irrigation frequency by 50% and last 3-5 years in the soil.

BENEFITS: **Plant Gel** products are not multi-use polymers that were developed for other industries. Plant Gel products are potassium based and specifically designed for the horticultural and agricultural industry.

- Reduces plant watering by 50%
- Reduces transplanting shock
- Reduces plant stress due to lack of available water
- Increases soil aeration
- Cost effective – lasts 3-5 years in the soil

APPLICATIONS

LANDSCAPE INDUSTRY: Bare Root/Seedlings

Mix one pound of **Plant Gel Fines** with 20-40 gallons of water. Pour the fines in slowly and agitate the water by mixing with a paddle or with the force of the water being added. Let the product stand for at least 15 minutes.

The longer the gel is allowed to stand, the tackier it will become and the better it will adhere to the roots. Dip the plant/tree immediately before planting. Adjust the slurry to the thickness that best adheres to the roots. One pound will treat approximately 12,000 – 19,200 seedlings. The **Hydro** can be used as a packing medium for transporting bare rootstock. Dip or spray material on the rootstock.

TRANSPLANTING: Mix two ounces of **Plant Gel** granular per one foot of root ball. Mix a majority of the polymer around the planting hole and mix the balance with the backfill. Do not amend the top two inches with polymer. Water liberally. Rate should be increased to three ounces per one foot of root ball in sandy soils.

½ oz. Per 4” root ball

1 oz. Per 8” root ball

Balled & Burlapped	Plant Gel (1000-2000 or 2000-4000 microns)		On containers smaller than 8”, use the 1000-2000 micron size polymer	
	Average Amt.	Sandy Soils	Containerized	Plant Gel
Caliper Size				
1”	2 oz.	3 oz.	1 gallon	½ oz.
2”	4 oz.	6 oz.	3 gallon	¾ oz.
3”	6 oz.	9 oz.	5 gallon	1 oz.
4”	8 oz.	12 oz.	10 gallon	2 oz.
Boxed Trees			15 gallon	3 oz.
24”	7 oz.		20 gallon	4 oz.
36”	14 oz.		30 gallon	6 oz.
48”	18 oz.		50 gallon	8 oz.

BROAD AREA TREATMENT:

Flower Beds, Ornamental Gardens

(1000-2000 or 2000-4000 microns)

Two methods available: sprinkle a small amount (½ tsp.) of **Plant Gel** in the plant hole, plant and cover with soil or apply one pound of **Plant Gel** per 100 square feet of ground area. Spread the polymer and work into the soil at a depth of three to four inches.

feet (175 to 225 pounds per acre) if worked into the soil at three to four inches. We recommend five pounds per 1000 square feet at depth of four inches for sandy soils. Broadcast the polymer with a spreader or drop seeder for even disbursement. Work into the soil, spread seed or lay sod, roll and soak thoroughly.

TURF/SODDING: (1000-2000 micron size)

Use **Plant Gel** at a rate of six pounds per 1000 square feet or 300 pounds per acre if worked into the soil at five to six inches. Use four to five pounds per 1000 square

HYDROSEEDING: (HYDRO)

Add three to four pounds of **Plant Gel Hydro** per 1000 gallons of liquid. Slowly pour product in tank and wait five minutes before adding fertilizer. Depending upon mulch used, salt content of water and fertilizer, one acre will require nine to fifteen pounds of **Plant Gel Hydro**.

GOLF COURSE GREENS:

For Greens and problem areas, use up to one pound per 100 square feet at a depth of five to six inches in the soil. To determine the square feet area of a circular green, take the diameter, square it and multiply it by .7854.

Example: a 20 foot circular green is 314 square feet: $20^2 \times .7854 = 400 \times .7854 = 314$.

<i>Amount of Plant Gel</i> (1000-2000 microns)			
Diameter	Square Ft.	Max. Amt.	Avg. Amt. (.5lbs./1000sq.ft.)
10	78	.08 lb.	0.4 lb.
20	314	3.0 lb.	1.5 lb.
25	491	4.8 lb.	2.4 lb.
30	707	7.0 lb.	3.5 lb.
35	962	10.0 lb.	5.0 lb.
40	1257	12.6 lb.	6.3 lb.
45	1590	16.0 lb.	8.0 lb.
50	1964	20.0 lb.	10.0 lb.
60	2827	28.0 lb.	14.0 lb.

Convenient Conversions			
9 square feet	=	1 square yard	
43,560 square feet	=	1 acre	
4,840 square yards	=	1 acre	

GREEN HOUSE/NURSERY: (1000-2000 microns)

To use as a soil amendment, mix two pounds of *Plant Gel* per cubic yard of soil. Make sure the polymer is thoroughly mixed for even disbursement. Use two pounds of *Plant Gel Fines* or *Hydro* per cubic yard or soil for mini-cells and small containers. Best results in mixing are achieved when *Plant Gel* and *Plant Gel Fines* or *Hydro* are incorporated into the soil in the dry crystal form.

Bulk Mixing

1 cubic foot of soil
1 bushel
1 cubic yard

Plant Gel (1-2mm), Plant Gel Fines, Hydro

1.2 oz. (34 grams)
1.5 oz. (42 grams)
2 lbs.

ESTIMATED COVERAGE: Based on the usage rate of two pounds of *Plant Gel*, *Plant Gel Fines*, or *Hydro* per cubic yard of soil, the following information can be used as a general guideline. (Please note: Actual pot dimensions may vary from one manufacturer to another and soil volumes will vary depending upon the type of soil used.)

BULK MIXING	CONTAINER SIZE	Amt of <i>Plant Gel</i> per indiv. container	Pots per cubic yard of soil	<i>Plant Gel / Plant Gel Fines / Hydro</i> Amount Treated per Container Size			
				8 lb.	30 lb.	40 lb.	50 lb.
	2½" round	--	5,616	22,464	84,240	112,320	140,400
	2½" square	--	6,048	24,192	90,720	120,960	151,200
	4" round	½ tsp.	1,296	5,184	19,440	25,926	32,400
	4" square	½ tsp.	1,512	6,048	22,680	30,240	37,800
	5" round	¾ tsp.	756	3,024	11,340	15,120	18,900
	6" round	¾ tsp	432	1,728	6,480	8,640	10,800
	8" round	1 tsp.	162	648	2,430	3,240	4,050
	10" round	½ oz.	81	324	1,215	1,620	2,025
	10" hanging	½ oz.	135	540	2,025	2,700	3,375
	1 gallon	½ oz.	189	756	2,835	3,780	4,725
	3 gallon	¾ oz.	122	486	1,822	2,430	3,050
	5 gallon	1 oz.	50	200	750	1,000	1,250
	11"x2¼"x2¼" flat	--	124	496	1,860	2,480	3,100

Above estimated coverage does not take into consideration the increase in soil volume when water is absorbed in a potting soil mixture containing *Plant Gel*, *Plant Gel Moist Fines*, or *Hydro*. Soil volume will increase ten to fifteen percent.

Soil Volumes

25.7 quarts = 1 cubic foot
27 cubic feet = 1 cubic yard
1 bushel = 1¼ cubic feet

Conversion Chart

3 tsp. = 1tbl.
1tbl. = ½ oz. **Plant Gel**
3 tsp. = ½ oz. **Plant Gel**

100 square feet of bench area, with a depth of six inches of soil is equal to 50 cubic feet of soil

CAUTION: KEEP OUT OF REACH OF CHILDREN *Plant Gel* products are non-toxic. Keep away from open wounds. When mixing large quantities for bulk mixing, wear a mask; dusty conditions may exist. If ingested or eye contact occurs, call a physician. Spilled materials are slippery when wet. Sweep up spills and place in disposal container. Maintain good housekeeping to control dust accumulations. DO NOT ALLOW MATERIAL TO ENTER DRAINS.