



Embrace™, Grace™, Libre™

PRIMULA OBCONICA

Minimum Germination Rate: Libre, Embrace 80%; Grace 70%

Seed Product Form: Raw

FLOWERING

Time frame when plants are receptive to flower initiation: 8 – 10 leaves present.

Flowering Type: Facultative short-day plant (minor) – short days enhance flowering.

Specific Flowering Mechanism: Maturity and irradiance trigger flowering. Unlike other Primula, cold temperatures are not necessary to set flower on Primula obconica.

PLUG CULTURE

Note: Primula obconica requires higher germination temperatures than other types of Primula.

Germination: Optimum conditions for seedling development that begins the day the crop is sown until cotyledon expansion. Expect radicle emergence in 7 days.

Cover: Seeds may be covered with a thin layer of coarse vermiculite to maintain moisture levels.

Media: • pH: 5.5 – 5.8

• EC: 0.5 – 0.75

Light: Light is not necessary for germination. If utilizing a chamber, providing a light source of 10 – 100 foot candles will improve germination dramatically compared to seed germinated in the dark.

Moisture: Saturated (5) for days 0 – 5 or until radicle emergence. On days 6 – 18 reduce moisture to moist (3). Beginning day 19 reduce further to medium (2).

Humidity: 100% until radicle emergence then reduce to 40 – 70%.

Dehumidify: Provide horizontal airflow to aid in drying down the media through evapotranspiration, allowing better penetration of oxygen to the roots.

Temperature: 72° – 75°F (22° – 24°C) until radicle emergence. Reduce to 65° – 68°F (18° – 20°C) until cotyledon expansion.

Plug Bulking/Flower Initiation: Optimum conditions during the vegetative period, beginning at cotyledon expansion, needed for the root to reach the edge of the plug cell AND to make the plant receptive to flower initiation.

Media: • pH: 5.5 – 5.8

• EC: 0.5 – 0.75

Light: Maximum 3,000 foot candles (30,000 lux). Avoid direct sunlight.

Temperature: 65° – 68°F (18° – 20°C). As seedlings mature, gradually reduce temperatures to 62° – 65°F (16° – 18°C).

Moisture: Alternate between moisture levels moist (3) and medium (2). Allow media to approach level (2) before re-saturating to level (3).

Humidity: 40 – 70%

Dehumidify: Provide horizontal airflow to aid in drying down the media through evapotranspiration, allowing better penetration of oxygen to the roots.

Fertilizers: After cotyledon emergence, fertilize weekly at 50 ppm nitrogen with a calcium-based fertilizer (14-4-14).

GROWING ON

Transplant Ready: 6 – 7 weeks from sow in a '288' tray.

Finish Bulking/Flower Initiation: Optimum conditions during the vegetative period, beginning at transplant, needed for the root to reach the edge of the container AND to make the plant receptive to flower initiation.

Media: • pH: 5.5 – 5.8

• EC: 1 Primula obconica is sensitive to high salts.

Light: To avoid leaf burn, provide a light shade when transplanting in the summer.

Temperature: After transplant, maintain night temperatures at 60° – 65°F (16° – 18°C). Once roots are established lower night temperatures to 50° – 55°F (10° – 13°C) with 60° – 70°F (16° – 21°C) days. Cool temperatures will help produce a more free-flowering, compact plant. Finishing during periods of excessive high temperatures will produce plants with large leaves and few flowers.

Moisture: Alternate between moisture levels wet (4) and moist (3). Allow media to approach level (3) before re-saturating to level (4).

Humidity: 40 – 70%

Dehumidify: Provide horizontal airflow to aid in drying down the media through evapotranspiration, allowing better penetration of oxygen to the roots.

Fertilizers: Primula obconica are light feeders. Fertilize with a calcium-based fertilizer (14-4-14) at 100 – 150 ppm nitrogen as needed to promote active growth. The use of ammonium in combination with high temperatures may promote excessive vegetative growth. Heavy fertilization practices can result in large leaf development.

Growth Regulators: If needed, Libre will respond to B-Nine (daminozide) at 5,000 ppm.

Common Diseases: Tomato Spotted Wilt Virus, Pythium Root Rot

Common Pests: Whitefly, Leafminers, Aphids and Thrips

PRODUCT USE	GARDEN SPECIFICATIONS
Pots, containers, gift item, indoor color	Light: Filtered sun USDA Hardiness Zone: 11 AHS Heat Zone: 4 – 1

	Garden Height	Garden Width
Embrace, Grace, Libre	8 – 10" (20 – 25 cm)	6 – 8" (15 – 20 cm)

PRIMULA OBCONICA SCHEDULING IN WEEKS

	Embrace	Grace	Libre
Total crop time	16 – 20	16 – 20	16 – 20
'288' plug crop time	6 – 7	6 – 7	6 – 7
Transplant to finish crop time			
4" crop	8 – 9	8 – 9	8 – 9
6" crop	10 – 12	10 – 12	10 – 12

Unlike other Primula, cold temperatures are not necessary to set flower on Primula obconica. Libre can be cropped year round.

Primula Obconica Grace is not primine free.

Special note: Certain varieties of primula obconica plants can cause allergic reactions, including skin rash and swelling, on some people. This is caused by the presence of the chemical primine. Wear latex gloves and long sleeves when handling; wash gloves and affected clothing thoroughly after use. If irritation occurs, call a physician.

Note: These suggestions are only guidelines and may have to be altered to meet individual grower's needs. Check all chemical labels to verify registration for use in your region.