PRODUCT DATA SHEET



17.2% B (typical)

Composition

- Boric acid, H₃BO₃
- Borax pentahydrate, Na₂B₄O₇ · 5H₂O
- Sodium pentaborate, Na₂B₁₀O₁₆ · 10H₂O

Microgranulated boron

Solubor[®] DF is a white, free flowing microgranulated product.

The product can be used in the following applications:

·As a spray to the soil at planting

As a foliar spray in young crops

To provide boron through irrigation, fertigation, or hydroponics where these systems are used
As a routine spray treatment to prevent boron deficiency in susceptible crops

Recommendations for use

Solubor DF should be dissolved in water and applied as a spray to the soil or the crop. It may be poured directly into the induction hopper or the spray tank filler. It is essential to use a generous supply of water and adequate flow through the induction hopper. Whether *Solubor* DF is fed into the hopper or directly into the tank, strong agitation must always be maintained throughout the mixing and spray operations.

Use as directed. Do not exceed recommended rates or a maximum dose rate of 4 kg boron (24 kg *Solubor* DF) per hectare per year. For crop dose rates, please contact your distributor.

Particle size

- A consistent granule size of 0.3 mm
- A flowable product that enables a solid boron fertilizer to be poured into induction bowl systems
- Ensures significant reduction in dust
- Whether introduced to the sprayer from the top filler or induction bowl, can significantly reduce down time between load

Chemical specificationTypicalGuaranteeWater soluble boron,
B%17.517.2-17.8Equivalent B2O3%56.455.4-57.3

(Boric oxide) 56.4 55.4-57.3 Na2O% 10.0 9.5-10.5

Sieve specification	
Mesh size mm	Percent retained guarentee
0.30	2.0

Solubility

Formulated for a very high solubility level to ensure speedy mixing. Dissolution rate is a function of concentration, agitation, and water temperature. Exercise caution when mixing high dose rates in low water volumes at low temperatures. The dissolution rate will depend on factors such as pouring rate and the equipment involved, ambient and water temperatures.



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рΗ

Percent Soubor DF by weight of solution	pH at 23°C
0.5	8.3
1.0	8.3
2.0	8.1
2.5	8.0
5.0	7.8
7.5	7.6
10.0	7.4

Easy to handle packaging

Available in 2.20 lb (1000 kg) IBCs, and in multiwall paper bags with a polyethylene moisture resistant barrier for the 11 lb (5 kg) size, and in polyethylene bags for the 26.4 lb (12 kg) and 55.1 lb (25 kg) sizes.

The feedback from growers is that the 12 kg size is particularly convenient to handle from the pallet into the sprayer. The polyethylene bags have the added advantage of weatherproof protection for the product.

Mixing instructions



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Boron: An essential plant nutrient

Boron is one of eight micronutrients essential to all plant growth. Adequate boron is necessary for proper absorption of macronutrients and for maintaining the integrity of plant cell walls.

Detecting boron deficiency

Boron deficiency shows in clearly defined ways in certain crops. Generally, by the time visible symptoms are seen, yields will already have been adversely affected. The best way to establish need is either through soil testing or through tissue analysis. In this way, boron supplementation can form part of a 'balanced nutrition' approach to crop fertilization.

Predicting boron deficiency

Certain crops worldwide are known to be more susceptible to boron deficiency than others. Specific crop information can be found at www.borax.com/ag.

There are several factors which need to be taken into account when boron deficiency may be suspected:

- High rainfall
- Recent liming (pH over 6.6)
- Previous cropping
- Boron removal by previous crops
- No boron nutrition
- Sandy soils
- High organic matter

Correcting boron deficiency

Boron deficiency can be remedied by the correct application of a borate containing material in solid or liquid fertilizers, to the seedbed in annual crops or under the foliar canopy of perennial crops. Crops can also be sprayed with boron containing solutions. These are normally tank mixed with other micronutrients or agrochemical products. Mixing with other sprays as part of a program not only saves on application cost, but allows for precise timing.

About U.S. Borax

U.S. Borax, part of Rio Tinto, is a global leader in the supply and science of borates—naturally-occurring minerals containing boron and other elements. We are 1,000 people serving 650 customers with more than 1,800 delivery locations globally. We supply around 30% of the world's need for refined borates from our worldclass mine in Boron, California, about 100 miles northeast of Los Angeles.

Our local agriculture experts understand the uses and benefits of boron on crops. In addition to a global sales team, we have a number of agronomists on staff to help fertilizer distributors maximize the benefits of borates in agriculture applications. Our ag team can answer individual growers' questions and concerns about their particular crop.

High quality, high reliability, high performance borate products. It's what we're known for.

Notice: Before using these products, please read the Product Specifications, the Safety Data Sheets and any other applicable product literature. The descriptions of potential uses for these products are provided only by way of example. The products are not intended or recommended for any unlawful or prohibited use including, without limitation, any use that would constitute infringement of any applicable patents. Nor is it intended or recommended that the products be used for any described purposes without verification by the user of the products' safety and efficacy for such purposes, as well as ensuring compliance with all applicable laws, regulations and registration requirements. Suggestions for use of these products are based on data believed to be reliable. The seller shall have no liability resulting from misuse of the products and provides no guarantee, whether expressed or implied, as to the results obtained if the products are not used in accordance with directions or safe practices. The buyer assumes all responsibility, including any injury or damage, resulting from misuse of the product, whether used alone or in combination with other materials. THE SELLER MAKES NO EXPRESS OR IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. THE SELLER SHALL HAVE NO LIABILITY FOR CONSEQUENTIAL DAMAGES.



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