PRODUCT DATA SHEET

SOLUBOR® DF

17.2% B (typical)
Composition

- Boric acid, H_3BO_3
- Borax pentahydrate, $Na_2B_4O_7 \cdot 5H_2O$
- Sodium pentaborate, $Na_2B_{10}O_{16} \cdot 10H_2O$

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 specification		
	Typical	Guarantee
Water soluble boron, B%	17.5	17.2–17.8
Equivalent B_2O_3% (Boric oxide)	56.4	55.4–57.3
Na_2O% (Sodium oxide)	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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pH

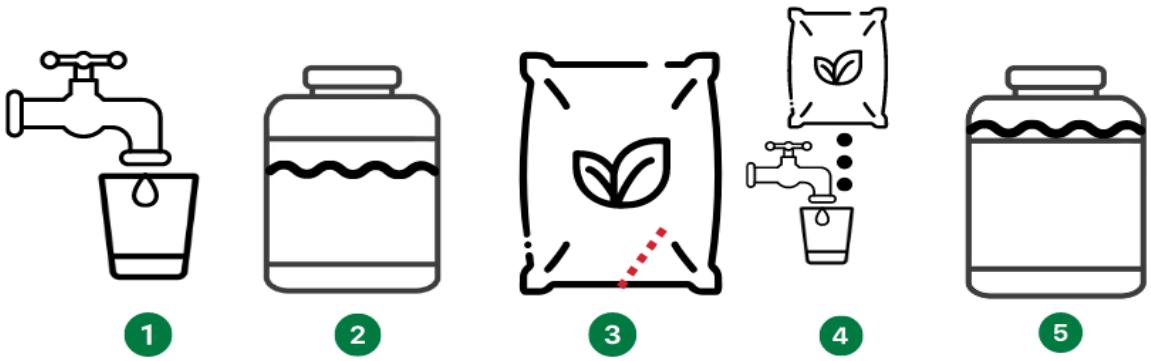
Percent *Soubor* DF by weight of solution	pH at 23°C
0.5	8.3
1.0	8.3
2.0	8.1
2.5	8.0
5.0	7.8
7.5	7.6
10.0	7.4

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



PRODUCT DATA SHEET

SOLUBOR® DF

20 MULE TEAM BORAX™
RioTinto

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 world-class 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.