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**blueSulfate<sup>®</sup>**  
the nitrate-free liquid fertilizer

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# blueSulfate®

## properties and operation of the fertilizer

The nitrogen and sulfur fertilizer solution is developed by Evonik during the production of hydrogen cyanide. Our product is continuously produced and its consistent high quality is guaranteed by regular analysis. blueSulfate® is available in bulk order through various transportation means. blueSulfate® is used for the CULTAN-process application.

CULTAN (Controlled Uptake Long Term Ammonium Nutrition) is the most efficient and environmentally-friendly method for applying blueSulfate® during the nitrogen supply of crops. In agriculture, it is used primarily for grain, corn, potatoes, and beets.

This process, is a type of injection fertilization based on a single injection of the entire amount of nitrogen needed during vegetation. During CULTAN fertilization, nitrogen is applied at the first sign of nitrogen deficiency in plants.



## Product specification

### Levels:

8,5 % N as ammonium nitrogen

9,5 % S as sulfate sulfur

23,0 % SO<sub>3</sub>

pH level > 5 (not suitable for foliar fertilization)

### Application:

blueSulfate® is suitable for all agricultural crops. Leaves should be avoided during application (corrosion damage). Mixing with other liquid fertilizers, e.g. urea, UAN etc. is possible.

### Storage:

blueSulfate® is a water pollutant. Storage in stainless steel containers (VA 1.4539 or 1.4571), polyethylene containers or steel containers with a polyethylene lining is recommended.

## Why use blueSulfate®

blueSulfate® is rapidly effective in fostering plant growth

blueSulfate® is the inexpensive alternative to solids

## Typical analysis dates (agriculture)

### 1. 1. Physical Parameter

Parameter	Dimension	Value
concentration	MA.-%	37,7 - 42
settleable solids	MA.-%	< 0,01
colour	--	colourless to slight blue
odour	--	odourless
pH-value	--	> 5
density	g/l	1210 - 1240

### 2. Nitrogen, Sulphur

Parameter	Dimension	Value
total nitrogen	MA.-%	8,5
ammonium nitrogen	MA.-%	8,5
Sulphur	MA.-%	9,5
SO <sub>3</sub>	MA.-%	23,0

### 3. Metals

Parameter	Dimension	Value
Arsenic (As)	mg/kg DS	< 2
Lead (Pb)	mg/kg DS	< 2
Boron (B)	mg/kg DS	< 5
Cadmium (Cd)	mg/kg DS	< 0,5
Chrome (Cr)	mg/kg DS	< 2
Chrom-VI (Cr)	mg/kg DS	< 1
Cobalt (Co)	mg/kg DS	< 2
Copper (Cu)	mg/kg DS	< 2
Nickel (Ni)	mg/kg DS	< 2
Mercury (Hg)	mg/kg DS	< 0,1
Selenium (Se)	mg/kg DS	< 5
Thallium (Tl)	mg/kg DS	< 0,5
Zinc (Zn)	mg/kg DS	< 2

### 4. Other Substances

Parameter	Dimension	Value
Cyanide	mg/kg DS	< 5
EOX	mg/kg DS	< 1,5
PAK (EPA)	mg/kg DS	< 1
Σ PCB (DIN)	mg/kg DS	< 0,2
I-TE Dioxine, dl-PCB	ng WHO-TEQ/ kg DS	< 15
Perfluorated Tenside	mg/kg DS	< 0,025

DS = dry stuff

