Martin Vialatte Œnologie

EFFERBAKTOL GRANULES

SPARKLING POTASSIUM METABISULFITE GRANULES
SULFITE ADDITIONS FOR MUSTS AND WINES

CHARACTERISTICS

- **EFFERBAKTOL granules** are prepared from potassium metabisulfite at a purity of 99% (E 224) and potassium bicarbonate (E 501).

- **EFFERBAKTOL granules** are available in two sizes of packaging:
  - **EFFERBAKTOL 50 containing 50 grams as pure SO_2.**
  - **EFFERBAKTOL 100 containing 100 grams as pure SO_2.**
  - **EFFERBAKTOL 125 containing 125 grams as pure SO_2.**

- On contact with must or wine, **EFFERBAKTOL granules** become naturally sparkling. This phenomenon produces foam on the surface that momentarily retains the granules assuring good protection from oxidation at the top of the tank.
- **EFFERBAKTOL granules** are made up of different sized particles. During the dispersion in the must or wine, the sparkling granules sink at different speeds depending on their size and disperse throughout the whole tank, allowing a homogenization of the sulfiting as effective as that of SO_2 gas.
- **EFFERBAKTOL granules** respects the environment:
  With limited release of SO_2 into the atmosphere compared to SO_2 gas or liquid applications the use of the granules provides better working conditions for users.

APPLICATION

- **EFFERBAKTOL granules** is used for sulfite additions at all stages of wine production:
  During the harvest, for sulfiting of grape tubs and musts without having to mix
  On wine, sulfiting of tanks during vinification and ageing:

Thanks to its composition and to its granular size, **EFFERBAKTOL granules** avoid, in the majority of cases, the tedious stage of a pumping over and mixing after sulfiting since the distribution of SO_2 is efficient and homogeneous.

PREPARATION & USE

- Determine the number of packets needed for the target SO_2 addition according to the following tables.
- Open the packets by tearing the envelope at the crimp of the seam.
- In the bins, spread out the granules over all the surface of the grapes.
- For the addition to tanks, sprinkle the granules on the top of the tank distributing them, as far as possible, covering the complete surface.
- Use entire packet once granules are exposed to air to insure effervescence.

The number of packets to be used depends on the desired concentration of SO_2 and the volume of the container or the weight of grapes. To determine the requirements, refer to the following tables:

- **Sulfiting** of **bins** at the harvest with **EFFERBAKTOL 50 granules**:

NUMBER OF EFFERBAKTOL 50 PACKETS NEEDED

	Sulfiting in ppm				
	33 ppm	**50 ppm**	66 ppm	83 ppm	100 ppm
Bin of 2000 kg	1	1,5	2	2,5	3
Bin of 4000 kg	2	**3**	4	5	6

The calculation has been done for a yield in the region of **75%**, 4000 kg of grapes give 30 hL of must (or use the conversion factor 1 ton of grapes give approximately 200 gallons of must.)

Example: to sulfite a bin of 4000 kg (4.4 tons) of grapes at 50 ppm, you need 3 packets of **EFFERBAKTOL 50 granules**

A readjustment of SO_2 may be necessary when transferred to the cellar.

Note: 1000 kg = 1.1 tons 1 g/hL = 10 ppm 1 hL = 26.4 gal

- **Sulfiting** of different sized **tanks** with **EFFERBAKTOL 50 granules** :

NUMBER OF EFFERBAKTOL 50 PACKETS NEEDED

		Sulfiting in ppm				
		10 ppm	**20 ppm**	30 ppm	40 ppm	50 ppm
Volume of tanks in hL (gal)	25 hL (660 gal)	0.5	1	1.5	2	2.5
	50 hL (1320 gal)	1	2	3	4	5
	100 hL (2640 gal)	2	**4**	6	8	10
	150 hL (3960 gal)	3	6	9	12	15
	300 hL (7920 gal)	6	12	18	24	30

Example: to sulfite a tank of 100hL (2640 gallons) at 20 ppm, you need to add 4 packets of **EFFERBAKTOL 50 granules**

- **Sulfiting** of different sized **tanks** with **EFFERBAKTOL 125 granules** :

NUMBER OF EFFERBAKTOL 125 PACKETS NEEDED

		Sulfiting in ppm			
		12.5 ppm	**25 ppm**	37.5 ppm	50 ppm
Volume of tanks in hL (gal)	50 hL (1320 gal)	0.5	1	1.5	2
	100 hL(2640 gal)	1	**2**	3	4
	150 hL (3960 gal)	1.5	3	4.5	16
	300 hL (7920 gal)	3	6	9	12

Example: to sulfite a tank of 100hL (2640 gal) at 25 ppm, add 2 packets of **EFFERBAKTOL 125 granules.**

- Due to the different sizes of the granules, we recommend using whole packets for accuracy in addition.
- If you need to split up the packets, use the following guide:
  1 packet of **EFFERBAKTOL 50 granules** contains the equivalent of 50 grams as SO_2 with a total package weight of 125 grams.
  1 packet of **EFFERBAKTOL 100 granules** contains the equivalent of 100 grams as SO_2 with a total package weight of 250 grams.
  1 packet of **EFFERBAKTOL 125 granules** contains the equivalent of 125 grams as SO_2 with a total package weight of 300 grams.

	Grams as SO_2									
	1	**2**	3	4	5	6	7	8	9	10
Weight of granules in grams	2.5	**5**	7.5	10	12.5	15	17.5	20	22.5	25

NOTE: 1 g/hL equals 10 ppm SO_2

To obtain 2 grams as SO_2 you need to weigh out 5 grams of granules.

- Remember the ratio: Each 1 gram as SO_2 weighs 2.5 grams of granules.
- The desired SO_2 addition can be calculated based on the volume of wine and using the preceding table to calculate the ppm expressed as SO_2.
- Example: weigh out **5 grams total** granules and add to a **60 gallon** barrel. The total SO_2 added can be calculated by using the table equivalents for 5 gram weight which is **2 grams as SO_2** then divide by the 60 gallon volume expressed in hL, gives us the equivalent SO_2 addition of 2 grams SO_2/2.27hL wine ≅ **9 ppm SO_2**.

For the designated weight of granules, use the following chart to determine the total addition as SO_2

Weight of granules	as SO_2	SO_2 per Barrel	SO_2 per Gallon
2.5 grams	1 gram	4.5 ppm	264 ppm
5 grams	2 grams	9 ppm	528 ppm
12.5 grams	5 grams	24 ppm	1321 ppm
25 grams	10 grams	48 ppm	2642 ppm
125 grams	50 grams		13210 ppm
250 grams	100 grams		26420 ppm
313 grams	125 grams		33000 ppm

To calculate dose for known volume of wine:
Using the **per Gallon** conversion for desired SO_2 addition, divide by the number of gallons being treated. For example the SO_2 contribution when using 250 grams of granules (the equivalent of 100 grams as SO_2) in 600 gallons wine is calculated:

26420 ppm/gallon ÷ 600 gallons = 44 ppm SO_2 addition.

You can determine the weight of granules (X) to be used to reach the desired SO_2 level by substituting your known variables.

X = [(desired SO_2 addition **x** volume of wine) ÷ 264ppm] ´ 2.5

For example, you want to make an addition of 30 ppm SO_2 in a volume of 660 gallons. To determine the quantity of granules needed, multiply the 30 ppm by 660 gallons then divide by 264 (the 1g SO_2 per Gallon value). The result is that you need to add 75 g as SO_2, then to find the weight of granules needed, multiply 75 x 2.5 = 188 grams granules needed.

SAFETY PRECAUTIONS

- **EFFERBAKTOL granules** is classified **Xi-Irritant**

  R31 : on contact with an acid it releases toxic gas.
  R36/37 : irritant for the eyes and lungs.
  S26 : in the case of contact with eyes, wash immediately and abundantly with water and consult a doctor.

PACKAGE

- **Efferbaktol 50** Packet equivalent to 50 g as SO_2 (125 g of granules) 30-001-2050
- **Efferbaktol 100** Packet equivalent to 100g as SO_2 (250g of granules) 30-001-2100
- **Efferbaktol 125** Packet equivalent to 125g as SO_2 (300 g of granules) 30-001-2125
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STORAGE

- Unopened original sealed packaging, store in a dry and odor free environment, out of the light.
- Once opened: use quickly, this product is hygroscopic and loses ability to effervesce when exposed to humidity.