

K+S KALI fertilisers

Potash and magnesium
fertilisers



Muriate of Potash

standard

EC FERTILISER

Muriate of Potash 60

60% K_2O water-soluble potassium oxide

- **MOP standard** is a highly concentrated single-nutrient fertiliser containing 60 % K_2O as potassium chloride.
- **MOP standard** is the universal potash fertiliser suitable for all chloride tolerant crops and applicable for all types of soils.
- **MOP standard** is available in different forms varying in particle size distribution and solubility in accordance with the requirements of our customers.

Muriate of Potash fine

Fine crystalline product ideally suited to the manufacture of compound fertilisers.

Muriate of Potash dustfree

Fine crystalline product virtually free of particles smaller than 0.16 mm (> 100 "tyler mesh"). **MOP dustfree** is used for both, the manufacture of compound fertilisers and for straight manual application.

SOLUMOP®

Fine crystalline product with improved solubility and a very low content of insolubles. **SOLUMOP®** was developed to serve specifically as a potassium source in fertigation of chloride tolerant crops.



Muriate of Potash

granular

EC FERTILISER

Muriate of Potash 60

60% K_2O water-soluble potassium oxide

- **MOP granular** is the universal potash fertiliser containing 60% K_2O as potassium chloride. **MOP granular** is suitable for all chloride tolerant crops and applicable for all types of soils.
- **MOP granular** is the granulated form of **MOP standard** ideally suited to bulk blending and mechanical spreading, due to its highly uniform and solid granules.
- **MOP granular** is commonly applied annually after harvest or prior to sowing and incorporated into the top-soil.
- **MOP granular** is available in different forms varying in size distribution of granules in accordance with the requirements of our customers.

Muriate of Potash granular

Granular product universally used for mechanical spreading and bulk blending.

Muriate of Potash granular B

Specifically developed for mechanical spreading and bulk blending in countries using fertilisers with grain size distribution according to American standards.



Sulphate of Potash

standard

EC FERTILISER

Sulphate of Potash 50 (+45), max. 1.0% Cl

50% K_2O water-soluble potassium oxide

45% SO_3 water-soluble sulphur trioxide (= 18% S)

Sulphate of Potash 51 (+45), low chloride max. 0.5% Cl

51% K_2O water-soluble potassium oxide

45% SO_3 water-soluble sulphur trioxide (= 18% S)

- **SOP standard** is a highly concentrated two-nutrient fertiliser based on potassium sulphate.
- **SOP standard** is applied to fruits, vegetables, ornamentals, tea, coffee, tobacco and special purpose crops for improvement of quality characteristics, most importantly colour, storage and transport properties, aroma and taste.
- **SOP standard** has a low salt index and is virtually free of chloride. These characteristics are of particular importance in chloride sensitive crops such as tobacco, fruits and vegetables, in protected crops and under conditions prone to salinity.
- **SOP standard** ensures adequate supply of sulphur; particularly in sulphur demanding crops such as legumes, oil crops, onions, cabbage and leek.
- **SOP standard** is a fine crystalline product used in the manufacture of compound fertilisers and for straight manual application.
- **SOP standard** is approved for use in organic farming according to European Commission Regulation (EC) No 834/2007.



Sulphate of Potash

granular

EC FERTILISER

Sulphate of Potash 50 (+ 45), max 1.0 % Cl

50% K_2O water-soluble potassium oxide

45% SO_3 water-soluble sulphur trioxide (= 18% S)

- **SOP granular** is the granulated form of **SOP standard** containing 50% K_2O and 45% SO_3 as potassium sulphate.
- **SOP granular** is ideally suited to mechanical spreading and bulk blending, due to its appropriate grain size distribution and its high quality granules.
- **SOP granular** is applied to fruits, vegetables, ornamentals, coffee, tea, tobacco and special purpose crops for improvement of quality characteristics, most importantly colour, storage and transport properties, aroma and taste.
- **SOP granular** is virtually free of chloride and hence an ideal potassium source for chloride sensitive crops.
- **SOP granular** has a low salt index compared to other potassium sources, causing a low osmotic effect, which is essential for water and nutrient uptake in protected crops and under conditions prone to salinity.
- **SOP granular** ensures adequate supply of sulphur, particularly in sulphur demanding crops such as legumes, oil crops, cabbage, onion and leek.
- **SOP granular** is approved for use in organic farming according to European Commission Regulation (EC) No 834/2007.



HORTISUL®

EC FERTILISER

Sulphate of Potash 52 (+45)

52% K_2O water-soluble potassium oxide

45% SO_3 water-soluble sulphur trioxide (= 18% S)

- **HORTISUL®** is a highly concentrated grade of Sulphate of Potash specifically developed for fertigation and foliar spray.
- **HORTISUL®** is ideally suited to fertilisation of protected crops such as vegetables, fruits and ornamentals.
- **HORTISUL®** is virtually free of chloride (max. 0.5%), making HORTISUL the perfect potash source for chloride sensitive crops such as tobacco, fruits and vegetables.
- **HORTISUL®** has a low salt index compared to other potassium sources, causing a low osmotic effect which is essential for water and nutrient uptake in protected crops and under conditions prone to salinity.
- **HORTISUL®** is dissolved in water, filtered and subsequently injected into irrigation systems or added to the sprayer tank.
- **HORTISUL®** is compatible with most pesticides and with most fertilisers within common concentration ranges.
- **HORTISUL®** consists of homogeneous crystals making **HORTISUL®** a free flowing fertiliser.
- **HORTISUL®** is derived from natural salt deposits and is approved for use in organic farming according to European Commission Regulation (EC) No 834/2007.



EPSO[®]Top

EC FERTILISER

Magnesium Sulphate 16+32

16% MgO water-soluble magnesium oxide

32% SO₃ water-soluble sulphur trioxide (= 13% S)

- **EPSO Top[®]** is a quick acting magnesium and sulphur fertiliser developed specifically for fertigation and foliar application.
- **EPSO Top[®]** contains 16% MgO and 32% SO₃ as magnesium sulphate heptahydrate (MgSO₄ · 7 H₂O).
- **EPSO Top[®]** is the ideal fertiliser to cure acute magnesium and sulphur deficiencies in agricultural and horticultural crops as well as in forest trees by foliar application (repeated treatment at a concentration of 5%).
- **EPSO Top[®]** is an ideal supplement to soil application of magnesium and sulphur. During periods of peak demand a foliar application of Epsom Salt is recommended on principal, in order to avoid temporary magnesium deficiency.
- **EPSO Top[®]** dissolves rapidly in water to produce a residue free and clear solution, making Epsom Salt a perfect magnesium and sulphur source for sophisticated fertigation- and hydroponic-systems.
- **EPSO Top[®]** mixes well with most pesticides and with most fertilisers within commonly used concentration ranges.
- **EPSO Top[®]** is approved for use in organic farming according to European Commission Regulation (EC) No 834/2007.



EPSO Microtop[®]

EC FERTILISER

Magnesium Sulphate with micro-nutrients 15+31

15% MgO	water-soluble magnesium oxide
31% SO₃	water-soluble sulphur trioxide (= 12% S)
1% B	water-soluble boron
1% Mn	water-soluble manganese

- A quick acting and effective foliar fertiliser containing magnesium, sulphur, boron and manganese. All nutrients are water soluble.
- Meets the increasing requirements for micronutrients of boron demanding crops.
- Immediate foliar absorption and fast response.
- Prevents and rapidly alleviates magnesium, sulphur, boron and manganese deficiencies in growing crops.
- Particularly useful as a prophylactic in nutrient deficient situations.
- Fully effective irrespective of soil pH-level due to the direct foliar absorption.



Magnesium Sulphate with micro-nutrients 13+34

13% MgO	water-soluble magnesium oxide
34% SO₃	water-soluble sulphur trioxide (= 13% S)
4% Mn	water-soluble manganese
1% Zn	water-soluble zinc

- **EPSO Combitor®** has especially been designed to meet the micronutrient demand of highly productive cereals in an ideal combination with magnesium and sulphur.
- **EPSO Combitor®** is a quick acting foliar fertiliser, containing the nutrients magnesium and sulphur as well as manganese and zinc, with all four nutrients in the fully water-soluble form.
- **EPSO Combitor®** can be quickly and fully absorbed through the leaf and therefore acts immediately.
- **EPSO Combitor®** overcomes magnesium, sulphur, manganese and zinc deficiencies in growing crops, quickly and reliably.
- **EPSO Combitor®** is especially suitable for use as a preventative application to avoid deficiency situations before they occur.
- **EPSO Combitor®** is fully effective irrespective of the soil pH due to direct foliar absorption.
- **EPSO Combitor®** is approved for use in organic farming according to European Commission Regulation (EC) No 834/2007.



Korn-Kali®

EC FERTILISER

Potassium Chloride containing Magnesium Salts

40 (+6+4+12)

- 40% K_2O water-soluble potassium oxide
- 6% MgO water-soluble magnesium oxide
- 4% Na_2O water-soluble sodium oxide (= 3% Na)
- 12% SO_3 water-soluble sulphur trioxide (= 4% S)

- **Korn-Kali®** is a combined potassium, magnesium and sulphur fertiliser with 40% K_2O as potassium chloride, 6% MgO as magnesium sulphate (12% SO_3). A further important constituent is 4% Na_2O as sodium chloride.
- **Korn-Kali®** contains potassium, magnesium, sodium and sulphur in a water-soluble form; thus, nutrients are immediately available to the plant irrespective of soil pH.
- **Korn-Kali®** is effective in all types of soils and suitable for all chloride tolerant crops. Korn-Kali satisfies both the potassium and magnesium requirements of crops. In sulphur demanding crops, such as rape and other oil seed crops, Korn-Kali makes a substantial contribution to the provision of sulphur. The sodium has beneficial effects on yield and quality, especially in sugar beet.
- **Korn-Kali®** is ideally suited to basic dressing in autumn or in early spring prior to sowing.
- **Korn-Kali®** is a granulated product with excellent spreading characteristics. The highly uniform granules ensure precise spreading even at large spreading widths. Due to the convenient particle size distribution Korn-Kali is also very well suited to bulk blending.



Patentkali®

EC FERTILISER

Sulphate of Potash containing Magnesium Salt 30 (+10+42)

30% K₂O water-soluble potassium oxide
10% MgO water-soluble magnesium oxide
42% SO₃ water-soluble sulphur trioxide (= 17% S)

- **Patentkali®** is a highly concentrated three-nutrient fertiliser based on potassium sulphate and Kieserite (MgSO₄ · H₂O) especially developed for fertilisation of high quality crops in agriculture and horticulture.
- **Patentkali®** contains readily water-soluble nutrients. Thus, potassium, magnesium and sulphur are immediately available to the plants irrespective of soil type and soil pH.
- **Patentkali®** contains potassium, magnesium and sulphur in an ideally balanced ratio for plant growth and development. This is of particular importance in crops with a specific demand for sulphur (oil crops, cabbage, onion, leek) or magnesium (potatoes, legumes).
- **Patentkali®** is the ideal potassium and magnesium source for chloride or salt sensitive crops such as tobacco, potato, fruits, vegetables, grapes, hops and ornamentals.
- **Patentkali®** is a granulated product with excellent spreading characteristics, also suitable for bulk blending.
- **Patentkali®** is approved for use in organic farming according to European Commission Regulation (EC) No 834/2007.



Magnesia-Kainit®

EC FERTILISER

Kainit 11 (+5+27+10)

- 11% K_2O water-soluble potassium oxide
5% MgO water-soluble magnesium oxide
27% Na_2O water-soluble sodium oxide (= 20% Na)
10% SO_3 water-soluble sulphur trioxide (= 4% S)

- **Magnesia-Kainit®** is mined as a crude potash salt containing Kieserite.
- **Magnesia-Kainit®** acts irrespective of soil pH and therefore is suitable for all sites.
- **Magnesia-Kainit®** contains solely natural constituents of sea water and all nutrients are directly available to plants.
- **Magnesia-Kainit®** supplies K_2O and MgO in the beneficial ratio of 2:1 and hence meets plant requirements for potassium and magnesium. Besides, it contributes to the sulphur nutrition of plants.
- **Magnesia-Kainit®** affects additionally weed growth due to its ideal granulometry.
- **Magnesia-Kainit®** is approved for use in organic farming according to European Commission Regulation (EC) No 834/2007.



ESTA® Kieserite

fine

EC FERTILISER

Kieserite 27+55

27% MgO water-soluble magnesium oxide

55% SO₃ water-soluble sulphur trioxide (= 22% S)

- **ESTA® Kieserite fine** is a highly concentrated two-nutrient fertiliser containing 27% MgO and 55% SO₃ as Kieserite (MgSO₄ · H₂O).
- **ESTA® Kieserite fine** is readily water-soluble and thus magnesium and sulphur are immediately available to the plant.
- **ESTA® Kieserite fine** is suitable for all types of soils owing to its high solubility regardless of soil pH. Kieserite ensures an adequate supply of magnesium and sulphur, particularly on calcareous soils with high pH values.
- **ESTA® Kieserite fine** is the fertiliser for basic dressing with magnesium and sulphur as well as for amelioration of magnesium deficient soils, due to its immediate and sustained efficiency.
- **ESTA® Kieserite fine** is a fine crystalline product ideally suited to the manufacture of compound fertilisers and for straight manual application.
- **ESTA® Kieserite fine** is mined from naturally occurring salt deposits and is approved for use in organic farming according to European Commission Regulation (EC) No 834/2007.



ESTA® Kieserite

gran.

EC FERTILISER

Kieserite 25+50

25% MgO water-soluble magnesium oxide

50% SO₃ water-soluble sulphur trioxide (= 20% S)

- **ESTA® Kieserite gran.** is the granulated form of **ESTA® Kieserite fine** containing 25% MgO and 50% SO₃ as magnesium sulphate.
- **ESTA® Kieserite gran.** is suitable for all types of soils owing to its high solubility regardless of soil pH. Particularly on calcareous soils and soils with high pH values Kieserite ensures an adequate supply of magnesium and sulphur.
- **ESTA® Kieserite gran.** is the fertiliser for basic, side and top dressing with magnesium and sulphur as well as for amelioration of magnesium deficient soils, due to its immediate and sustained efficiency.
- **ESTA® Kieserite gran.** has excellent spreading properties, due to the hardness of the granules and the appropriate particle size distribution. **ESTA® Kieserite gran.** is also ideally suited to bulk blending.
- **ESTA® Kieserite gran.** is mined from naturally occurring deposits and is approved for use in organic farming according to European Commission Regulation (EC) No 834/2007.



patent-PK[®]

EC FERTILISER

PK-fertiliser based on soft ground rock phosphate
P₂O₅ + K₂O (+ MgO + SO₃) 12+15 (+ 5+ 27)

12% P₂O₅ in mineral acid-soluble phosphorus pentoxide, of which at least 55% of the declared P₂O₅ content is soluble in 2% formic acid

15% K₂O water-soluble potassium oxide

5% MgO water-soluble magnesium oxide

27% SO₃ water-soluble sulphur trioxide (= 11% S)

- **patent-PK[®]** is a superb granular fertiliser comprising soft rock phosphate and **Patentkali[®]**, i.e. potassium and magnesium in the quality promoting sulphate form.
- **patent-PK[®]** is a multi-nutrient fertiliser with significant operational advantages for organic systems.
- **patent-PK[®]** is an excellent basic fertiliser for all chloride sensitive crops such as potatoes, fruits, tobacco, vegetables and grape vines.
- **patent-PK[®]** meets the increasing sulphur requirements of crops, due to a SO₃ content of 27%.
- **patent-PK[®]** ideal for use in organic agriculture.
- **patent-PK[®]** is approved for use in organic farming according to European Commission Regulation (EC) No 834/2007.



K+S KALI fertilisers

Product	Nutrients
Muriate of Potash	60% K ₂ O
Sulphate of Potash*	50% K ₂ O - 45% SO ₃
Hortisul®*	52% K ₂ O - 45% SO ₃
EPSO Top®*	16% MgO - 32% SO ₃
EPSO Microtop®*	15% MgO - 31% SO ₃ - 1% B - 1% Mn
EPSO Combitop®*	13% MgO - 34% SO ₃ - 4% Mn - 1% Zn
Korn-Kali®	40% K ₂ O - 6% MgO - 4% Na ₂ O - 12% SO ₃
Patentkali®*	30% K ₂ O - 10% MgO - 42% SO ₃
Magnesia-Kainit®*	11% K ₂ O - 5% MgO - 27% Na ₂ O - 10% SO ₃
ESTA® Kieserite*	27% MgO - 55% SO ₃
patent-PK®*	12% P ₂ O ₅ - 15% K ₂ O - 5% MgO - 27% SO ₃

*approved for use in organic farming in accordance with European Commission regulation (EC) No 834/2007.





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