



APPLICATION GUIDE

HIGH PERFORMANCE  
LIQUID POTASSIUM  
WITH THIOSULFATE SULFUR





**Tessenderlo Kerley International's liquid fertilizers deliver liquid precision to the crop: more precise application and more efficient nutrient uptake.**

- Active Thiosulfate is a versatile technology with double action: it brings a key nutrient and acts as an activator enhancing the uptake of other nutrients, thus optimizing overall fertilizer efficiency.
- We bring a new generation of liquid fertilizers – innovative products for more precise and environmentally responsible yield & crop quality improvement.

#### **The importance of potassium**

Potassium is an essential element in all plants and in certain crops, such as potatoes it is the most important of the three primary nutrients nitrogen, phosphorus and potassium (N, P, K). While potassium is not directly incorporated into the plant tissue, its presence is vital for many important physiological and biochemical functions:

- Potassium is essential for the development of proteins, enzymes and vitamins as well as for plant photosynthesis.
- It plays a key role in transport functions within the plant.
- Potassium controls plant transpiration, improving the efficiency of water use and hence reducing drought stress.
- It is also involved in a variety of other important metabolic functions.

**KTS® is a clear, chloride-free solution that contains the highest potassium and sulfur content available on the market.**

- Boosts crop quality: improves consistency, protein content, crop color, sweetness and shelf life.
- High quality potassium delivers efficiency to ensure a better crop yield.
- Improves the assimilation of other nutrients present in the soil (especially phosphorus and certain micronutrients).
- Liquid potassium and sulfur fertilizer without either nitrogen or chloride.



## INTRODUCTION

KTS is a neutral to basic, chloride-free, clear liquid solution, containing 25% potash and 17% sulfur. Each litre of KTS contains 360 grams of potash ( $K_2O$ ) and 252 grams of sulfur (S). KTS can be applied by drip, sprinkler or flood irrigation. It may be blended with other fertilizers or applied as a foliar treatment on selected crops. When used as a foliar fertilizer KTS should first be diluted with water before applying.

KTS may be applied to a wide variety of ornamental, turf, green-house and other agricultural crops. Potassium requirements for most crops increase dramatically during periods of rapid growth and fruit development. KTS combines the essential nutrients potassium and sulfur in an optimal form that is readily available to plants.

## BENEFITS OF KTS

### Crop quality

- Encourages uniform growth
- Increases the production of protein and its quality
- Enhances crop resistance to environmental stress
- Assists the translocation of sugar

### Nutrient uptake

- K uptake is at least 30% more efficient compared with conventional K-fertilizers
- Provides potassium and sulfur, which are essential for all crops

### Liquid fertilizer benefits

- Easy to handle and safe to use
- Cost effective
- Fully compatible with irrigation systems and sprayers
- Does not plug drip lines or spray nozzles

### Active thiosulfate benefits

- Increases chlorophyll content
- Assists the synthesis and functioning of enzymes and vitamins in the plant
- Optimizes fertilizer efficiency
- Improves availability of nutrients in the soil, particularly micronutrients

## SUMMARY OF APPLICATIONS

- Compatible with open field cultivation as well as cultivation under covers in tunnels and in greenhouses
- Can be applied via drip irrigation, sprinklers and pivots, soil injection and foliar applications
- Suitable for use in all crops but is specially recommended for a wide range of cash crops as well as for corn, soybean, cotton and tuber crops

## COMPATIBILITY

KTS is compatible with most other liquid fertilizers within normal concentration ranges, except with those containing calcium, which may cause precipitation of calcium sulfate ( $CaSO_4$ ). However, KTS can be blended with CaTs® and is also compatible with most pesticides and fungicides.

## SPECIFICATIONS

- $K_2O$ (w/w)	25%
- S (w/w)	17%
- pH range	6.8 - 8.5
- Density range (at 25°C)	1.45 - 1.49

## TYPICAL PROPERTIES

- Appearance/color	Clear and colorless
- Density (at 25°C)	1.47 kg/l
- Recommended minimum storage temperature	- 10°C
- $SO_3$ (w/w)	42.4%
- $K_2O$ (w/v)	36.8%
- S (w/v)	25%
- $SO_3$ (w/v)	62.4%
- $K_2O$ (g/l)	368
- S (g/l)	250
- $SO_3$ (g/l)	624
- Chemical formula	$K_2S_2O_3$

## FERTIGATION

Fertigation is the practice of injecting soluble or liquid fertilizers through irrigation systems using water as a nutrient delivery system to the crop.

KTS has been specifically developed for use in fertigation and the product has all the necessary characteristics to be ideal for this application.

Before injecting KTS into an irrigation system, make sure that the irrigation system is in good condition and provides uniform distribution to the field. Application of nutrients like KTS should be made in the middle third or second half of an irrigation set. Several hours of irrigation should take place before and after the injection of KTS.

*The injection of KTS should be done slowly, and should last at least as long as it takes irrigation water to travel from the point of injection to the last emitter or sprinkler in the field. The injection of KTS should be done with a fertilizer injection pump and should be done over a 1 to 4 hour time period. Rapid injection of KTS may lead to uneven distribution of the KTS and may cause crop damage. For additional information about injection of nutrients into an irrigation system, consult with your local agronomist and review the International Fertilizer Industry Association (IFA) publication "Fertigation: A tool for efficient fertilizer and water management" (U. Kafkafi and J. Tarchitzky).*

*All rates listed are for established crops on medium to fine textured soils (suggested rates are for trees and vines at least 4 years old or older). Avoid application to new plantings until crop is well established. For sandy soils, suggested rates should be reduced by 50%. Do not apply KTS when crops are experiencing heat or moisture stress.*

## FLOOD AND IN FURROW APPLICATION

- Trees and vines: 45 to 110 liters of KTS per hectare per application; apply once every 2 to 3 weeks starting at full leaf
- Vegetable and row crops: 45 to 95 liters of KTS per hectare per application; apply once every 2 to 3 weeks

## SPRINKLER/CENTRE PIVOT IRRIGATION

- Trees (under): 45 to 75 liters per hectare per application every 10 to 14 days based on crop requirements
- Trees (overhead): 30 to 45 liters per hectare per application every 10 to 14 days based on crop requirements
- Vines: 30 to 45 liters per hectare every 10 to 14 days based on crop requirements
- Vegetable and row crops: beginning at the 3<sup>rd</sup> - 4<sup>th</sup> leaf stage, apply 10 to 55 liters per hectare every 7 to 10 days based on crop requirements
- After injection, allow enough irrigation time (at least 60 minutes) to rinse the plants of any residual fertilizer

## DRIP IRRIGATION

Calculations for specific solution concentrations are given below. A typical scenario is that a nutrient solution of 80 mg K per liter requires a stock solution of 5.25 l KTS (7.72 kg) per 100 liters of water, injected at a rate of 0.5%.

For scenarios not described in the table, the following formulae can be used to calculate the relevant solution concentrations:

- **Nutrient solution** (K ppm or K mg/l) = 30.5 x concentration of stock solution (l KTS per 100 l water) x % injection rate
- **Stock solution** (l KTS per 100 l water) = 0.0328 x concentration of nutrient solution (ppm K or mg K/l) / % injection rate

NUTRIENT SOLUTION (K PPM OR K MG/L)	STOCK SOLUTION (L OF KTS PER 100 LITERS OF WATER) AT AN INJECTION RATE OF		
	1%	0.8%	0.5%
20	0.66	0.82	1.31
40	1.31	1.64	2.62
<b>80</b>	2.62	3.28	<b>5.25</b>
120	3.94	4.92	7.87
160	5.25	6.56	10.50
200	6.56	8.20	13.12
240	7.87	9.84	15.74
280	9.18	11.48	18.37
320	10.50	13.12	20.99
360	11.81	14.76	23.62
400	13.12	16.40	26.24



KTS does not contain any nitrogen. This allows it to supply efficient quantities of potassium while maintaining a high K/N ratio, which is of special importance before harvesting vegetables or during fruit growth. The K/N ratio must also be adapted to soils or substrates used in glasshouses or polythene tunnels.

#### **Fruit and nuts** (pome fruit, stone fruit, tropical fruit, citrus, kiwi, olive, avocado, pistachio, almond)

Fertilization of fruit trees is very often based on the nutrient content of leaves. Leaf analysis is therefore an indispensable tool to determine the requirements of fruit trees. The figures below indicate the range of optimal K content for various fruit types. The frequency of KTS application depends on the soil type. For instance, light textured soils demand smaller more frequent doses compared to heavier soils with a high fixation capacity.

- **Young trees:** 30 to 45 liters per hectare during the season, starting at full leaf; apply once every 3 to 4 weeks
- **Mature trees:** 45 to 95 liters per hectare, starting at full leaf; apply once every 3 to 4 weeks

#### **Grapes**

Application of KTS can be made any time up to veraison and post-harvest.

- **Young vines:** 25 to 45 liters per hectare, no more than once every 3 to 4 weeks
- **Mature vines:** 45 to 95 liters per hectare as required according to tissue analysis, no more than once every 2 weeks

#### **Vegetables and row crops**

25 to 50 liters per hectare, once every 10 days, no more than 3 times per month

#### **Tobacco**

10 to 50 liters per hectare, once every 14 days, 3 to 6 applications, starting three weeks after planting

#### **Bananas**

30 liters per hectare at fruit filling (finger stage) followed by 30 liters per hectare 15 days before harvest

#### **Flowers**

3 to 5 liters per hectare weekly throughout crop growth

#### **Strawberries**

30 to 50 liters per hectare once every 10 days after plants are well established, no more than 3 times per month

#### **Blueberries**

30 to 50 liters per hectare once every 10 to 14 days, from fruit set, BBCH70, application during second third of watering

#### **Cranberries**

30 to 50 liters per hectare once every 10 days after plants are well established, no more than 3 times per month





### MICRO-SPRINKLER (FAN JET)

- **Young trees:** 25 to 50 liters per hectare, once every 3 to 4 weeks
- **Mature trees:** 55 to 110 liters per hectare, once every 3 to 4 weeks
- **Young vines:** 25 to 50 liters per hectare, once every 3 to 4 weeks, starting at full leaf
- **Mature vines:** 45 to 95 liters per hectare as required according to tissue analysis, once every 3 to 4 weeks starting at full leaf

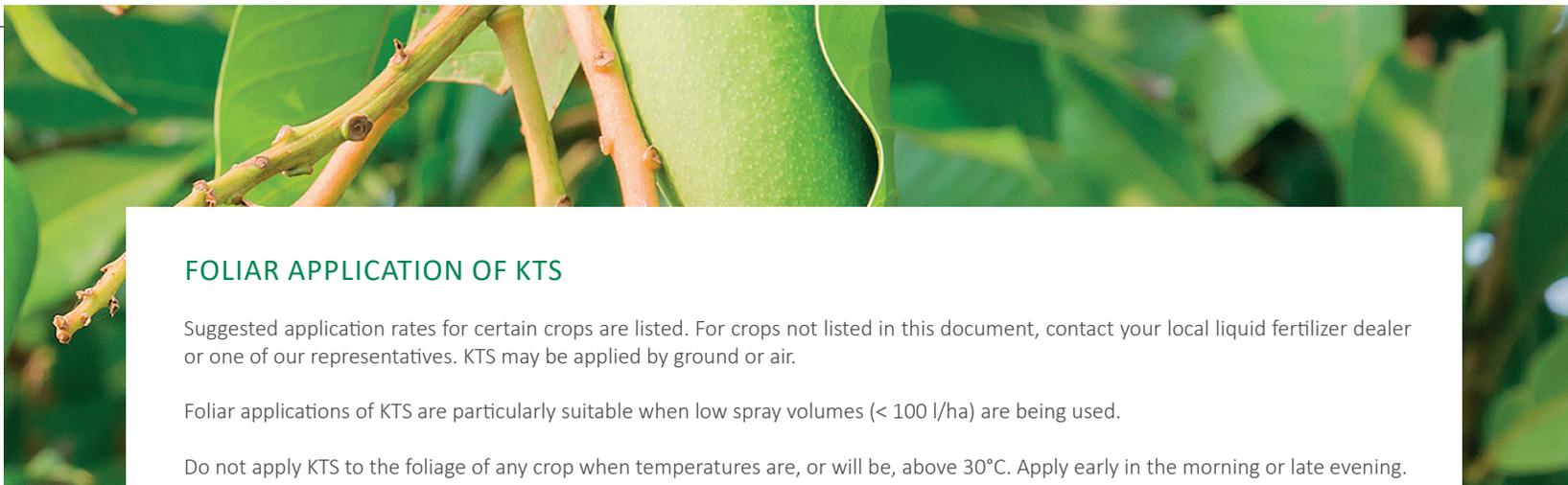
OPTIMAL K CONTENT IN LEAVES (% IN DRY MATTER)	
Apple, pear	1.1 - 2.0
Stone fruits	1.5 - 3.0
Citrus	1.0 - 1.7
Mango	0.3 - 1.2
Grapes: petiole	1.2 - 5.0
: leaf blade	0.6 - 1.5
Pistachio	1.8 - 2.2
Kiwi	> 0.8
Banana	3.0 - 5.0

### DIRECTIONS FOR USE OF KTS IN DRIP IRRIGATION

To get the best results from KTS in fertigation programs using injections of stock solutions, the guidelines below should be followed:

- Add ½ of water to tank, begin stirring
- With highly alkaline water (pH > 8), it is recommended to first neutralize the stock solution to pH 7 before addition of KTS
- Add recommended amount of KTS followed by the other compatible liquid N and P sources
- Add compatible micronutrients, followed by flowable materials, then by emulsifiables and finally any soluble powders and/or water soluble fertilizers. (All should be pre dispersed in water before adding to the tank solution.)
- Complete filling of tank to desired volume and continue circulating prior to and during injection
- Flush equipment after usage
- It is highly recommended to conduct a small scale trial to check the compatibility of the mixture before large scale operation and injection into the irrigation system.
- Always refer to instructions for use and precautions given for the product





## FOLIAR APPLICATION OF KTS

Suggested application rates for certain crops are listed. For crops not listed in this document, contact your local liquid fertilizer dealer or one of our representatives. KTS may be applied by ground or air.

Foliar applications of KTS are particularly suitable when low spray volumes (< 100 l/ha) are being used.

Do not apply KTS to the foliage of any crop when temperatures are, or will be, above 30°C. Apply early in the morning or late evening.

### **Cotton:**

5 to 10 liters per hectare beginning from the 1<sup>st</sup> through to the 4<sup>th</sup> week of bloom along with liters per hectare of N-Sure

### **Potatoes:**

5 to 10 liters per hectare beginning at tuber initiation; apply second treatment at golf ball size and third treatment at tuber bulking

### **Wheat and other small grains:**

5 to 15 liters per hectare at tillering to early boot stage. Do not use foliar on corn and crops sensitive to sulfur.

### **Canola:**

5 to 15 liters per hectare at bolting

### **Alfalfa:**

10 to 15 liters per hectare at crown green up or on regrowth just after cutting

### **Rice:**

5 to 10 liters per hectare at panicle initiation

### **Peas and Lentils:**

5 to 10 liters per hectare during late bud to 10% bloom

### **Tomatoes:**

Begin at fruit set; apply 5 to 10 liters per hectare every 7 to 14 days

### **Soybeans:**

10 to 15 liters per hectare at R1 to R2 stage

### **Sugar beets:**

10 to 20 liters per hectare at row closure

### **Apples, apricots, almonds, citrus, pecans:**

KTS at 5 to 15 liters per hectare in a minimum of 1000 liters of water spray solution. Begin application at first full leaf and apply as needed during the growing season. For concentrated sprays of less than 1000 liters per hectare, reduce the rate of KTS to stay within the recommended solution ratio (i.e., 500 liters of water per hectare equals 2.5 to 7.5 liters of KTS per hectare). Do not exceed a spray solution concentration of 1.5%.

### **Viniferous vines:**

Begin 2 weeks after bloom: 5 to 10 liters per hectare in a minimum of 500 liters of water. Repeat treatment in 7 to 10 days. Do not apply foliar to Concord grapes. Do not exceed a spray solution concentration of 2%. Do not apply after veraison.

*Recommendations listed above are for KTS application only. The addition of other products to the spray mix is the responsibility of the applicator and not Tessenderlo Kerley International, and should be tested on the crop in a small area before applying to large areas due to possible phytotoxicity. Avoid using silicon adjuvants when applying KTS in a foliar spray. Caution: Foliar applications of KTS during bloom may in some tree crops lead to flower thinning.*





## SOIL APPLICATION OF KTS

### STARTER FERTILIZER

Be sure to follow established recommendations for crop, soil type and moisture conditions in your area. Excessive amounts of fertilizer can damage seed germination. Do not apply to small seeded crops. Do not exceed established recommendations for N + P + K for local soil type and conditions.

Starter recommendations are for a 5 cm x 5 cm (5 centimeters to the side and 5 centimeters below the seed) or a 5 cm x 0 cm (5 cm to the side of the seed on the soil surface). KTS can be applied by itself or with other starter fertilizers, such as P-Sure®.

- **Corn:** apply 10 to 50 liters of KTS per hectare
- **Wheat:** apply 10 to 50 liters per hectare
- **Tobacco:** apply 10 to 25 liters as a single application, during the transplanting of young plants
- **Sugar beet, potatoes, oilseed rape, sorghum:** apply 10 to 50 liters per hectare

### POP-UP FERTILIZER (IN FURROW)

It is recommended to avoid contact between KTS and the seeds of legumes or other small seeded crops. If in doubt consult with your Tessengerlo Kerley expert.

- **Corn:** apply 5 to 10 liters of KTS per hectare by itself or with other liquid pop-up fertilizers
- **Wheat:** apply 5 to 10 liters of KTS per hectare by itself or with other liquid
- **Sugar beet, potatoes, oilseed rape, sorghum:** apply 5 to 10 liters of KTS per hectare

### SIDE DRESSING

KTS can be soil injected or deep banded by itself or with nitrogen and phosphorus to supply crops with N, P, K and S requirements for the season. Soil injection can improve nutrient use efficiency by reducing nutrient loss due to erosion and soil fixation. KTS can also be broadcast sprayed on soil surface or surface banded midway between rows to help meet potassium and sulfur requirements. Follow soil and tissue analysis recommendations to apply the proper amount of potassium and sulfur.

- **Corn, cotton, soybeans:** 25 to 140 liters per hectare soil injection on medium to fine textured soils and 28 to 94 liters per hectare sandy soils; avoid pruning roots. Apply as needed to meet crop requirements. For surface banding or dribble application, 28 to 94 liters per hectare on medium to fine textured soils and 28 to 47 liters per hectare on sandy soils. Do not allow spray or spray drift to contact leaves, stalks or any part of the crop due to potential phytotoxicity.
- **Vegetables:** for soil injection, surface banding or dribble application apply 25 to 115 liters per hectare on medium to fine textured soils and 25 to 75 liters per hectare on sandy soils; avoid pruning roots. Apply as needed to meet crop requirements. Do not allow spray or spray drift to contact leaves, stalks or any part of the crop due to potential phytotoxicity.

Rates will vary depending on crop requirement and soil analysis.

### BLENDING WITH KTS

- KTS is compatible with liquid urea ammonium nitrate (UAN) and ammonium polyphosphate (APP) solutions in certain specific ratios.
- Blends of KTS and APP may exhibit some cloudiness although under normal circumstances this should not effect the performance of the blend, which is best used soon after preparation.
- Only UAN and KTS blends with greater than 80% of one of the two components are stable without dilution.
- In general, when blending KTS and UAN solution, as much water, by weight, should be added to the blend so as to equal the amount of the UAN solution or KTS in the final mix, whichever is the smaller (so, for example in a blend of 60 kg of UAN solution with 40 kg of KTS, the blend should be diluted with 40 kg of water). Blending order should be: KTS, then water, followed by UAN. Blends with UAN solution should be tested first before making large quantities. In cold weather, the potassium in KTS reacts with the nitrate in UAN to form potassium nitrate crystals. Adding water or heat will bring the crystals back into solution. Avoid sparging air into KTS or a KTS blend. When mixing pesticides with KTS, and other fertilizers, the blend sequence should be as follows: water, then pesticide, followed by KTS and/or other fertilizer. Always make sure that combinations with pesticides are compatible.
- Micronutrient blends should be jar tested first before mixing with KTS. In most situations, micronutrient chelates of neutral pH are preferred for blending with KTS. Strongly acidic and/or weak chelates do not blend well with KTS. Blends of KTS should not be acidified below a pH of 6.0.



### SOME EXAMPLES OF STARTER FERTILIZER BLENDS

BLEND	PRODUCTS	KG PER METRIC TON OF BLEND
6-21-6-4S	10-34-0	615
	KTS	240
	Water	145
7-25-6-4S	10-34-0	730
	KTS	240
	Water	30
10-13-5-3S	UAN32	195
	10-34-0	385
	KTS	200
	Water	220

Always do a jar test before making large quantities. When blending KTS and UAN 32, always have as much water, by weight, in the blend as the UAN 32 solution. Ratio of UAN to KTS must not drop below 4:1 (i.e. must not exceed 20% of KTS) in binary UAN rich mixtures.

### KTS + P-SURE (APP) STARTER BLENDS

- Highly efficient starter fertilizers
- Provides young plants with four essential nutrients: nitrogen, phosphorus, potassium and sulfur
- Ensures the vital early development of the crop with reduced amounts of phosphorus
- Helps mobilize zinc, iron and manganese
- P-Sure contains 50% of the phosphorus in the orthophosphate form, immediately available to the plant and 50% in the form of various polyphosphate chains which become available to the plant over a variable length of time ranging from several days to several weeks depending on the soil type.
- KTS helps to regulate the release of phosphorus from the P-Sure
- P-Sure contains 158 g/l N as ammoniacal nitrogen and 533 g/l P<sub>2</sub>O<sub>5</sub>

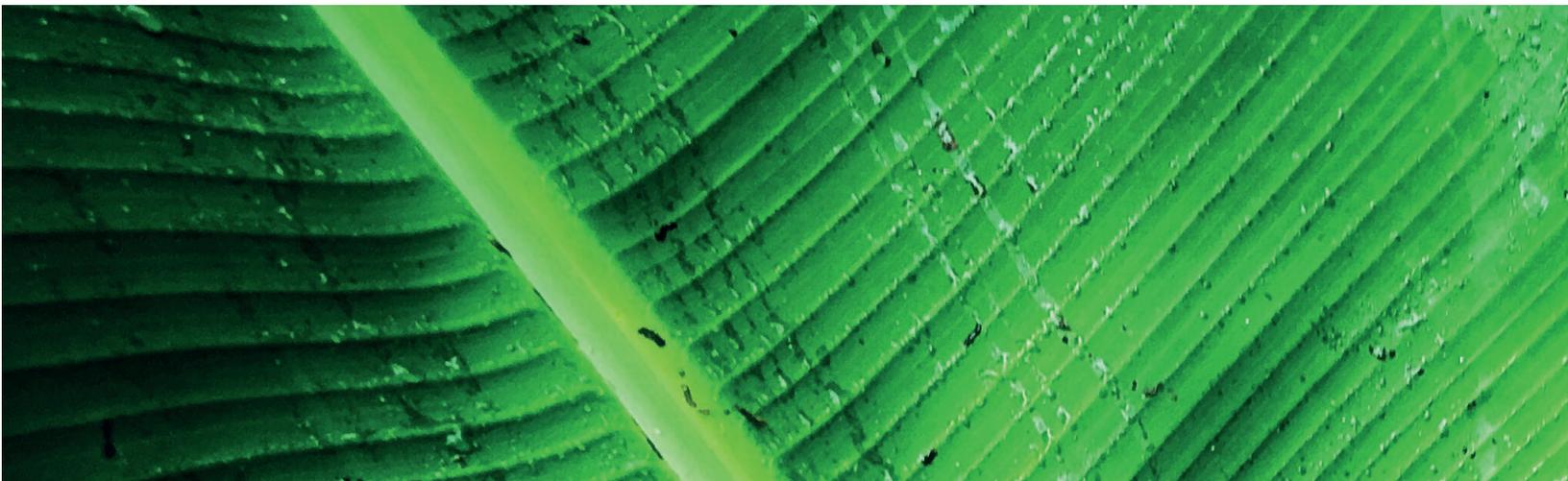
APPLICATION	KTS (dose l/ha)	P-SURE (11-37-0) (dose l/ha)	CROPS
Application of the fertilizer in the seed line (pop-up)*	5-10	10-40	Corn, cereals, sorghum, potatoes, sugar beets and other row crops
Localized application (5x5)	10-50	30-150	All crops

\* On light sandy soils with a low proportion of humus doses should be reduced to a maximum of 5 liters of KTS per hectare with a maximum of 30 l of P-Sure per hectare.

### SOIL APPLICATION OF KTS: PH AND CROP PRODUCTIVITY

Soil pH has a direct effect on nutrient availability as well as soil microbial activity. A low soil pH can indicate the presence of high levels of toxic ions such as manganese, iron and/or aluminum while a high pH can indicate the presence of high calcium levels in the soil. Most crops do best with a soil pH between 6.0 and 7.5 for optimum nutrient uptake.

Periodic testing of soils is the only way to determine soil pH and the appropriate course of action to maintain soils at their full productive potential. Minimize or avoid applications of KTS if the pH of the soil is below 6.0.



## PRECAUTIONS FOR USE

CAUTION: Plant and leaf injury may occur on some crops when certain weather and growing conditions are present. The user assumes all risks of use and handling.

- DO NOT apply KTS to foliage of crops sensitive (foliar burn) to sulfur.
- DO NOT apply KTS to foliage of any crop when temperatures are, or will be, above 30 °C. Apply KTS in the early morning or in the evening.
- Use caution when applying fertilizer to crops experiencing heat or moisture stress. Fertilizers are salts which compete with the crop for water. Crops should be hydrated before applying any fertilizer.
- The total rate of fertilizer applied should be split among several irrigations at lower rates per application as temperatures increase.
- DO NOT apply KTS with knife injectors or other types of fertilizer injecting equipment that may cause root pruning.
- Do not apply KTS foliar with crop oil sprays. Allow at least 14 days before or after an application of crop oil before applying KTS as a foliar.
- DO NOT apply KTS while chlorinating irrigation system. Thiosulfates will neutralize chlorine.
- DO NOT mix KTS with acid or acidic fertilizers below a pH of 6.0: KTS will decompose.
- DO NOT use high-pressure sprays (greater than 60 psi or 4.1 bar) when applying KTS over the top of a crop.
- Recommendations are for KTS only; the addition of other fertilizers at or near the same time could increase the chance of phytotoxicity to the crop. Please allow several days between injections.
- When mixing KTS or any liquid fertilizer with pesticides always keep agitators running during filling and spraying operations. Failure to maintain agitation may cause separation of products resulting in uneven spray application.
- Many crops are sensitive to salts during germination. When soil moisture is low, delayed crop emergence and/or phytotoxicity may occur when fertilizer is placed too close to the seed. Do not use KTS in pop-up fertilizer when soil moisture is limited, soil salinity is above an electrical conductivity of 1.0 mS/cm or when irrigation is delayed such that germination may be affected.
- Fertigation application of KTS and other liquid or water soluble fertilizers to an established crop may cause injury to a crop if:
  1. Injection period is less than 60 minutes, which may cause an uneven distribution of KTS to the crop
  2. KTS rates are higher than suggested
  3. Ample irrigation water is not applied immediately before and after the injection of KTS
- Crop injury may result from unusual weather conditions (heat wave, drought, or hot drying wind), or improper application practices such as injecting fertilizer to quickly all of which are out of control of the manufacturer or seller. For further information contact a Certified Crop Advisor (CCA), Pest Control Advisor (PCA), fertilizer dealer or Tessenderlo Kerley International Specialist.



## GENERAL PRECAUTIONS

Avoid prolonged or repeated contact with eyes, skin and clothing. Chemical goggles or a full face shield should be worn. To protect skin, wear appropriate protective equipment such as rubber or plastic aprons, rubber gloves and boots. Avoid breathing mist or vapour. Keep containers closed. Wash thoroughly after handling. May cause gastrointestinal distress if swallowed. For further information, consult a Material Safety Data Sheet (MSDS). To request an MSDS, send an e-mail [tessenderlokerley@tessenderlo.com](mailto:tessenderlokerley@tessenderlo.com).

### First aid

In case of contact with eyes, immediately flush eyes with water for at least 15 minutes. Seek immediate medical attention if irritation occurs. In case of skin contact, flush skin with water. If irritation occurs, seek immediate medical attention. Remove and wash contaminated clothing before reuse. If swallowed, give large amounts of water and induce vomiting by touching back of throat with finger unless unconscious. Seek immediate medical attention.

### Handling and storage

Minimise skin exposure. Store mini-bulks and smaller containers out of the sun in an area of moderate temperature. Do not reuse containers. Avoid containers, piping or fittings made of copper containing alloys or galvanised metal. Do not store at temperatures below -10°C as crystallisation may occur. KTS may be stored in plastic, fibreglass or stainless steel vessels. Dispose of containers in accordance with local regulations and requirements.

### In case of spill

Contain spill and maximize recovery. Keep spill out of water sources. Exercise caution in area of spill for slippery conditions. Dispose of spilled material in accordance with regulatory requirements.

### Phytotoxicity

Plant and leaf injury may occur on some crops when certain weather and growing conditions are present. The user assumes all risks of use and handling. Before handling this product, consult the MSDS for handling, safety and first aid information.

### Warranty and Limitation of Damages

Crop injury may result from unusual weather conditions, failure to follow label directions, or improper application practices, all of which are out of control of the manufacturer or seller. The directions in this application guide are believed to be reliable and should be followed carefully.

While every care has been taken to ensure that the information in this publication is correct at the time of publication, Tessenderlo Group cannot give any guarantee as to its accuracy or accept any liability resulting from its use.

The purpose of this guide is to provide information about this product and to make suggestions regarding its use. This guide does not make recommendations about the amount of potassium and sulfur needed for optimum crop production. The rate of each application of KTS should be made based on a soil test, soil release rate test and/or plant tissue analysis for potassium and sulfur, and on the recommendations of a Certified Crop Advisor, Pest Control Advisor or authorized KTS distributor.

Seller's guarantee shall be limited to the terms in the Application Guide, and subject thereto, the buyer assumes any risk to person or property arising out of use or handling and accepts the product on these conditions.

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## SUSTAINABLE CROP NUTRITION FOR AGRICULTURE

For over 100 years Tessenenderlo Kerley International has demonstrated its commitment to nurturing crop life through innovation, research and the development of novel fertilizers for a more sustainable agriculture. Our diverse product portfolio addresses the challenges of modern agriculture by delivering essential nutrients in forms that protect soil health and optimize nutrient use efficiency.

### We provide an extensive range of both liquid and solid/soluble fertilizers



HIGH-PERFORMANCE LIQUIDS

HIGH QUALITY SOLID/SOLUBLES



**Our experts are familiar with your region and crops.  
Their support includes:**

- Agronomic advice
- Providing technical information
- Carrying out field studies that are specific to your issues
- Providing application and storage tips

**For more contact information, please get in touch with:**

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