



The Long-Lasting Shield Against Grain Pests.

Get Proven Protection for up to 5 Months*

About K-Obiol® EC 25:

- + **K-Obiol® EC 25** is a potent, synergised grain protectant designed to protect your uninfested cereal grain.
- + As a contact pesticide, it acts as a preventative measure, shielding your grain from insect infestations.
- + **Note:** To maximize effectiveness, apply to uninfested grain. If already infested, a targeted treatment may be necessary to eliminate the existing insects.

Active Ingredient & Mode of Action:

- + **K-Obiol® EC 25** contains the active ingredient deltamethrin (a pyrethroid).
- + Piperonyl butoxide (PBO) is added as a synergist, enhancing deltamethrin's effectiveness, even against pyrethroid-resistant insects.
- + Deltamethrin, a potent neurotoxin, acts by both contact and ingestion. It disrupts the insect's nervous system, leading to rapid paralysis and knockdown, effectively incapacitating and ultimately killing the pest.

Pests Controlled:

K-Obiol® EC 25 protects bulk-stored raw cereals from a variety of insect pests, including:

- + Confused flour beetle
- + Saw-toothed grain beetle
- + Rust-red flour beetle
- + Rice weevil
- + Granary weevil
- + Maize weevil
- + Flat grain beetle

K-Obiol® EC 25 can also be used to prevent tropical grain moth eggs from hatching and control lesser grain borer when used as a fogging solution.



Key Product Characteristics:



Formulation Type:
Emulsifiable Concentrate (EC)

K-Obiol® EC 25 is an emulsifiable concentrate. This means it is a liquid formulation that requires dilution with water before application. The concentrate is mixed with water in the reservoir of the sprayer to create the working solution.



Active Ingredients:
Deltamethrin 25 g/l
Piperonyl butoxide 225 g/l

The long-lasting residual action of **K-Obiol® EC 25** (up to 5 months*) significantly reduces the need for frequent re-treatments, saving time, labour and overall costs.



Properties:
K-Obiol® EC 25 is a potent, synergistic grain protectant

Application Methods:
Direct grain application (on specified grains), residual treatment of surfaces, fogging of storage facilities, treatment of bag stacks & surface treatment for control of tobacco beetle.



Packaging:
5L and 20L**

Areas of Use:
Grain storage facilities and silos.

** Depending on availability



*Depending on the surface and usage application.

Usage and Application:



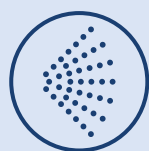
Admix Treatment of Bulk Stored Raw Grains

K-Obiol® EC 25 can be applied directly to bulk stored raw grains to provide protection from stored grain insect pests.

Direct application on maize, wheat, rye and oats in bulk storage.

Application Timing:
Apply **K-Obiol® EC 25** as a protectant to **un-infested grains** at time of storage.

(See calculation table on the next page).



Residual Spray Treatment

K-Obiol® EC 25 can be sprayed on surfaces within grain storage facilities to create a protective barrier against stored grain insects.

Residual treatment of (non porous) surfaces in barns, warehouses & areas where grain is stored:
Dilution: 100 ml - 120 ml in 10 l water / 200 m².



Thermal Fogging Solution

K-Obiol® EC 25 can be used in thermal fogging machines to effectively reach and eliminate pests in the most hard-to-reach areas of enclosed storage facilities.

Fogging of storage facilities:
Dilution: 1 l in 1 l paraffin or diesel. Applied at 1 l solution per 4000 - 5000 m³.



Treatment of bag stacks

K-Obiol® EC 25 can be sprayed on bag stacks in grain storage facilities to protect them from stored grain insects.

Treatment of bag stacks:
Dilution: 60 ml - 100 ml in 10 l water / 100 m².



Direct Application on Grains:

Application Rate:

K-Obiol® EC 25 must be diluted before it is used. Dilute 1 part **K-Obiol® EC 25** to 16.5 parts of water (600ml to 10L) to give a mixture containing 0.15% m/v deltamethrin.

Calibrate the spray equipment according to achieve a nominal deposit of 0.75 ppm deltamethrin using the calculations (Grainflow in tons/h X 76)/55 =ml / 10 sec.

Application Calculation

Flow rate of grain hopper (tons / h)	K-Obiol® EC 25 mix	
	ml/10 sec	litre / h
15	20.73	7.46
20	27.64	9.95
25	34.55	12.44
30	41.45	14.92
35	48.36	17.41
40	55.27	19.90
60	82.91	29.85
80	110.55	39.80
90	124.36	44.77
100	138.18	49.75
110	152.00	54.72
120	165.82	59.69
140	193.45	69.64
160	221.09	79.59
180	248.73	89.54
200	276.36	99.49
220	304.00	109.44
240	331.64	119.39

For average calibration of between 1,5 – 3 bar pressure, we suggest the following nozzles as per grain-flow:

TX 6 nozzle for grain-flow between 30-35 T/h

TX 8 nozzle for grain-flow between 40-70 T/h

TX 8 x 2 nozzles for grain-flow between 90-110 T/h

TX 12 x 2 nozzles for grain-flow between 120-180 T/h

Always calculate your grain flow and calibrate your spraying equipment accordingly.



Maize



Wheat



Rye



Oats

K-Obiol® EC 25, the smart choice to Protect Your Grain, Your Investment, and Your Reputation

- + **K-Obiol® EC 25** provides reliable and long-lasting* protection against a wide range of grain pests, ensuring the safety and security of valuable grain.
- + By effectively protecting harvested grains from insect infestations, **K-Obiol® EC 25** minimizes grain loss and maintains grain quality.
- + Stored grain represents a significant investment. **K-Obiol® EC 25** safeguards this investment by preventing costly damage from insect infestations.
- + **K-Obiol® EC 25** is a trusted and proven solution for grain protection, used by farmers and grain storage professionals around the world for over 40 years.
- + Maintaining high-quality grain is essential for brand reputation. **K-Obiol® EC 25** helps maintain grain integrity for the grain seller.
- + **K-Obiol® EC 25** offers low residue levels and minimal environmental impact when used according to label instructions.
- + **K-Obiol® EC 25** offers a sustainable approach to pest control, minimizing the need for frequent treatments and reducing reliance on other methods.
- + **K-Obiol® EC 25** is easy to mix and apply, offering flexible application options to suit various needs.

Curative Treatment:

Eliminate existing infestations and protect valuable grain with **K-Obiol® EC25**. It effectively kills susceptible insects on contact, to effectively help control insect infestations.

When applied at the label rate, residue levels for both deltamethrin and PBO are below the South African set MRL's. Therefore, there is no withholding period required once dried.

*5 months depending on surface and usage application



Introducing the K-Obiol® Advanced Dosing Equipment:

K-Obiol® Advanced Dosing Equipment 3.0

The K-Obiol® Advanced Dosing Equipment 3.0 offers these benefits:

- + **PLC System with Touchscreen:** Easy to use programmable logic control (PLC) system, with infrared trigger provides precise and accurate dosing, control and monitoring while reducing waste.
- + **Precise Automated Dosing:** The precise dosing optimizes product utilization by minimizing the need for re-application. There is no need for the operator to do dosing calculation and mixing.
- + **Traceability:** Enhances operational transparency by recording application date and volume, facilitating quality assurance and compliance.
- + **Multiple Intake Lines Option:** Increases operational efficiency by allowing simultaneous dosing of multiple lines, reducing downtime.
- + **High-Pressure Spray Lance:** Built in high-pressure spray lance allows for thorough sanitation, a key component in integrated pest management (IPM) without needing additional equipment.
- + **Automated Triggering:** Minimizes wastage by ensuring only the grain receives treatment, and not empty conveyer line.
- + **Reduced Waste:** Minimizes overspray and wastage, contributing to environmental sustainability and cost-effectiveness.

Traceability On PLC System includes this information:

- + Amount Chemical applied and Type of Chemical used.
- + Time taken to treat grain.
- + Location and Date/Total time sprayed.



Contains 500L Water Tank & 100L Chemical Dosing Tank

K-Obiol® Advanced Dosing Equipment 2.0

- + For less frequent, and smaller-scale insecticide spraying, the **K-Obiol® Advanced Dosing Equipment 2.0** offers a cost-effective, automated option without the need for PLC operation.



Contains 500L Chemical Tank

Contact us on 082 616 2962 to arrange an on-site or TEAMS demo of the K-Obiol® Advanced Dosing Equipment. Hurry, Limited Spaces are available.

Images above for illustrative purposes



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**Depending on the surface and usage application.*

Use insecticides responsibly. Always read the label and product information before use and follow all warnings and precautions.

K-Obiol® EC 25 Reg. No. L4586 Act No. 36 of 1947

Active Ingredients: Deltamethrin (pyrethroid) 25 g// and Piperonyl butoxide 225 g// **DANGER**

Registration Holder: 2022 Environmental Science ZA (Pty) Ltd.

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