



Bayer Environmental Science

REGULOX K

Version 1
Revision Date 19.09.2003

GB
102000001904

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING**Product information**

Trade name : REGULOX K
 Product code : TADS9769
 Product code : 04847A
 Specification : 15503
 Usage : growth regulator
 Company : Bayer Environmental Science
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 Waltham Cross
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 number : +44(0)1223-870312

2. COMPOSITION/INFORMATION ON INGREDIENTS**Chemical nature**

Soluble concentrate (SL), contains:
Maleic hydrazide 250 g/l

Hazardous components

| Chemical Name | CAS-No. | Symbol(s): | R-phrase(s) | Concentration [%] |
|----------------------------------|------------|------------|-------------|-------------------|
| Maleic hydrazide, potassium salt | 51542-52-0 | | | 29.10 |

3. HAZARDS IDENTIFICATION**Risk advice to man and the environment**

No particular hazards known.

4. FIRST AID MEASURES

General advice : Remove contaminated, soaked clothing immediately and dispose of safely.

Inhalation : Move the patient to fresh air and keep at rest. If symptoms persist, call a physician.

Skin contact : Wash off immediately with soap and plenty of water. If symptoms persist, call a physician.

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- Eye contact : In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
- Ingestion : Do not induce vomiting. Wash out mouth with water. Keep at rest. Obtain medical attention.

Notes to physician

- Symptoms : Local:, To date no symptoms are known.
- Symptoms : Systemic:, To date no symptoms are known.
- Treatment : Local treatment:
Initial treatment should be symptomatic and supportive.
- Treatment : Systemic treatment:
Initial treatment should be symptomatic and supportive.

5. FIRE-FIGHTING MEASURES

- Suitable extinguishing media : water spray
alcohol-resistant foam
dry chemical
carbon dioxide (CO₂)
- Extinguishing media which must not be used for safety reasons : Product itself is non-combustible; fire extinguishing measures to suit surroundings.
- Specific hazards during fire fighting : In case of fire the evolution of dangerous gases is possible.
- Special protective equipment for fire-fighters : In the event of fire and/or explosion do not breathe fumes. Wear self contained breathing apparatus for fire fighting if necessary.
- Further information : Remove product from areas of fire, or otherwise cool containers with water in order to avoid pressure being built up due to heat.
Whenever possible, contain fire-fighting water by bunding area with sand or earth.

6. ACCIDENTAL RELEASE MEASURES

- Personal precautions : Avoid contact with spilled product or contaminated surfaces.
When dealing with a spillage do not eat, drink or smoke.
- Environmental precautions : Keep people and animals away.
Do not discharge into the drains/surface water/groundwater.
If spillage enters drains leading to sewage works inform local water company immediately.
If spillage enters rivers or watercourses, inform the Environment Agency (emergency telephone number 0800



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- 807060).
- Methods for cleaning up : Take up with absorbent material (e.g. sand, earth or a proprietary absorbent material).
Transfer collected material to heavy duty plastic drums and keep safe for disposal.
Clean contaminated floors and objects thoroughly with water and detergents, observing environmental regulations
- Additional advice : Information regarding safe handling, see section 7.
Information regarding personal protective equipment, see section 8.
Information regarding waste disposal, see section 13.
Check also for any local site procedures.

7. HANDLING AND STORAGE

Handling

- Advice on safe handling : No specific precautions required when handling unopened packs/containers; follow relevant manual handling advice.
Provide good ventilation of working area (local exhaust ventilation if necessary).
- Advice on protection against fire and explosion : No special precautions required.

Storage

- Requirements for storage areas and containers : Keep containers tightly closed in a cool, well-ventilated place.
Store in a place accessible by authorized persons only.
- Further information on storage conditions : Keep away from direct sunlight.
Protect against frost.
- Storage temperature : 0 - 30 °C
- Suitable materials : Keep in original packaging, tightly closed.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Refer to COSHH assessment (Control of substances Hazardous to Health Regulations 1999 as amended). Engineering controls should be used in preference to personal protective equipment wherever practicable.

Personal protective equipment

- Respiratory protection : No personal respiratory protective equipment normally required.
- Hand protection : Chemical resistant gloves
PVC or nitrile rubber gloves



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- Eye protection : Chemical resistant goggles must be worn.
- Skin and body protection : Light protective clothing, PVC
PVC boots
- Hygiene measures : When using, do not eat, drink or smoke.
Remove soaked clothing immediately.
Remove soiled clothing immediately.
Clean hands and face at work intervals and after work.
Work in an adequately ventilated room.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

- Form : Liquid
Colour : brown

Safety data

- pH : 8.5 - 10.0
Note: Determined in the undiluted form
- Density : ca. 1.17 g/cm³ at 20 °C
- Water solubility : Note: Miscible
- Partition coefficient (n-octanol/water) : log Pow: -0.56
Note: The value mentioned relates to the active ingredient maleic hydrazide.
- Other information : The product is not combustible.

10. STABILITY AND REACTIVITY

- Conditions to avoid : Note: Extremes of temperature and direct sunlight.
- Materials to avoid : None
- Hazardous reactions : No hazardous reactions when stored and handled according to prescribed instructions.
Note: Stable under recommended storage conditions.

11. TOXICOLOGICAL INFORMATION

- Acute oral toxicity : LD50 (rat) > 2,000 mg/kg
- Acute inhalation toxicity : LC50 (rat) > 20 mg/l
Exposure time: 4 h
- Acute dermal toxicity : LD50 (rat) > 2,000 mg/kg

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| | | |
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| Skin irritation | : | rabbit Result: No skin irritation |
| Eye irritation | : | rabbit Result: No eye irritation |
| Sensitization | : | guinea pig Result: non-sensitizing |
| Further information | : | The product has not been tested. The information is derived from the properties of the individual components. |

12. ECOLOGICAL INFORMATION**Ecotoxicity effects**

| | | |
|-----------------------------|---|--|
| Toxicity to fish | : | LC50: > 1,435 mg/l Rainbow trout (<i>Oncorhynchus mykiss</i>) Exposure time: 96 h Test substance: The value mentioned relates to the active ingredient maleic hydrazide potassium salt. |
| Toxicity to fish | : | LC50: 1,608 mg/l <i>Lepomis macrochirus</i> (Bluegill sunfish) Exposure time: 96 h Test substance: The value mentioned relates to the active ingredient maleic hydrazide potassium salt. |
| Toxicity to daphnia | : | EC50: 108 mg/l Daphnia Exposure time: 48 h Test substance: The value mentioned relates to the active ingredient maleic hydrazide potassium salt. |
| Toxicity to algae | : | EC50: > 100 mg/l <i>Chlorella pyrenoidosa</i> Exposure time: 96 h Test substance: The value mentioned relates to the active ingredient maleic hydrazide potassium salt. |
| Toxicity to other organisms | : | LD50: > 4,640 mg/kg Mallard duck Test substance: The value mentioned relates to the active ingredient maleic hydrazide potassium salt. |

13. DISPOSAL CONSIDERATIONS

| | | |
|---------|---|--|
| Product | : | In accordance with current regulations may be taken to waste disposal site or incineration plant, after consultation with site operator and/or with the responsible authority Can be landfilled or incinerated, when in compliance with local |
|---------|---|--|



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regulations.
Advice may be obtained from the local waste regulation authority (part of the Environment Agency in the UK).

Contaminated packaging : Packaging that cannot be cleaned should be disposed of as product waste.
Empty containers can be landfilled after cleaning, when in compliance with the Environmental Protection (Duty of Care) Regulations 1991.

Waste key for the unused product : 020109 Agrochemical waste other than those mentioned in 020108.

14. TRANSPORT INFORMATION

ADNR : Not dangerous goods
ADR : Not dangerous goods
IATA : Not dangerous goods
IMDG : Not dangerous goods
CDG CPL : Not dangerous goods

15. REGULATORY INFORMATION

This product has been classified in accordance with The Chemicals (Hazard Information and Packaging for Supply) Regulations 2002: CHIP 3.

Hazardous components which must be listed on the label:

- Maleic hydrazide, potassium salt

Exceptional labelling of special preparations : Restricted to professional users.
To avoid risks to man and the environment, comply with the instructions for use.

Further information : WHO-classification: II (Moderately hazardous)

Does not require a hazard warning label, but the normal safety precautions for handling of chemicals must be observed.



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16. OTHER INFORMATION

Further information

The above information is intended to give general health and safety guidance on the storage and transport of the product.

It is not intended to apply to the use of the product for which purposes the product label and any appropriate technical usage literature available should be consulted and any relevant licenses, consents or approvals complied with.

The requirements or recommendations of any relevant site or working procedure, system or policy in force or arising from any risk assessment involving the substance or product should take precedence over any of the guidance contained in this safety data sheet where there is a difference in the information given.

The information provided in this safety data sheet is accurate at the date of publication and will be updated as and when appropriate.

No liability will be accepted for any injury, loss or damage resulting from any failure to take account of information or advice contained in this safety data sheet.

Changes since the last version will be highlighted in the margin. This version replaces all previous versions.