

# Clethodim 50% TK

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Date of issue: 7-3-2016

Revision date:

Supersedes:

Version: 1.0

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product identifier

Product form : Mixture  
Name : Clethodim 50% TK  
Type of product : Biocide

#### 1.2. Relevant identified uses of the substance or mixture and uses advised against

##### 1.2.1. Relevant identified uses

Main use category : Professional use  
Use of the substance/mixture : Herbicide

##### 1.2.2. Uses advised against

No additional information available

#### 1.3. Details of the supplier of the safety data sheet

Simonis B.V.  
7000 AP Doetinchem - The Netherlands  
T +31 314 333 700 - F +31 314 344 167  
[agrochem@simonisbv.nl](mailto:agrochem@simonisbv.nl) - <http://www.simonisbv.nl/>

#### 1.4. Emergency telephone number

| Country        | Organisation/Company   | Address                         | Emergency number | Remark |
|----------------|--|---------------------------------|------------------|--------|
| United Kingdom | Guy's & St Thomas' Poisons Unit<br>Medical Toxicology Unit, Centre<br>Hospitalier Universitaire de Constantine | Avonley Road<br>SE14 5ER London | 0870 243 2241    |        |

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### Classification according to Regulation (EC) No. 1272/2008 [CLP]

Acute toxicity (oral), Category 4 H302  
Skin corrosion/irritation, Category 2 H315  
Hazardous to the aquatic environment — Chronic Hazard, Category 3 H412

Full text of H statements : see section 16

##### Adverse physicochemical, human health and environmental effects

Harmful to aquatic life with long lasting effects. Causes skin irritation. Harmful if swallowed.

#### 2.2. Label elements

##### Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS07

Signal word (CLP) : Warning  
Hazardous ingredients : Clethodim  
Hazard statements (CLP) : H302 - Harmful if swallowed  
H315 - Causes skin irritation  
H412 - Harmful to aquatic life with long lasting effects  
Precautionary statements (CLP) : P264 - Wash hands thoroughly after handling  
P273 - Avoid release to the environment  
P280 - Wear protective gloves/protective clothing/eye protection/face protection  
P301+P312 - IF SWALLOWED: Call a doctor, a POISON CENTER if you feel unwell  
P332+P313 - If skin irritation occurs: Get medical advice/attention  
P501 - Dispose of contents/container to hazardous or special waste collection point

# Clethodim 50% TK

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

### 2.3. Other hazards

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII  
This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

## SECTION 3: Composition/information on ingredients

### 3.1. Substance

Not applicable

### 3.2. Mixture

| Name      | Product identifier  | %  | Classification according to Regulation (EC) No. 1272/2008 [CLP]             |
|-----------|---------------------|----|---|
| Clethodim | (CAS No) 99129-21-2 | 50 | Acute Tox. 4 (Oral), H302<br>Skin Irrit. 2, H315<br>Aquatic Chronic 3, H412 |

Full text of H-phrases: see section 16

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

|                                       |  |
|---------------------------------------|--|
| First-aid measures general            | : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).  |
| First-aid measures after inhalation   | : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention if you feel unwell.  |
| First-aid measures after skin contact | : Take off contaminated clothing. Wash skin with plenty of water. If skin irritation occurs: Get medical advice/attention.   |
| First-aid measures after eye contact  | : Immediately flush eyes thoroughly with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention if pain, blinking or redness persist. |
| First-aid measures after ingestion    | : Rinse mouth. Do NOT induce vomiting. Get medical advice/attention if you feel unwell. Call a poison center or a doctor if you feel unwell.   |

### 4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries after skin contact : Irritation.

### 4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water spray. Sand.  
Unsuitable extinguishing media : Do not use a heavy water stream.

### 5.2. Special hazards arising from the substance or mixture

Fire hazard : Non flammable.  
Explosion hazard : No direct explosion hazard.  
Hazardous decomposition products in case of fire : For further information, refer to section 10 : "Stability and Reactivity".

### 5.3. Advice for firefighters

Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Avoid (reject) fire-fighting water to enter environment.  
Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

#### 6.1.1. For non-emergency personnel

Emergency procedures : Evacuate unnecessary personnel. Avoid contact with skin and eyes.

#### 6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection. For further information refer to section 8 : "Exposure-controls/personal protection".  
Emergency procedures : Ventilate area.

# Clethodim 50% TK

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

### 6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if product enters sewers or public waters.

### 6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Take up liquid spill into absorbent material. Recover mechanically the product.  
Other information : Dispose of materials or solid residues at an authorized site.

### 6.4. Reference to other sections

For further information refer to section 8 : " Exposure-controls/personal protection". Concerning disposal elimination after cleaning, see item 13.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Precautions for safe handling : Concerning personal protective equipment to use, see item 8. Provide good ventilation in process area to prevent formation of vapour. Avoid contact with skin and eyes. Wear personal protective equipment.  
Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product. Wash contaminated clothing before reuse.

### 7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep only in the original container in a cool well ventilated place. Keep container closed when not in use. Keep away from food, drink and animal feedingstuffs.  
Incompatible products : Strong bases. Strong acids. Strong oxidizers.  
Heat and ignition sources : Keep away from heat and direct sunlight.

### 7.3. Specific end use(s)

Herbicide.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

No additional information available

### 8.2. Exposure controls

Appropriate engineering controls : Ensure good ventilation of the work station.  
Personal protective equipment : Protective clothing. Gloves. Safety glasses. Insufficient ventilation: wear respiratory protection.  
Hand protection : Wear suitable gloves resistant to chemical penetration. Chemical resistant gloves (according to European standard NF EN 374 or equivalent). Choosing the proper glove is a decision that depends not only on the type of material, but also on other quality features, which differ for each manufacturer. Since the product consists of several substances, it is not possible to estimate the durability of the glove material beforehand. Thus it needs to be tested before use  
Eye protection : Safety glasses  
Skin and body protection : Wear suitable protective clothing  
Respiratory protection : No special respiratory protection equipment is recommended under normal conditions of use with adequate ventilation. In case of inadequate ventilation wear respiratory protection



Other information : Do not eat, drink or smoke during use.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state : Liquid  
Colour : Brown.  
Odour : characteristic.  
Odour threshold : No data available  
pH : 4 - 6  
Relative evaporation rate (butylacetate=1) : No data available  
Melting point : No data available  
Freezing point : No data available

# Clethodim 50% TK

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

|                                  |                     |
|----------------------------------|---------------------|
| Boiling point                    | : No data available |
| Flash point                      | : No data available |
| Auto-ignition temperature        | : No data available |
| Decomposition temperature        | : No data available |
| Flammability (solid, gas)        | : No data available |
| Vapour pressure                  | : No data available |
| Relative vapour density at 20 °C | : No data available |
| Relative density                 | : No data available |
| Density                          | : 0,98 kg/l         |
| Solubility                       | : No data available |
| Log Pow                          | : No data available |
| Viscosity, kinematic             | : No data available |
| Viscosity, dynamic               | : No data available |
| Explosive properties             | : No data available |
| Oxidising properties             | : No data available |
| Explosive limits                 | : No data available |

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Stable under normal conditions of use.

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

No dangerous reactions known.

### 10.4. Conditions to avoid

Extremely high or low temperatures. Keep out of direct sunlight.

### 10.5. Incompatible materials

Strong acids. Strong bases. Strong oxidation agent.

### 10.6. Hazardous decomposition products

Combustion generates : Carbon oxides (CO, CO<sub>2</sub>).

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity : Oral: Harmful if swallowed.

|          |                          |
|----------|--------------------------|
| ATE oral | 500,000 mg/kg bodyweight |
|----------|--------------------------|

| Clethodim (99129-21-2)     |  |
|----------------------------|--|
| LD50 oral rat              | 1630 mg/kg male rats; female rats 1360 mg/kg; male mice 2570 mg/kg; female mice 2430 mg/kg |
| LD50 dermal rabbit         | > 5000 mg/kg   |
| LC50 inhalation rat (mg/l) | > 3,9 mg/l/4h  |

|  |  |
|--|--|
| Skin corrosion/irritation                          | : Causes skin irritation.<br>pH: 4 - 6 |
| Serious eye damage/irritation                      | : Not classified<br>pH: 4 - 6          |
| Respiratory or skin sensitisation                  | : Not classified                       |
| Germ cell mutagenicity                             | : Not classified                       |
| Carcinogenicity                                    | : Not classified                       |
| Reproductive toxicity                              | : Not classified                       |
| Specific target organ toxicity (single exposure)   | : Not classified                       |
| Specific target organ toxicity (repeated exposure) | : Not classified                       |
| Aspiration hazard                                  | : Not classified                       |

# Clethodim 50% TK

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

### SECTION 12: Ecological information

#### 12.1. Toxicity

Ecology - general : Harmful to aquatic life with long lasting effects.

| Clethodim (99129-21-2) |                                       |
|------------------------|---------------------------------------|
| LC50 fishes 1          | 67 mg/l <i>Oncorhynchus mykiss</i>    |
| LC50 fish 2            | > 120 mg/l <i>Lepomis macrochirus</i> |
| EC50 Daphnia 1         | > 120 mg/l                            |
| EC50 72h algae (1)     | 56,8 mg/l                             |

#### 12.2. Persistence and degradability

No additional information available

#### 12.3. Bioaccumulative potential

No additional information available

#### 12.4. Mobility in soil

No additional information available

#### 12.5. Results of PBT and vPvB assessment

| Clethodim 50% TK   |  |
|--|--|
| This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII  |  |
| This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII |  |

#### 12.6. Other adverse effects

Additional information : Avoid release to the environment

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods






Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.

Additional information : Empty containers should be taken for recycle, recovery or waste in accordance with local regulation.

Ecology - waste materials : Avoid release to the environment.

### SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

| ADR   | IMDG  | IATA  | ADN  | RID   |
|---|---|---|--|---|
| <b>14.1. UN number</b>  |   |   |  |   |
| 3082  | 3082  | 3082  | 3082   | 3082  |
| <b>14.2. UN proper shipping name</b>  |   |   |  |   |
| ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.   | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.                                 | Environmentally hazardous substance, liquid, n.o.s.                                 | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.                                  | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.                                   |
| <b>Transport document description</b>   |   |   |  |   |
| UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Clethodim 50% TK), 9, III, (E) | UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., 9, III                 | UN 3082 Environmentally hazardous substance, liquid, n.o.s., 9, III                 | UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., 9, III                  | UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., 9, III                   |
| <b>14.3. Transport hazard class(es)</b>   |   |   |  |   |
| 9   | 9   | 9   | 9  | 9   |
|           |  |  |  |  |
| <b>14.4. Packing group</b>  |   |   |  |   |
| III   | III   | III   | III  | III   |
| <b>14.5. Environmental hazards</b>  |   |   |  |   |
| Dangerous for the environment : No  | Dangerous for the environment : No<br>Marine pollutant : No                         | Dangerous for the environment : No  | Dangerous for the environment : No   | Dangerous for the environment : No  |
| No supplementary information available  |   |   |  |   |

# Clethodim 50% TK

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

### 14.6. Special precautions for user

#### - Overland transport

|   |                           |
|---|---------------------------|
| Classification code (ADR)   | : M6                      |
| Special provisions (ADR)  | : 274, 335, 601, 375      |
| Limited quantities (ADR)  | : 5I                      |
| Excepted quantities (ADR)   | : E1                      |
| Packing instructions (ADR)  | : P001, IBC03, LP01, R001 |
| Special packing provisions (ADR)  | : PP1                     |
| Mixed packing provisions (ADR)  | : MP19                    |
| Portable tank and bulk container instructions (ADR)                     | : T4                      |
| Portable tank and bulk container special provisions (ADR)               | : TP1, TP29               |
| Tank code (ADR)   | : LGBV                    |
| Vehicle for tank carriage   | : AT                      |
| Transport category (ADR)  | : 3                       |
| Special provisions for carriage - Packages (ADR)                        | : V12                     |
| Special provisions for carriage - Loading, unloading and handling (ADR) | : CV13                    |
| Hazard identification number (Kemler No.)                               | : 90                      |
| Orange plates   | :                         |



|                               |       |
|-------------------------------|-------|
| Tunnel restriction code (ADR) | : E   |
| EAC code                      | : •3Z |

#### - Transport by sea

|                                   |                 |
|-----------------------------------|-----------------|
| Special provisions (IMDG)         | : 274, 335, 969 |
| Limited quantities (IMDG)         | : 5 L           |
| Excepted quantities (IMDG)        | : E1            |
| Packing instructions (IMDG)       | : P001, LP01    |
| Special packing provisions (IMDG) | : PP1           |
| IBC packing instructions (IMDG)   | : IBC03         |
| Tank instructions (IMDG)          | : T4            |
| Tank special provisions (IMDG)    | : TP2, TP29     |
| EmS-No. (Fire)                    | : F-A           |
| EmS-No. (Spillage)                | : S-F           |
| Stowage category (IMDG)           | : A             |
| MFAG-No                           | : 171           |

#### - Air transport

|  |                   |
|--|-------------------|
| PCA Excepted quantities (IATA)               | : E1              |
| PCA Limited quantities (IATA)                | : Y964            |
| PCA limited quantity max net quantity (IATA) | : 30kgG           |
| PCA packing instructions (IATA)              | : 964             |
| PCA max net quantity (IATA)                  | : 450L            |
| CAO packing instructions (IATA)              | : 964             |
| CAO max net quantity (IATA)                  | : 450L            |
| Special provisions (IATA)                    | : A97, A158, A197 |
| ERG code (IATA)                              | : 9L              |

#### - Inland waterway transport

|                           |                      |
|---------------------------|----------------------|
| Classification code (ADN) | : M6                 |
| Special provisions (ADN)  | : 274, 335, 375, 601 |
| Limited quantities (ADN)  | : 5 L                |
| Excepted quantities (ADN) | : E1                 |
| Carriage permitted (ADN)  | : T                  |

# Clethodim 50% TK

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Equipment required (ADN) : PP  
Number of blue cones/lights (ADN) : 0

### - Rail transport

Classification code (RID) : M6  
Special provisions (RID) : 274, 335, 375, 601  
Limited quantities (RID) : 5L  
Excepted quantities (RID) : E1  
Packing instructions (RID) : P001, IBC03, LP01, R001  
Special packing provisions (RID) : PP1  
Mixed packing provisions (RID) : MP19  
Portable tank and bulk container instructions (RID) : T4  
Portable tank and bulk container special provisions (RID) : TP1, TP29  
Tank codes for RID tanks (RID) : LGBV  
Transport category (RID) : 3  
Special provisions for carriage – Packages (RID) : W12  
Special provisions for carriage - Loading, unloading and handling (RID) : CW13, CW31  
Colis express (express parcels) (RID) : CE8  
Hazard identification number (RID) : 90

### 14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

Not applicable

## SECTION 15: Regulatory information

### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

#### 15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

Type of product (Biocide) : Herbicide

#### 15.1.2. National regulations

No additional information available

### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out

## SECTION 16: Other information

Abbreviations and acronyms:

|       |   |
|-------|---|
| SDS   | Safety Data Sheet   |
| CLP   | Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008                       |
| REACH | Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006 |
| PBT   | Persistent Bioaccumulative Toxic  |
| vPvB  | Very Persistent and Very Bioaccumulative  |
| ADN   | European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways   |
| ADR   | European Agreement concerning the International Carriage of Dangerous Goods by Road               |
| IATA  | International Air Transport Association   |
| IMDG  | International Maritime Dangerous Goods  |
| RID   | Regulations concerning the International Carriage of Dangerous Goods by Rai                       |
| ICAO  | ICAO - International Civil Aviation Organization  |
| LC50  | Median lethal concentration   |
| LD50  | Median lethal dose  |
|       | CAS (Chemical Abstracts Service) number   |
|       | EG-nr.: EINECS- en ELINCS-number  |
|       | EINECS: European Inventory of Existing Commercial Substances                                      |
| NOEC  | No-Observed Effect Concentration  |

# Clethodim 50% TK

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

|      |  |
|------|--|
|      | STOT: Specific Target Organ Toxicity       |
| PNEC | Predicted No-Effect Concentration          |
|      | PEC: Predicted Environmental Concentration |
|      | OEL: Occupational Exposure Limit           |

Data sources : according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830.

Other information : REACH Disclaimer:  
This information is based on current knowledge. Consistency of data in the SDS with CSR is considered, as far as the information is available at the time of compilation (cfr Revision date and Version number). **DISCLAIMER OF LIABILITY** The information in this SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This SDS was prepared and is to be used only for this product. If the product is used as a component in another product, this SDS information may not be applicable.

Full text of H- and EUH-statements:

|                     |   |
|---------------------|---|
| Acute Tox. 4 (Oral) | Acute toxicity (oral), Category 4                                 |
| Aquatic Chronic 3   | Hazardous to the aquatic environment — Chronic Hazard, Category 3 |
| Skin Irrit. 2       | Skin corrosion/irritation, Category 2                             |
| H302                | Harmful if swallowed  |
| H315                | Causes skin irritation  |
| H412                | Harmful to aquatic life with long lasting effects                 |

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

|                     |      |                    |
|---------------------|------|--------------------|
| Acute Tox. 4 (Oral) | H302 | Expert judgment    |
| Skin Irrit. 2       | H315 | Calculation method |
| Aquatic Chronic 3   | H412 | Calculation method |

Safety Data Sheet applicable for regions : GB - United Kingdom

This Safety Data Sheet is compiled by :

Trade Wind B.V. (info@twnl.com)

SDS EU (REACH Annex II)

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product*