



EUROPEAN COMMISSION  
HEALTH & CONSUMER PROTECTION DIRECTORATE-GENERAL

Directorate E – Food Safety: plant health, animal health and welfare, international questions  
E1 Directorate D - Food Safety: production and distribution chain

Chlorotoluron  
SANCO/4329/2000 final  
15 February 2005

### Review report for the active substance **chlorotoluron**

Finalised in the Standing Committee on the Food Chain and Animal Health at its meeting on  
15 February 2005  
in view of the inclusion of chlorotoluron in Annex I of Directive 91/414/EEC

#### **1. Procedure followed for the re-evaluation process**

This review report has been established as a result of the re-evaluation of chlorotoluron, made in the context of the work programme for review of existing active substances provided for in Article 8(2) of Directive 91/414/EEC concerning the placing of plant protection products on the market, with a view to the possible inclusion of this substance in Annex I to the Directive.

Commission Regulation (EEC) No 3600/92<sup>(1)</sup> laying down the detailed rules for the implementation of the first stage of the programme of work referred to in Article 8(2) of Council Directive 91/414/EEC, as last amended by Regulation (EC) No 2266/2000<sup>(2)</sup>, has laid down the detailed rules on the procedure according to which the re-evaluation has to be carried out. Chlorotoluron is one of the 90 existing active substances covered by this Regulation.

In accordance with the provisions of Article 4 of Regulation (EEC) No 3600/92, Stefes Agro GmbH on 20. July 1993, Phytorus SA on 26 July 1993, Agrolinz on 26 July 1993, Ciba-Geigy Ltd on 23 July 1993, I.P.I.C.I. Industria Prodotti Chimici on 30 July 1993, Barclay Chemicals on 27 July 1993, ACI International on 30 July 1993, SANC on 23 July 1993, Markhteshim Agan on 20 July 1993, Aragonesas Agro SA on 27 July 1993, Stefes Research GmbH on 09 July 1993, Portman Agrochemicals on 26 July 1993, Helm AG on 23 July 1993, Calliope SA on 21 July 1993 and B.V. Luxan on 21 July 1993 notified to the Commission of their wish to secure the inclusion of the active substance chlorotoluron in Annex I to the Directive.

In accordance with the provisions of Article 5 of Regulation (EEC) No 3600/92, the Commission, by its Regulation (EEC) No 933/94<sup>(3)</sup>, as last amended by Regulation (EC) No 2230/95<sup>(4)</sup>, designated Spain as rapporteur Member State to carry out the assessment of chlorotoluron on the basis of the dossiers submitted by the notifiers. In the same Regulation, the Commission specified furthermore the deadline for the notifiers with regard to the submission to

---

<sup>1</sup> OJ No L 366, 15.12.1992, p.10.

<sup>2</sup> OJ No L 259, 13.10.2000, p.27.

<sup>3</sup> OJ No L 107, 28.04.1994, p.8.

<sup>4</sup> OJ No L 225, 22.09.1995, p.1.

the rapporteur Member States of the dossiers required under Article 6(2) of Regulation (EEC) No 3600/92, as well as for other parties with regard to further technical and scientific information; for chlorotoluron this deadline was 31 October 1995.

On March 1999 Makhteshim Agan confirmed to the rapporteur Member State that Makhteshim Agan and Agrolinz formed a Task Force for the inclusion of chlorotoluron in the Annex I of the Directive 91/414/EEC.

Makhteshim Agan on behalf of the chlorotoluron task force (comprising Makhteshim Agan & Agrolinz (Nufarm Chemical)) and Phytorus SA submitted each in time a dossier to the rapporteur Member State. Makhteshim Agan on behalf of the chlorotoluron task force (comprising Makhteshim Agan & Agrolinz (Nufarm Chemical)), submitted a dossier to the rapporteur Member State which did not contain substantial data gaps, taking into account the supported uses. Therefore, Makhteshim Agan being the designated representative of the chlorotoluron task force, was considered to be the main data submitter. Phytorus submitted a dossier that was considered not complete

In accordance with the provisions of Article 7(1) of Regulation (EEC) No 3600/92, Spain submitted on 7 May 1999 to the Commission the report of its examination, hereafter referred to as the draft assessment report, including, as required, a recommendation concerning the possible inclusion of chlorotoluron in Annex I to the Directive. Moreover, in accordance with the same provisions, the Commission and the Member States received also the summary dossier on chlorotoluron from Makhteshim Agan, on 1 September 1999.

In accordance with the provisions of Article 7(3) of Regulation (EEC) No 3600/92, the Commission forwarded for consultation the draft assessment report to all the Member States on 16 June 1999 as well as to Makhteshim Agan being the main data submitter, on 22 June 1999.

The Commission organised an intensive consultation of technical experts from a certain number of Member States, to review the draft assessment report and the comments received thereon (peer review), in particular on each of the following disciplines:

- identity and physical /chemical properties ;
- fate and behaviour in the environment ;
- ecotoxicology ;
- mammalian toxicology ;
- residues and analytical methods ;
- regulatory questions.

The meetings for this consultation were organised on behalf of the Commission by the Pesticide Safety Directorate (PSD) in York, United Kingdom, from January to July 2001.

The report of the peer review (i.e. full report) was circulated, for further consultation, to Member States on 27 June 2001 and the main data submitter on 25 August 2001 for comments and further clarification.

In accordance with the provisions of Article 7(3) of Regulation (EEC) No 3600/92, the dossier, the draft assessment report, the peer review report (i.e. full report) and the comments and clarifications on the remaining issues, received after the peer review were referred to the **Standing Committee on the Food Chain and Animal Health**, and specialised working groups of this Committee, for final examination, with participation of experts from the 15

Member States. This final examination took place from July 2001 to December 2004, and was finalised in the meeting of the **Standing Committee** on 15 February 2005.

The review did not reveal any open questions or concerns which would have required a consultation of the Scientific Committee on Plants.

The present review report contains the conclusions of the final examination; given the importance of the draft assessment report, the peer review report (i.e. full report) and the comments and clarifications submitted after the peer review as basic information for the final examination process, these documents are considered respectively as background documents A, B and C to this review report and are part of it.

## **2. Purposes of this review report**

This review report, including the background documents and appendices thereto, has been developed and finalised in support of the Directive 2005/53/EC<sup>5</sup> concerning the inclusion of chlorotoluron in Annex I to Directive 91/414/EEC, and to assist the Member States in decisions on individual plant protection products containing chlorotoluron they have to take in accordance with the provisions of that Directive, and in particular the provisions of article 4(1) and the uniform principles laid down in Annex VI.

This review report provides also for the evaluation required under Section A.2.(b) of the above mentioned uniform principles, as well as under several specific sections of part B of these principles. In these sections it is provided that Member States, in evaluating applications and granting authorisations, shall take into account the information concerning the active substance in Annex II of the directive, submitted for the purpose of inclusion of the active substance in Annex I, as well as the result of the evaluation of those data.

In accordance with the provisions of Article 7(6) of Regulation (EEC) No 3600/92, Member States will keep available or make available this review report for consultation by any interested parties or will make it available to them on their specific request. Moreover the Commission will send a copy of this review report (not including the background documents) to all operators having notified for this active substance under Article 4(1) of this Regulation.

The information in this review report is, at least partly, based on information which is confidential and/or protected under the provisions of Directive 91/414/EEC. It is therefore recommended that this review report would not be accepted to support any registration outside the context of Directive 91/414/EEC, e.g. in third countries, for which the applicant has not demonstrated to have regulatory access to the information on which this review report is based.

## **3. Overall conclusion in the context of Directive 91/414/EEC**

The overall conclusion from the evaluation is that it may be expected that plant protection products containing chlorotoluron will fulfil the safety requirements laid down in Article 5(1)(a) and (b) of Directive 91/414/EEC. This conclusion is however subject to compliance with the particular requirements in sections 4, 5, 6 and 7 of this report, as well as to the implementation of the provisions of Article 4(1) and the uniform principles laid down in Annex VI of Directive

---

<sup>5</sup> OJ No L 241, 17.09.2005, p. 51-56

91/414/EEC, for each chlorotoluron containing plant protection product for which Member States will grant or review the authorisation.

Furthermore, these conclusions were reached within the framework of the uses which were proposed and supported by the main data submitter and mentioned in the list of uses supported by available data (attached as Appendix IV to this Review Report).

Extension of the use pattern beyond those described above will require an evaluation at Member State level in order to establish whether the proposed extensions of use can satisfy the requirements of Article 4(1) and of the uniform principles laid down in Annex VI of Directive 91/414/EEC.

With particular regard to residues, the review has established that the residues arising from the proposed uses, consequent on application consistent with good plant protection practice, have no harmful effects on human or animal health. The Theoretical Maximum Daily Intake (TMDI; excluding water and products of animal origin) for a 60 kg adult is 0.81 % of the Acceptable Daily Intake (ADI), based on the FAO/WHO European Diet (August 1994). Additional intake from water and products of animal origin are not expected to give rise to intake problems.

The review has identified several acceptable exposure scenarios for operators, workers and bystanders, which require however to be confirmed for each plant protection product in accordance with the relevant sections of the above mentioned uniform principles.

The review has also concluded that under the proposed and supported conditions of use there are no unacceptable effects on the environment, as provided for in Article 4 (1) (b) (iv) and (v) of Directive 91/414/EEC, provided that certain conditions are taken into account as detailed in section 6 of this report.

#### **4. Identity and Physical/chemical properties**

The main identity and the physical/chemical properties of chlorotoluron are given in Appendix I.

The active substance shall comply with the FAO specification and there seem not to be reasons for deviating from that specification; the FAO specification is given in Appendix I of this report.

The review has established that for the active substance notified by the main data submitter Makhteshim Agan on behalf of the chlorotoluron task force (comprising Makhteshim Agan & Agroliz (Nufarm Chemical)), none of the manufacturing impurities considered are, on the basis of information currently available, of toxicological or environmental concern.

In accordance with the provisions of Article 13(5) of Directive 91/414/EEC, Spain considered, on the basis of the information currently available, that the substance notified by the other data submitter Phytorus SA, in the meaning of Article 13(2) and (5) of the Directive, differ significantly in degree of purity and nature of impurities from the composition registered in the dossier submitted by the main data submitter, since the available information does not allow to assess the identity of the active substance notified by Phytorus SA.

## **5. Endpoints and related information**

In order to facilitate Member States, in granting or reviewing authorisations, to apply adequately the provisions of Article 4(1) of Directive 91/414/EEC and the uniform principles laid down in Annex VI of that Directive, the most important endpoints were identified during the re-evaluation process. These endpoints are listed in Appendix II.

## **6. Particular conditions to be taken into account on short term basis by Member States in relation to the granting of authorisations of plant protection products containing chlorotoluron**

On the basis of the proposed and supported uses (as listed in Appendix IV), the following particular issues have been identified as requiring particular and short term attention from all Member States, in the framework of any authorisations to be granted, varied or withdrawn, as appropriate:

Member States must pay particular attention to the protection of groundwater, when the active substance is applied in regions with vulnerable soil and/or climate conditions. Conditions of authorisation should include risk mitigation measures, where appropriate.

## **7. List of studies to be generated**

No further studies were identified which were at this stage considered necessary in relation to the inclusion of chlorotoluron in Annex I under the current inclusion conditions.

Some endpoints however may require the generation or submission of additional studies to be submitted to the Member States in order to ensure authorisations for use under certain conditions. This may particularly be the case for groundwater studies to be performed in regions with vulnerable soil and/or climatic conditions.

## **8. Information on studies with claimed data protection**

For information of any interested parties, Appendix III gives information about the studies for which the main data submitter has claimed data protection and which during the re-evaluation process were considered as essential with a view to annex I inclusion. This information is only given to facilitate the operation of the provisions of Article 13 of Directive 91/414/EEC in the Member States. It is based on the best information available to the Commission services at the time this review report was prepared; but it does not prejudice any rights or obligations of Member States or operators with regard to its uses in the implementation of the provisions of Article 13 of the Directive 91/414/EEC neither does it commit the Commission.

## **9. Updating of this review report**

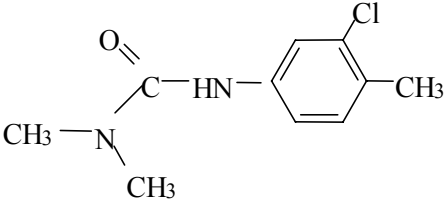
The technical information in this report may require to be updated from time to time in order to take account of technical and scientific developments as well as of the results of the examination of any information referred to the Commission in the framework of Articles 7, 10 or 11 of Directive 91/414/EEC. Such adaptations will be examined and finalised in the **Standing Committee on the Food Chain and Animal Health**, in connection with any amendment of the inclusion conditions for chlorotoluron in Annex I of the Directive.



# APPENDIX I

## Identity, physical and chemical properties

### CHLOROTOLURON

<b>Common name (ISO)</b>	Chlorotoluron
<b>Chemical name (IUPAC)</b>	3-(3-chloro-p-tolyl)-1,1-dimethylurea
<b>Chemical name (CA)</b>	<i>N</i> -(3-chloro-4-methylphenyl)- <i>N,N</i> -dimethylurea
<b>CIPAC No</b>	217
<b>CAS No</b>	15545-48-9
<b>EEC No</b>	2395922
<b>FAO SPECIFICATION</b>	217/TC/S (1990) (Content shall be declared not less than 975 g/kg (+/- 20 g).
<b>Minimum purity</b>	975 g / kg
<b>Molecular formula</b>	C <sub>10</sub> H <sub>13</sub> ClN <sub>2</sub> O
<b>Molecular mass</b>	212.7
<b>Structural formula</b>	

<b>Melting point</b>	148.05°C
<b>Boiling point</b>	Not applicable
<b>Appearance</b>	Colourless crystals, odourless
<b>Relative density</b>	$\rho = 1.34 \times 10^3 \text{ kg/m}^3$ at 22°C
<b>Vapour pressure</b>	$5 \times 10^{-6} \text{ Pa}$ at 25.0°C
<b>Henry's law constant</b>	Not determined due to very low vapour pressure
<b>Solubility in water</b>	74 mg/l at 25°C
<b>Solubility in organic solvents</b>	Ethanol: 48 g/l (25°C) Acetone: 54 g/l (25°C) Toluene : 3.0 g/l (25°C) n-Octanol: 24 g/l (25°C) n-Hexane: 60 mg/l (25°C) Ethyl Acetate: 21 g/l (25°C) Dichloromethane: 51 g/l (25°C)
<b>Partition co-efficient (log P<sub>ow</sub>)</b>	2.5 ± 0.1 (25°C pH=7)
<b>Hydrolytic stability (DT<sub>50</sub>)</b>	pH 7: Stable (> 1 yr). PH 5: Stable (> 1 yr). PH 9: Stable (> 1 yr).
<b>Dissociation constant</b>	No dissociation constant is available in an accessible pH range
<b>Quantum yield of direct photo-transformation in water at <math>\lambda &gt; 290 \text{ nm}</math></b>	Not applicable
<b>Flammability</b>	Not flammable
<b>Explosive properties</b>	No self-ignition.: Chlorotoluron is not thermally sensitive, shock sensitive nor friction sensitive
<b>UV/VIS absorption (max.)</b>	The molar absorptivity was determined to be $19516 \text{ M}^{-1}\text{cm}^{-1}$ at 241-242 nm
<b>Photostability in water (DT<sub>50</sub>)</b>	Chlorotoluron photolysis followed first order kinetics yielding a rate constant of $6.87 \times 10^{-5} \text{ s}^{-1}$ , half-life 2.8 hours (Hg lamp $\lambda > 190 \text{ nm}$ )

## APPENDIX II

### END POINTS AND RELATED INFORMATION

#### CHLOROTOLURON

## 1 Toxicology and metabolism

### Absorption, distribution, excretion and metabolism in mammals

Rate and extent of absorption:	75% for males and females at 24 hrs, based on urinary excretion
Distribution:	Widely distributed; highest residues in liver, spleen and kidneys at 168 h.
Potential for accumulation:	No evidence of accumulation
Rate and extent of excretion:	Mainly via urine (61% males, 81% females) within 168 h. Faeces (36% males, 16% females) and expired air (<1%) within 168 h.
Toxicologically significant compounds:	Parent compound
Metabolism in animals:	Extensively metabolised in the rat, by N-demethylation and oxidation

### Acute toxicity

Rat LD <sub>50</sub> oral:	> 10000 mg/Kg
Rat LD <sub>50</sub> dermal:	> 2000 mg/kg bw
Rat LC <sub>50</sub> inhalation:	> 5.3 mg/L ( nose-only)
Skin irritation :	Non irritant
Eye irritation :	Non irritant
Skin sensitization (test method used and result):	Not sensitizing (Maximisation test)

### Short term toxicity

Target / critical effect:	RBC, spleen and liver (rat and dog)
Lowest relevant oral NOAEL / NOEL:	600 ppm= 21.45 mg/Kg bw/day in males (90-days study in dog)
Lowest relevant dermal NOAEL / NOEL:	No data

Lowest relevant inhalation NOAEL /  
NOEL:

No data

## Genotoxicity

Non-genotoxic potential

## Long term toxicity and carcinogenicity

Target / critical effect:

Kidney in mice. Liver in rats

Lowest relevant NOAEL:

100 ppm (3.7 mg/kg bw/day in males (2-years tox study, rat))

Carcinogenicity:

Carcinogenic potential: Kidney adenomas and adenocarcinomas in male mice. Not carcinogenic to Sprague-Dawley rats.

## Reproductive toxicity

Target / critical effect –  
Reproduction:

Increased resorptions incidence at parental toxic doses

Lowest relevant reproductive  
NOAEL / NOEL:

1000 ppm (95mg/kgbw/day). 2-generation study in rats

Target / critical effect –  
Developmental toxicity:

Fetotoxicity (increased resorptions and skeletal anomalies in rabbits, and reduced mean weight of the foetuses and skeletal deviations in rats) at maternal toxic doses. No teratogenic potential.

Lowest relevant developmental  
NOAEL / NOEL:

50 mg//kg/bw/day (Chinchilla rabbits)

## Delayed neurotoxicity

No evidence

## Other toxicological studies

Chlorotoluron effects on biochemical parameters and on cell proliferation in the liver following administration to male rats (Beisstein, 1997)

Weak liver enzyme inducer. Chlorotoluron is not a hepatocellular mitogen

## Medical data

No negative effects, based on a certificate from the Occupational Medicine Advisor of the substance manufacturer. No epidemiological studies available.

## Summary

	Value	Study	Safety factor
ADI:	0.04 mg/kgbw/day	2-years in rat	100
AOEL systemic:	0.215 mg/kg bw/day	90-days, dog	100
AOEL inhalation:	Not allocated		
AOEL dermal:	Not allocated		
ArfD (acute reference dose):	Not allocated		

## Dermal absorption

6.6% for undiluted product 7.1% for diluted preparation Derived from <i>in vitro</i> study in human and rat skin
--

## 2 Fate and behaviour in the environment

### 2.1 Fate and behaviour in soil

#### Route of degradation

##### Aerobic:

Mineralization after 100 days:

1 study with 4 soils  
6.4-13.3%

Non-extractable residues after 100 days:

1 study with 4 soils  
28.2-62.6%

Major metabolites above 10 % of applied active substance: name and/or code % of applied rate (range and maximum)

2 studies with 7 soils  
3-(3-chloro-p-tolyl)-1-methylurea  
23% (16d); 23-30% (16-84d)  
At least other 4 different metabolites identified at less than 10%

#### Supplemental studies

##### Anaerobic:

DT50 = 591 days in laboratory  
<0.3% volatiles; 6.6% unextracted; no relevant metabolites at 120 days

##### Soil photolysis:

DT50 = 55 days in laboratory (92 days midsummer sunlight days at latitude 30°C).  
<0.1% volatiles; 7.8% unextracted; no relevant metabolites (3-(3-chloro-p-tolyl)-1-methylurea = 5.4% (3d)).

##### Remarks:

None

#### Rate of degradation

##### Parent compound

##### Laboratory studies

DT<sub>50</sub>lab (20 °C, aerobic):

13-92 days

DT<sub>90</sub>lab (20 °C, aerobic):

42-304 days

DT<sub>50</sub>lab (10 °C, aerobic):

103.4-202.4 days

DT<sub>50</sub>lab (20 °C, anaerobic):

591 days

##### Desmethyl chlorotoluron

### Laboratory studies

DT<sub>50</sub>lab (20 °C, aerobic):

52-66 days

DT<sub>90</sub>lab (20 °C, aerobic):

173-218 days

DT<sub>50</sub>lab (10 °C, aerobic):

157 days

DT<sub>90</sub>lab (10 °C, aerobic):

521 days

### Field studies (country or region)

DT<sub>50f</sub> from soil dissipation studies:

Switzerland (European conditions)  
 26-42 days for chlorotoluron

DT<sub>90f</sub> from soil dissipation studies:

86-140 days for chlorotoluron

Soil accumulation studies:

43% of chlorotoluron after 96 days.  
 No more information is available

Soil residue studies:

No data available

### Remarks:

e.g. effect of soil pH on degradation rate

Maximum concentration for the major metabol  
 3-(3-chloro-p-tolyl)-1-methylurea: 12.5% (27d)  
 35.6%(96d)

## Adsorption/desorption

$K_f / K_{oc}$ :

	$K_f$	%OC	$K_{oc}$	n
Sand soils	1.65	0.43	384	1
Silt loam soils	2.38- 27.21	4.39- 19.34	123- 141	2
Loam	1.50	1.39	108	1
Loamy sand	1.17	0.76	154	1
Silty sand soils	2.63-0.15	1.4-0.1	152- 374	1
Additional information is available but not related to type soil.				
2.04-38.40				
Not observed				

$K_d$ :

pH dependence:

## Mobility

### Laboratory studies:

Column leaching:

3 studies with 7 different soils (2.4-5 kg as/ha). Precipitation = 200 mm Time period = 2 days 3.4-0.5% a.r. of chlorotoluron in the leachate.
No data

Aged residue leaching:

### Field studies:

Lysimeter/Field leaching studies:

Location = Germany German Guideline 13 and GLP Two outdoor lysimeters filled with a sandy soil. Application in spring and autumn at a rate of 1.5 kg a.s./ha. Summer wheat, winter wheat and winter barley were planted. Leachates were collected and sampled monthly. Soil was analysed at the end of the study. Total duration = 2 years. Chlorotoluron and three of its metabolites (3-(3-chloro-p-tolyl)-1-methylurea, 1-(3-chloro-4-p-tolyl)urea and 3-chloro-4-methylaniline) did not appear in leachate at concentrations higher than permissible limit.
---

**Remarks:**

None

## 2.2 Fate and behaviour in water

### Abiotic degradation

Hydrolytic degradation:	(70°C): 1.6 d (pH 5), 2.1 d (pH 7), 3.9 d (pH 9) (50°C): 22 d (pH 5), 31 d (pH 7), 61 d (pH 9) (30°C): > 200 d (pH 5, 7, 9) (20°C): > 200 d (calculated from experiments)
Major metabolites:	None
Photolytic degradation:	304 nm, 20 days, 20-25°C No degradation was observed.
Major metabolites:	None

### Biological degradation

Readily biodegradable:	No
Water/sediment study:	
DT <sub>50</sub> water:	42 d $r^2 = 0.88$
DT <sub>90</sub> water:	141 d $r^2 = 0.88$
DT <sub>50</sub> whole system:	352 d $r^2 = 0.89$
DT <sub>90</sub> whole system:	1171 d $r^2 = 0.89$
Distribution in water / sediment systems (active substance)	Chlorotoluron has been identified in sediments at a percentage above 10% at $\geq$ 14 days. However, metabolites in sediments did not appear at > 10% AR.
Distribution in water / sediment systems (metabolites)	Two main metabolites appeared in water: 3-(3-chloro-p-tolyl)-1-methylurea (12.6% at 49 days) and chlorotoluron benzoic acid (25.1% at 100 days)
Accumulation in water and/or sediment:	No

**Degradation in the saturated zone** No data available

**Remarks:** None

## 2.3 Fate and behaviour in air

### Volatility

Vapour pressure:

$5 \times 10^{-6}$  Pa at 25°C

Henry's law constant:

Not determined due to very low vapour pressure

### Photolytic degradation

Direct photolysis in air:

Atkinson calculation = 2-10 h.

Photochemical oxidative degradation in air, DT<sub>50</sub>:

No data

Volatilisation:

From plant surfaces: < 2.1%

From soil: < 2.1%

Remarks:

None

### 3 Ecotoxicology

#### Terrestrial Vertebrates

Acute toxicity to mammals:	≥ 10,000 mg/kg
Acute toxicity to birds:	272 mg a.s./kg (Japanese quail). Formulated product = no data.
Dietary toxicity to birds:	2,150 mg a.s./kg (Japanese quail). Formulated product = no data.
Reproductive toxicity to birds:	NOEC = 88 mg a.s/kg (Japanese quail). Formulated product = no data.
Reproductive toxicity to mammals:	1,000 ppm (rat multigeneration study)

#### Aquatic Organisms

Acute toxicity fish:	LD <sub>50</sub> = 20 mg/L
Long term toxicity fish:	NOEC (21d) = 0.4 mg/L
Bioaccumulation fish:	No data
Acute toxicity invertebrate:	LD <sub>50</sub> = 67 mg/L
Chronic toxicity invertebrate:	NOEC (21d) = 16.7 mg/L
Acute toxicity algae:	EC <sub>50</sub> = 0.024 mg/L (a.s) EC <sub>50</sub> = 0.05 mg/L (Des-methyl Chlorotoluron) EC <sub>50</sub> = 113 mg/L (Chlorotoluron Benzoic Acid)
Chronic toxicity sediment dwelling organism:	No data
Acute toxicity aquatic plants:	E <sub>b</sub> C <sub>50</sub> = 0.038 mg/L (a.s) E <sub>wt</sub> C <sub>50</sub> = 0.049 mg/L (Des-methyl Chlorotoluron) E <sub>b</sub> C <sub>50</sub> = 0.10 mg/L (Des-methyl Chlorotoluron) E <sub>wt</sub> C <sub>50</sub> > 640 mg/L (Chlorotoluron Benzoic Acid) E <sub>b</sub> C <sub>50</sub> > 640 mg/L (Chlorotoluron Benzoic Acid)

## Honeybees

Acute oral toxicity:

LD<sub>50</sub> >177.4 µg formulated product/bee

Acute contact toxicity:

LD<sub>50</sub> >200 µg formulated product/bee

## Other arthropod species

<i>Test species</i>	Test Substance	Dose	End point	Effect	Annex VI Trigger
<b>Laboratory Tests</b>					
<i>Poecilus cupreus</i>	Formulated product	3.5 L f.p./ha (≈2.45 kg as/ha)	Mortality	No adverse effects	30%
<i>Chrysoperla carnea</i>	Formulated product	3.4 L f.p./ha (≈2.45 kg as/ha)	Mortality Reproduction	No adverse effects	30%
<i>Typhlodromus pyri</i>	Formulated product	3.4 L f.p./ha (≈2.45 kg as/ha)	Mortality Reproduction	No adverse effects	30%
<i>Aphidius spp</i>	Formulated product	3.5 L f.p./ha (≈2.45 kg as/ha)	Mortality Reproduction	3.7% 74.3%	30%
<i>Aphidius rhopalosiphi</i>	Formulated product	3.3 kg f.p./ha (≈3.0 kg as/ha)	Mortality	No adverse effects	30%
<i>Typhlodromus pyri</i>	Formulated product	3.3 kg f.p./ha (≈3.0 kg as/ha)	Mortality Reproduction	No adverse effects	30%
<b>Extended laboratory test</b>					
<i>Aphidius rhopalosiphi</i>	Formulated product	3.5 L f.p./ha (≈2.45 kg as/ha)	Mortality Behaviour Activity Reproduction	No adverse effects	30%

## Earthworms

Acute toxicity:

&gt;1000 mg a.s./kg

&gt;1000 mg formulated product/kg

Reproductive toxicity:

697 mg 3-(3-chloro-p-tolyl)-1-methylurea/kg

Data not required

**Soil micro-organisms**

Nitrogen mineralization:

No effects at 3.5 kg as/ha (83 days)  
Reversible effects in 2 months at  
35 kg a.s./ha.

No effects at 16.5 kg product/ha (28 days)

Carbon mineralization:

No effects at 3.5 kg as/ha (83 days)

No effects at 16.5 kg product/ha (28 days)

**APPENDIX IIIA****CHLOROTOLURON**

List of studies for which the main submitter has claimed data protection and which during the re-evaluation process were considered as essential for the evaluation with a view to Annex I inclusion.

**B.1 Identity, B.2 Physical and chemical properties, B.3 Data on application and further information, B.4 Proposals for classification and labelling, B.5 Methods of analysis**

<b>Annex point/ reference number</b>	<b>Author(s)</b>	<b>Year</b>	<b>Title Source (where different from company) Company, Report No. GLP or GEP status (where relevant) Published or not</b>
IIA, 1.11;IIA 4.1	G. Guzikevich	2001	Chlorotoluron technical five lot analysis and method validation. MA Doc. No. 90003388. (Study Nr. 01-05). GLP: yes Not Published
IIA, 2.1.1	Das, R.	1993	Report on melting point/melting range File No. C2242/497 MA doc. No. 90000087 GLP. Not Published
IIA, 2.2	Minder, F.	1994	Report on density of solids File No. C242/529 MA Doc. No. 90000098 GLP. Not Published
IIA, 2.3.1	Geoffroy, A.	1994	Report on vapour pressure curve File No. C2242/528 MA Doc. No. 90000097 GLP. Not Published
IIA, 2.4.1; IIA, 2.4.2	Das, R.	1993	Report on general physico-chemical properties (PAI) File No. C2242/495 MA Doc. No. 90000085 GLP. Not Published

<b>Annex point/ reference number</b>	<b>Author(s)</b>	<b>Year</b>	<b>Title Source (where different from company) Company, Report No. GLP or GEP status (where relevant) Published or not</b>
IIA, 2.4.1; IIA, 2.4.2	Das, R.	1993	Report on general physico-chemical properties (TGAI) File No. C2242/496 MA Doc. No. 90000086 GLP. Not Published
IIA, 2.9.4	Jäkel, K.	1993	Report on dissociation constant in water File No. C2242/527 MA Doc. No. 90000096 GLP. Not Published
IIA, 2.6	Stulz, J.	1993	Report on water solubility File No. C2242/494 MA Doc. No. 90000084 GLP. Not Published
IIA, 2.7/01	Rodler, M.	1991	Report on solubility in organic solvents File No. C2242/430a MA Doc. No. 9000070B GLP. Not Published
IIA, 2.7/02	Stulz, J.	1994	Report on solubility in organic solvents File No. C2242/430b MA Doc. No. 9000070 <sup>a</sup> GLP. Not Published
IIA,2.8.	Stulz, J.	1993	Report on Octanol / water partition coefficient GLP:Yes Not Published
IIA, 2.9.2; IIA, 7.2.1.2	Klöpffer, W.	1991	Determination of the phototransformation in water of chlorotoluron according to 'UBA Test Guideline Direct Phototransformation' File No. C2242/438 MA Doc. No. 90000075 GLP. Not Published
IIA, 2.10/01	Schürch, H.	1994	Report on thermal stability and stability in air File No. C2242/503 MA Doc. No. 90000093 GLP. Not Published
IIA, 2.10/02	Stamm, E.	1994	Rate estimation of the hydroxyl radical oxidation of chlorotoluron C2242 File No. C2242/515 MA Doc. No. 90000095 GLP. Not Published

<b>Annex point/ reference number</b>	<b>Author(s)</b>	<b>Year</b>	<b>Title Source (where different from company) Company, Report No. GLP or GEP status (where relevant) Published or not</b>
IIA, 2.11.1	Schürch, H.	1994	Report on flammability of solids File No. C2242/499 MA Doc. No. 90000089 GLP. Not Published
IIA, 2.11.2	Schürch, H.	1994	Report on auto-flammability of solids File No. C2242/500 MA Doc. No. 90000090 GLP. Not Published
IIA, 2.13	Schürch, H.	1994	Report on explosive properties File No. C2242/501 MA doc. No. 90000091 GLP. Not Published
IIA, 2.14	M. Ryser	1994	Report on surface tension of aqueous solutions File No. C2242/546 MA Doc. No. 90000162 GLP: Yes Not Published
IIA, 2.15	Schürch, H.	1994	Report on oxidizing properties File No. C2242/502 MA Doc. No. 90000092 GLP. Not Published
IIA,2.11-2.15	Young, S.		Chlorotoluron Technical: Physico-chemical properties. MA Doc. No. 90003407 GLP: yes Not Published
IIA,4.2.1;l IIA,5.2a-e	Schneider	1991	Method of analysis for determination of residues in cereals. MA Doc.No. 90002561 GLP: yes Not Published
IIA,4.2.2;l IIA, 5.2.f-j	Knoch,E.	2001	Method Development and Method Validation of Isoproturon/Des Methyl Isoproturon and Chlorotouron/Des Methyl Chlorotoluron in Soil MA Doc.No. 90003428. GLP: yes Not Published

<b>Annex point/ reference number</b>	<b>Author(s)</b>	<b>Year</b>	<b>Title Source (where different from company) Company, Report No. GLP or GEP status (where relevant) Published or not</b>
IIA,4.2.1;l IIA, 5.2a- e	Reichert, N.	2001	Independent laboratory validation of the analytical method for the residue analysis of chlorotoluron in cereal (grains) MA Doc.No.90004245 GLP: yes Not Published
IIA,4.2.1;l IIA 5.2 a- e	Tawiah, N.	1991	Determination of parent compound by high performance liquid chromatography, straw File No. C2242/486.MA Doc.No. 90000079 GLP: no Not Published
IIA,4.2.2;l IIA, 5.2.f-j	Reichert,N. and Klimmek S.	2001	Independent Laboratory Validation of the analytical method for the residue determination of Isoproturon/Desmethyl Isoproturon and Chloroturon/Desmethyl Chlorotoluron in Soil. MA Doc.No. 9003428 (S) GLP: yes Not Published
IIA,4.2.3;l IIA, 5.2.k- o	Knoch,E.	2001	Method Development and Method Validation of Isoproturon/Des Methyl Isoproturon and Chlorotouron/Des Methyl Chlorotoluron in water (surface water and drinking water) MA Doc.No. 90003429. GLP: yes Not Published
IIA,4.2.3;l IIA, 5.2.k- o	Reichert,N. and Klimmek S.	2001	Independent Laboratory Validation of the analytical method for the residue determination of Isoproturon/Desmethyl Isoproturon and Chloroturon/Desmethyl Chlorotoluron in Water. MA Doc.No. 9003429 (S) GLP: yes Not Published
IIA 4.2.4; IIIA 5.2p-t	Heitze, A.	1996	Developing an analytical method for the determination of chlorotoluron in air MA Doc No. 90000325 GLP. Not Published

**B.6 Toxicology and metabolism**

<b>Annex point/ reference number</b>	<b>Author(s)</b>	<b>Year</b>	<b>Title Source (where different from company) Company, Report No. GLP or GEP status (where relevant) Published or not</b>
IIA,5.1	Bissig, R.	1991	The renal excretion of [U-14 C] phenyl CGA 15646 by male rats after oral administration (exposure monitoring) File No. C2242/395. MA Doc. No. 90000068 GLP: yes Not Published
IIA, 5.1	Gordon, E.	2001	Chlorotoluron Absorption from the gastrointestinal tract: Basis for using an absorption rate of 75%.MA Doc.No. 90003400 GLP: yes Not Published
IIA,5.2.1	Leuschner, J.	2002	Acute skin irritation study of Tourex Technical (Chlorotoluron) in Sprague-Dawley rats by dermal administration. MA Doc. No. 90004303 GLP: yes Not Published
IIA,5.2.4	Leuschner, J.	2002	Acute skin irritation test (patch test) of Tolurex Technical (Chlorotoluron) in rabbits. MA Doc. No. 90004301 GLP: yes Not Published
IIA,5.2.5	Leuschner, J.	2002	Acute skin irritation study of Tourex Technical (Chlorotoluron) by instillation into the conjunctival sac of rabbits. MA Doc. No. 90004302 GLP: yes Not Published
IIA,5.2.6	Leuschner, J.	2002	Tolurex Technical in the skin sensitization test in guinea-pigs according to Magnusson and Klingman (Maximisation Test) MA Doc. No. 90004914 GLP: yes Not Published
IIA,5.4	Nigitz H-P.		In vivo/in vitro Unscheduled DNA synthesis in rat hepatocytes with chlorotoluron technical. MA Doc. No. 90003279 GLP: yes Not Published

<b>Annex point/ reference number</b>	<b>Author(s)</b>	<b>Year</b>	<b>Title Source (where different from company) Company, Report No. GLP or GEP status (where relevant) Published or not</b>
IIA, 5.4	Wilmer, J.W.G.M	1985	Chromosome analysis of cultured Chinese hamster ovary cells treated with chlorotoluron. MA Doc. No. 90003278 GLP: yes Not Published
IIA, 5.6.2	Becker, H and Bidermann, K.	1993	Embryotoxicity study (including teratogenicity) with Chlorotoluron technical in the rabbit RCC project 333528MA Doc.No. 90003280 GLP: yes Not Published
IIA,5.8.2; IIIA, 7.3.b	Cage, S.	2002	14 C-Chlorotoluron:Comparative in vitro dermal penetration study using human and rat skin. MA Doc.no. 90004274 GLP: yes Not Published
IIA, 5.5.d	Beilstein, P & Weber, E	1997	Chlorotoluron: Effects on biochemical parameters and on cell proliferation in the liver following administration to male rats MA Doc. No. 90000748 GLP. Not Published
IIA, 5.6.2	Fitz Gerald, R.E.	1991	Developmental toxicity (teratogenicity) study in rabbits with C 2242 technical (oral administration) File No. C2242/382 MA Doc. No. 90000067 GLP. Not Published
IIA, 5.10; IIIA, 7.2.1.1	Dagan, G	2002	Tolurex 500 SC: Predictive operator exposure UK Model (UKPOEM) MA Doc No. 9004197 (A) No GLP. Not published
IIA, 5.10; IIIA, 7.2.1.1	Dagan, G	2002	Tolurex 500 SC: Predictive operator exposure German model MA Doc No. 9004197 (B) No GLP. Not published
IIA, 5.10; IIIA, 7.2.1.1	Dagan, G	2002	Tolurex 500 SC: Predictive operator exposure UK Model (UKPOEM) MA Doc No. 9004197(C) No GLP. Not published

<b>Annex point/ reference number</b>	<b>Author(s)</b>	<b>Year</b>	<b>Title Source (where different from company) Company, Report No. GLP or GEP status (where relevant) Published or not</b>
IIA, 5.10; IIIA, 7.2.1.1	Dagan, G	2002	Tolurex 500 SC: Predictive operator exposure German model MA Doc No. 9004197 (D) No GLP. Not published
IIA, 5.10; IIIA, 7.2.1.1	Dagan, G	2002	Tolurex 70 SC: Predictive operator exposure UK Model (UKPOEM) MA Doc No. 9005045(A) No GLP. Not published
IIA, 5.10; IIIA, 7.2.1.1	Dagan, G	2002	Tolurex 70 SC: Predictive operator exposure German model MA Doc No. 9005045(B) No GLP. Not published
IIA, 5.10; IIIA, 7.2.2	Dagan, G	2002	Tolurex 500SC: Bystander exposure MA Doc No. 90004198 No GLP. Not published
IIA, 5.10; IIIA, 7.2.2	Dagan, G	2002	Tolurex 70SC: Bystander exposure MA Doc No. 90006026 No GLP. Not published

**B.7 Residue data**

<b>Annex point/ reference number</b>	<b>Author(s)</b>	<b>Year</b>	<b>Title Source (where different from company) Company, Report No. GLP or GEP status (where relevant) Published or not</b>
IIA, 6.1	Corden, M.	2003	14C-Chlorotoluron- Metabolism in wheat MA Doc. No. 90005493 GLP: yes Not Published
IIA, 6.3.1.1/33 : IIA 6.3.1.2/19	Griggs, N.	1991	C 2242, DICURANE 70 WG, Winter Wheat and Winter Barley, United Kingdom File No. C2242/487MA Doc.No. 90000208 GLP: no Not Published
IIA, 6.6	Terry, A.	2002	Predicted concentrations in rotational crops after application of Chlorotoluron to winter cereals in the EUMA Doc. No. 90004875 GLP: no Not Published

**B.8 Environmental fate and behaviour**

<b>Annex point/ reference number</b>	<b>Author(s)</b>	<b>Year</b>	<b>Title Source (where different from company) Company, Report No. GLP or GEP status (where relevant) Published or not</b>
IIA, 7.1.1.1.2. b	Mamouni, A.	1994	Photolysis of phenyl-[U-14C]-C2242 on soil surface under laboratory conditions File No. C2242/567 MA Doc. No. 90000210 GLP. Not Published
IIA, 7.1.1.2.1	Corden, M.	2002	14 C-Desmethyl chlorotoluron:Aerobic rate of degradation in 3 soils at 20C and 1 soil at 10C MA Doc. No. 90004694 GLP: yes Not Published
IIA,7.1.1. 2.1d.	Shaw,D	2002	14C-Chlorotoluron:Anerobic soil metabolism (route and rate of degradation) MA Doc.No. 90004793 GLP: yes Not Published
IIA,7.1.1. 2.1; IIIA,9.1.1. 1	Wahle,U.	1990	Depth dependent degradation of Chlorotoluron, CIB 03/7-12 MA Doc.No.90000482 GLP: yes Not Published
IIA, 7.1.2.a	Kördel, W	1990	Determination of adsorption/desorption for chlortoluron, CIB 03/7-13 File No. C2242/578 MA Doc. No. 90000213 GLP: yes Not Published
IIA, 7.1.2.b	Aikens, P.	2002	14 C-Desmethyl Chlorotoluron adsorption/desorption in three soils MA Doc. No. 90004350 GLP: yes Not Published
IIA, 7.1.2.a	Schanne, C., Morgenroth, U.	1993	Soil adsorption/desorption of <sup>14</sup> C-Chlorotoluron (C2242) on five soils File No. C2242/465 MA Doc. No. 90000077 GLP. Not Published

<b>Annex point/ reference number</b>	<b>Author(s)</b>	<b>Year</b>	<b>Title Source (where different from company) Company, Report No. GLP or GEP status (where relevant) Published or not</b>
IIA,7.1.3.2	Schanne,C.	1994	Leaching characteristics of aged residues of 14 C Chlorotoluron in two soils File No. C2242/583MA Doc.No.90000715 GLP: yes Not Published
IIA,7.1.3.3; IIIA 9.1.2.2	Herrchen,M	1992	Outdoor lysimeter study on chlorotoluron CIB 03/7-11 File No. C2242/504MA Doc.No. 90000094 GLP: yes Not Published
IIA, 7.2.1.3.1	Bader, U.	1990	Report on the test for ready biodegradability in the modified Sturm test of C2242 technical File No. C2242/377 MA Doc. No. 90000065 GLP. Not Published
IIA, 7.2.1.2 IIA, 2.9.2;	Klöpffer, W.	1991	Determination of the phototransformation in water of chlorotoluron according to 'UBA Test Guideline Direct Phototransformation' File No. C2242/438 MA Doc. No. 90000075 GLP. Not Published
IIA, 7.2.1.3.2	Kane, T.	2002	14 C-Degradability and fate in the water/sediment system MA Doc. No. 90004794 GLP: yes Not Published
IIA, 7.2.2	Reischmann, F.J	1992	1992 Volatilisation of CGA 15646 (C2242) from soil surface under controlled laboratory conditions File No. C2242/491 MA Doc. No. 90000081 GLP. Not Published
IIA,7.2.2	Sandmeier, P.	1992	Volatilisation of CGA 15646 (chlorotoluron) from plant and soil after postemergent spray application of [ <sup>14</sup> C-phenyl] labeled material on wheat under indoor conditions File No. C2242/424MA Doc. No. 90000069 GLP: yes Not Published

**B.9 Ecotoxicology**

<b>Annex point/ reference number</b>	<b>Author(s)</b>	<b>Year</b>	<b>Title Source (where different from company) Company, Report No. GLP or GEP status (where relevant) Published or not</b>
IIA, 8.1.1.1 IIIA, 10.1.1	Roberts, N.L.	1986	The acute oral toxicity (LD50) of tolurex technical to the Japanese quail MA Doc. No.: 5075 GLP: yes Not Published
IIA 8.1.2	Leuschner,J	2002	Acute toxicity study of Chlorotoluron by oral administration via the diet to birds (Japanese quail) MA Doc.No. 90004225 GLP: yes Not Published
IIA 8.1.3	Leuschner,J	2002	Study on reproduction in birds (Japanese quail) with Chlorotoluron by oral administration via the diet. MA Doc.No. 90004972 GLP: yes Not Published
IIA, 8.2.1 IIIA, 10.2.1	Knoch, M.	1995	Acute toxicity study of Tolurex 70 SC in Rainbow Trout (Oncorhynchus mykiss) MA Doc. No.: 8386 GLP: yes Not Published
IIA, 8.2.1 IIIA, 10.2.1	Rufli, H.	1994	Report on the acute toxicity test of C2242 SC 700 to Rainbow Trout (Oncorhynchus mykiss) MA Doc. No.: 90000167 GLP: yes Not Published
IIA 8.2.1	Heintze,A.	2001	Report on acute toxicity test of Tolurex 90WG in Rainbow Trout MA Doc.No. 90002869 GLP: yes Not Published
IIA, 8.2.2 IIIA, 10.2.5	Bogers, M.	1990	Chlorotoluron technical, 21-day prolonged toxicity study in the Rainbow trout (flow trough) MA Doc. No.: 90000714 GLP: yes Not Published

<b>Annex point/ reference number</b>	<b>Author(s)</b>	<b>Year</b>	<b>Title Source (where different from company) Company, Report No. GLP or GEP status (where relevant) Published or not</b>
IIA, 8.2.4 IIIA, 10.2.1	Adema, D.M.M	1986	The acute toxicity of Tolurex Tech. on Daphnia Magna MA Doc. No.: 5102 GLP: yes Not Published
IIA, 8.2.4 IIIA, 10.2.1	Grade, R.	1995	Report on the acute toxicity test of C2242 SC 700, (A-6285 J) on Daphnia (Daphnia magna Straus 1820) File No. C2242/574 MA Doc. No.: 90000168 GLP: yes Not Published
IIA, 8.2.4 IIIA, 10.2.1	Heintze, A.	2001	Assessment of toxic effects of Tolurex 90 WG on Daphnia Magna using the 48 h acute immobilization test MA Doc. No.: 90002870 GLP: yes Not Published
IIA, 8.2.5 IIIA, 10.2.5	Ritter, A.	1990	Influence of Chlortoluron technical on the reproduction of Daphnia Magna MA Doc. No.: 90000713 GLP: yes Not Published
IIA, 8.5	Bader, U.	1990	Report on the test for inhibitory concentration on aerobic bacteria of C2242 technical File No. C2242/378 MA Doc. No. 90000066 GLP. Not Published
IIA, 8.2.6 IIIA, 10.2.1	Heintze, A.	2001	Testing of toxic effects of Tolurex 90 WG on the single cell green alga <i>Desmodesmus subspicatus</i> MA Doc. No.: 90002871 GLP: yes Not Published
IIA, 8.2.6 IIIA, 10.2.1	Oldersma, H.	1986	The acute toxicity of Tolurex Tech on the growth of the alga <i>Selenastrum capricornutum</i> MA Doc. No.: 5101 GLP: yes Not Published

<b>Annex point/ reference number</b>	<b>Author(s)</b>	<b>Year</b>	<b>Title Source (where different from company) Company, Report No. GLP or GEP status (where relevant) Published or not</b>
IIA,8.2.6	Dengler, D.	2001	2001 Testing of toxic effects of 3-(-chloro-p-tolyl)-1-methylurea on the single cell green alga <i>Desmodesmus subspicatus</i> MA Doc.No.90003394 GLP: yes Not Published
IIA,8.2.6	Memmert,U.	1999	Toxicity of Chlorotoluron Technical to <i>Anabaena flos-aquata</i> (cyanopta) in a 72-hour algal growth inhibition test. MA Doc.no. 90002968 GLP: yes Not Published
IIA, 8.2.6; IIIA, 10.1.1	Scheerbaum, D.	2003	Chlorotoluron benzoic acid, Alga, growth inhibition test with <i>Desmodesmus subspicatus</i> , 72 h. MA Doc. No. 90005359 GLP: yes Not Published
IIA,8.2.6;I IIA,10.1.1 ;IIIA,10.2. 1	Grade,R.	1995	Report on the growth inhibition test of C-2242 SC 700, (A-6285J) to green algae ( <i>Scenedesmus subspicatus</i> ). File No. C2242/575MA Doc.No.90000169 GLP: yes Not Published
IIA, 8.2.8	Dirk Scheerbaum	2003	Chlorotoluron benzoic acid. Aquatic Plant Toxicity Test, <i>Lemna gibba</i> , Semi-Static. MA Doc.No.: 90005358 GLP: yes Not Published
IIA,8.2.8; IIIA,10.1. 1;IIIA,10. 2.1	Firth K.A.	2002	Des-methyl Chlorotoluron higher plant ( <i>Lemna</i> ) growth inhibition test MA Doc.No. 90004742 GLP: yes Not Published
IIA,8.2.8; IIIA,10.1. 1;IIIA,10. 2.1	Firth K.A.	2002	Tolurex 70 SC: Higher plant ( <i>Lemna</i> ) growth inhibition test. MA Doc.No. 90004743 GLP: yes Not Published

<b>Annex point/ reference number</b>	<b>Author(s)</b>	<b>Year</b>	<b>Title Source (where different from company) Company, Report No. GLP or GEP status (where relevant) Published or not</b>
IIA,8.2.8	Memmert,U.	1999	Toxicity of Chlorotoluron Technical to aquatic higher plant <i>Lemna gibba</i> in a 7-day semistatic growth inhibition test. MA Doc.no. 90002969 GLP: yes Not Published
IIA, 8.3.1.1 IIIA, 10.4.1	Kling, A.	2001	Assessment of side effects of Tolurex 90 WG to Honey bee, <i>Apis mellifera</i> L. MA Doc. No.: 90002872 GLP: yes Not Published
IIA, 8.3.1.1 IIIA, 10.4.1	Nengel, S.	1995	Assessment of side effects of Tolurex 70 SC to the Honey bee, <i>Apis mellifera</i> L. MA Doc. No.: 8349 GLP: yes Not Published
IIA, 8.3.2 IIIA, 10.5.1	Adelberger, I.	2001	Tolurex 90 WG: Acute toxicity to the Predatory Mite, <i>Typhlodromus pyri</i> SCHEUTEN in the laboratory MA Doc. No.: 90002874 GLP: yes Not Published
IIA, 8.3.2 IIIA, 10.5.1	Bargen, H.	2001	Tolurex 90 WG: Acute toxicity to the Aphid Parasitoid, <i>Aphidius</i> Parasitoid, <i>Aphidius rhopalosiphi</i> DeStefani-Perez in the laboratory MA Doc. No.: 90002873 GLP: yes Not Published
IIA, 8.3.2 IIIA, 10.5.1	Kühner	1995	Assessment of side effects of Tolurex 70 SC on the predatory mite, <i>typhlodromus pyri</i> MA Doc. No.: 8345 GLP: yes Not Published
IIA, 8.3.2 IIIA, 10.5.1	Kühner	1995	Assessment of side effects of Tolurex 70 SC on the green lacewing, <i>Chrysoperia carnea</i> Steph in laboratory MA Doc. No.: 8346 GLP: yes Not Published

<b>Annex point/ reference number</b>	<b>Author(s)</b>	<b>Year</b>	<b>Title Source (where different from company) Company, Report No. GLP or GEP status (where relevant) Published or not</b>
IIA, 8.3.2 IIIA, 10.5.1	Kühner	1995	Assessment of side effects of Tolurex 70 SC on the ground beetle, <i>Poecilus supreus</i> L. in the laboratory MA Doc. No.: 8347 GLP: yes Not Published
IIA, 8.3.2 IIIA, 10.5.1	Kühner	1995	Assessment of side effects of Tolurex 70 SC on the Aphid Parasitoid, <i>Aphidius</i> spp. in the laboratory MA Doc. No.: 8449 GLP: yes Not Published
IIA, 8.3.2 IIIA, 10.5.1	Wainwright, M.	2001	Tolurex 70 SC: An extended laboratory test to evaluate the effects of pesticides on adults of cereal aphid parasitoid <i>Aphidius rhopalosiphii</i> MA Doc. No.: 90002877 GLP: yes Not Published
IIA, 8.4.1 IIIA, 10.6.1.1	Kühner, C.	1990	Akute Toxizität von Dicuran 700 flüssig auf den Kompostwurm, <i>Eisenia foetida</i> MA Doc. No.: 90000155 GLP: yes Not Published
IIA, 8.4.1 IIIA, 10.6.1.1	Wachter, S.	2001	Acute toxicity of Tolurex 90 WG on earthworms, <i>Eisenia foetida</i> using an artificial soil test MA Doc. No.: 90002875 GLP: yes Not Published
IIA, 8.4.1 IIIA, 10.6.1.1	Wachter, S.	2001	Acute toxicity of 3-(3-chloro-p-tolyl)-1-methylurea on earthworms, <i>Eisenia foetida</i> using an artificial soil test MA Doc. No.: 90002904 GLP: yes Not Published
II, 8.5	Schanné	1994	The effects of chlorotoluron (C2242) on soil respiration and nitrification File No. C2242/492 MA Doc No. 90000082 GLP: Yes Not Published

Annex point/ reference number	Author(s)	Year	Title Source (where different from company) Company, Report No. GLP or GEP status (where relevant) Published or not
IIA, 8.5 IIIA, 10.7.1	Wachter, S	2001	Assessment of side effects of Tolurex 90 WG on the activity of the soil microflora MA Doc. No.: 90002876 GLP: yes Not Published
IIA,8.6; IIIA,10.8	Fiebig,S.	2002	Tolurex 70 SC: Terrestrial plants toxicity, vegetative vigour, Tier II MA Doc.No. 9004781A GLP: yes Not Published
IIA,8.6; IIIA,10.8	Fiebig,S.	2002	Tolurex 70 SC: Terrestrial plants toxicity, seedling emergence, Tier II MA Doc.No. 9004781B GLP: yes

**APPENDIX IIIB****CHLOROTOLURON**

List of studies which were submitted during the evaluation process and were not cited in the draft assessment report:

**B.1 Identity, B.2 Physical and chemical properties, B.3 Data on application and further information, B.4 Proposals for classification and labelling, B.5 Methods of analysis.**

<b>Annex point/ reference number</b>	<b>Author(s)</b>	<b>Year</b>	<b>Title Source (where different from company) Company, Report No. GLP or GEP status (where relevant) Published or not</b>
IIA, 1.11;IIA 4.1	G. Guzikevich	2001	Chlorotoluron technical five lot analysis and method validation. MA Doc. No. 90003388. (Study Nr. 01-05). GLP: yes Not Published
IIA, 2.1.5.1/01 -05	Käser, W.	1993	Report on chemical composition GLP:No Not Published
IIA, 2.1.8.	Stulz, J.	1993	Report on Octanol / water partition coefficient GLP:Yes Not Published
IIA, 2.1.14	Ryser, M	1994	Report on Surface Tension of Aqueous suspension GLP:Yes Not Published
IIA,2.11- 2.15	Young, S.		Chlorotoluron Technical: Physico-chemical properties. MA Doc. No. 90003407 GLP: yes Not Published
IIA, 2.14	M. Ryser	1994	Report on surface tension of aqueous solutions File No. C2242/546 MA Doc. No. 90000162 GLP: Yes Not Published

<b>Annex point/ reference number</b>	<b>Author(s)</b>	<b>Year</b>	<b>Title Source (where different from company) Company, Report No. GLP or GEP status (where relevant) Published or not</b>
IIIA, 2.4.2	Das, R.	1993	Report on pH of aqueous solutions File No. C2242/498 MA Doc. No. 90000088 GLP. Not Published
IIIA 2.1-2.8	de Ryckel, B.	2001	Physico-chemical properties of Tolurex 70 SC File No. AGAN/FO20117/Ch.2191/2000/155 MA Doc. No. 90002905 GLP. Not Published
IIIA 2.1-2.8; IIIA, 5.1	de Ryckel, B.	2001	Accelerated storage stability of Tolurex 70 SC MA Doc. No. 90002624 GLP. Not Published
IIIA 2.1-2.8; IIIA, 5.1	de Ryckel, B.	2002	Shelf – life stability of Tolurex 70 SC: Analysis after 2 years storage at room temperature MA Doc. No. 90004873 GLP. Not Published
IIIA, 2.1-2.8; IIIA, 5.1	Windreich, S.	1997	Tolurex 700 SC: Storage stability and shelf-life specification MA Doc. No. 90001342 GLP. Not Published
IIIA, 2.5.2	Ryser, M.	1994	Report on viscosity of liquids File No. C2242/545 MA Doc. No. 90000161 GLP. Not Published
IIIA, 2.2.1	Schürch, H.	1994	Report on explosive properties File No. C2242/548 MA Doc. No. 90000164 GLP. Not Published
IIIA, 2.3a	Schürch, H.	1994	Report on determination of flashpoint File No. C2242/547 MA Doc. No. 90000163 GLP. Not Published
IIIA, 2.3c	Schürch, H.	1994	Report on auto-flammability of liquids File No. C2242/549 MA Doc. No. 90000165 GLP. Not Published

<b>Annex point/ reference number</b>	<b>Author(s)</b>	<b>Year</b>	<b>Title Source (where different from company) Company, Report No. GLP or GEP status (where relevant) Published or not</b>
IIIA, 4.6.3	Beale, R	2001	Determination of the effects of two types of tank washing procedures for Tolugan 700 SC MA Doc. No. 90003431 GLP: yes Not Published
IIA,4.2.1;l IIA,5.2a-e	Heegemann, W.	1986	Method of analysis for determination of residues of chlorotoluron in wheat and barley grain MA Doc. No.90002560 GLP: yes Not Published
IIA,4.2.2;l IIA, 5.2.f-j	Knoch,E.	2001	Method Development and Method Validation of Isoproturon/Des Methyl Isoproturon and Chlorotouron/Des Methyl Chlorotoluron in Soil MA Doc.No. 90003428. GLP: yes Not Published
IIA,4.2.3;l IIA, 5.2.k-o	Knoch,E.	2001	Method Development and Method Validation of Isoproturon/Des Methyl Isoproturon and Chlorotouron/Des Methyl Chlorotoluron in water (surface water and drinking water) MA Doc.No. 90003429. GLP: yes Not Published
IIA,4.2.1;l IIA, 5.2a-e	Reichert, N.	2001	Independent laboratory validation of the analytical method for the residue analysis of chlorotoluron in cereal (grains) MA Doc.No.90004245 GLP: yes Not Published
IIA,4.2.2;l IIA, 5.2.f-j	Reichert,N. And Klimmek S.	2001	Independent Laboratory Validation of the analytical method for the residue determination of Isoproturon/Desmethyl Isoproturon and Chloroturon/Desmethyl Chlorotoluron in Soil. MA Doc.No. 9003428 (S) GLP: yes Not Published

<b>Annex point/ reference number</b>	<b>Author(s)</b>	<b>Year</b>	<b>Title Source (where different from company) Company, Report No. GLP or GEP status (where relevant) Published or not</b>
IIA,4.2.3;l IIA, 5.2.k- o	Reichert,N. And Klimmek S.	2001	Independent Laboratory Validation of the analytical method for the residue determination of Isoproturon/Desmethyl Isoproturon and Chloroturon/Desmethyl Chlorotoluron in Water. MA Doc.No. 9003429 (S) GLP: yes Not Published
IIA,4.2.1;l IIA,5.2a-e	Schneider	1991	Method of analysis for determination of residues in cereals. MA Doc.No. 90002561 GLP: yes Not Published
IIA,4.2.1;l IIA 5.2 a- e	Tawiah, N.	1991	Determination of parent compound by high performance liquid chromatography, straw File No. C2242/486.MA Doc.No. 90000079 GLP: no Not Published
IIIA 4.2.4; IIIA 5.2p-t	Heitze, A.	1996	Developing an analytical method for the determination of chlorotoluron in air MA Doc No. 90000325 GLP. Not Published
IIIA, 5.1.1a- 5.1.3.4.c	de Ryckel, B.	2001	Method of analysis of chlorotoluron content in a formulation suspension concentrate (SC) and in a water dispersible granules (WG) MA Doc. No. 90003408 GLP. Not Published

**B.6 Toxicology and metabolism**

<b>Annex point/ reference number</b>	<b>Author(s)</b>	<b>Year</b>	<b>Title Source (where different from company) Company, Report No. GLP or GEP status (where relevant) Published or not</b>
IIA, 5.1	Gordon, E.	2001	Chlorotoluron Absorption from the gastrointestinal tract: Basis for using an absorption rate of 75%.MA Doc.No. 90003400 GLP: yes Not Published
IIA,5.2.1	Leuschner, J.	2002	Acute skin irritation study of Tourex Technical (Chlorotoluron) in Sprague-Dawley rats by dermal administration. MA Doc. No. 90004303 GLP: yes Not Published
IIA,5.2.4	Leuschner, J.	2002	Acute skin irritation test (patch test) of Tolurex Technical (Chlorotoluron) in rabbits. MA Doc. No. 90004301 GLP: yes Not Published
IIA,5.2.5	Leuschner, J.	2002	Acute skin irritation study of Tourex Technical (Chlorotoluron) by instillation into the conjunctival sac of rabbits. MA Doc. No. 90004302 GLP: yes Not Published
IIA,5.2.6	Leuschner, J.	2002	Tolurex Technical in the skin sensitization test in guinea-pigs according to Magnusson and Klingman (Maximisation Test) MA Doc. No. 90004914 GLP: yes Not Published
IIA,5.4	Nigitz H-P.		In vivo/in vitro Unscheduled DNA synthesis in rat hepatocytes with chlorotoluron technical. MA Doc. No. 90003279 GLP: yes Not Published
IIA, 5.4	Wilmer, J.W.G.M	1985	Chromosome analysis of cultured Chinese hamster ovary cells treated with chlorotoluron. MA Doc. No. 90003278 GLP: yes Not Published

<b>Annex point/ reference number</b>	<b>Author(s)</b>	<b>Year</b>	<b>Title Source (where different from company) Company, Report No. GLP or GEP status (where relevant) Published or not</b>
IIA, 5.5	Piccirillo, V. J.	2003	Chlorotoluron, Carcinogenicity review MA Doc. No. 90005199 GLP: yes Not Published
IIA, 5.6.2	Becker, H and Bidermann, K.	1993	Embryotoxicity study (including teratogenicity) with Chlorotoluron technical in the rabbit RCC project 333528MA Doc.No. 90003280 GLP: yes Not Published
IIA,5.8.2; IIIA, 7.3.b	Cage, S.	2002	14 C-Chlorotoluron:Comparative in vitro dermal penetration study using human and rat skin. MA Doc.no. 90004274 GLP: yes Not Published
IIA, 5.10	Gordon, E.	2002	Chlorotoluron: Classification on the basis of specific effects on human health. MA Doc.No. 90004195 GLP: no Not Published
IIA, 5.10	Gordon, E.	2002	Chlorotoluron: Classification on the basis of toxicological properties MA Doc.No. 90004196 GLP: no Not Published
IIA, 5.5.d	Beilstein, P & Weber, E	1997	Chlorotoluron: Effects on biochemical parameters and on cell proliferation in the liver following administration to male rats MA Doc. No. 90000748 GLP. Not Published
IIIA, 7.1.6	Leuschner, J	2003	Examination of Tolurex 70 SC in a skin sensitization test in guinea-pigs according to Magnusson and Kligman (Maximisation Test) MA Doc. No. 90005441 GLP. Not published
IIA, 5.10; IIIA, 7.2.1.1	Dagan, G	2002	Tolurex 500 SC: Predictive operator exposure UK Model (UKPOEM) MA Doc No. 9004197 (A) No GLP. Not published

<b>Annex point/ reference number</b>	<b>Author(s)</b>	<b>Year</b>	<b>Title Source (where different from company) Company, Report No. GLP or GEP status (where relevant) Published or not</b>
IIA, 5.10; IIIA, 7.2.1.1	Dagan, G	2002	Tolurex 500 SC: Predictive operator exposure German model MA Doc No. 9004197 (B) No GLP. Not published
IIA, 5.10; IIIA, 7.2.1.1	Dagan, G	2002	Tolurex 500 SC: Predictive operator exposure UK Model (UKPOEM) MA Doc No. 9004197(C) No GLP. Not published
IIA, 5.10; IIIA, 7.2.1.1	Dagan, G	2002	Tolurex 500 SC: Predictive operator exposure German model MA Doc No. 9004197 (D) No GLP. Not published
IIA, 5.10; IIIA, 7.2.1.1	Dagan, G	2002	Tolurex 70 SC: Predictive operator exposure UK Model (UKPOEM) MA Doc No. 9005045(A) No GLP. Not published
IIA, 5.10; IIIA, 7.2.1.1	Dagan, G	2002	Tolurex 70 SC: Predictive operator exposure German model MA Doc No. 9005045(B) No GLP. Not published
IIA, 5.10; IIIA, 7.2.2	Dagan, G	2002	Tolurex 500SC: Bystander exposure MA Doc No. 90004198 No GLP. Not published
IIA, 5.10; IIIA, 7.2.2	Dagan, G	2002	Tolurex 70SC: Bystander exposure MA Doc No. 90006026 No GLP. Not published

**B.7 Residue data**

<b>Annex point/ reference number</b>	<b>Author(s)</b>	<b>Year</b>	<b>Title Source (where different from company) Company, Report No. GLP or GEP status (where relevant) Published or not</b>
IIA, 6.1	Corden, M.	2003	14C-Chlorotoluron- Metabolism in wheat MA Doc. No. 90005493 GLP: yes Not Published
IIA, 6.6	Terry, A.	2002	Predicted concentrations in rotational crops after application of Chlorotoluron to winter cereals in the EUMA Doc. No. 90004875 GLP: no Not Published

**B.8 Environmental fate and behaviour**

<b>Annex point/ reference number</b>	<b>Author(s)</b>	<b>Year</b>	<b>Title Source (where different from company) Company, Report No. GLP or GEP status (where relevant) Published or not</b>
IIA, 7.1.1.2.1	Corden, M.	2002	14 C-Desmethyl chlorotoluron:Aerobic rate of degradation in 3 soils at 20C and 1 soil at 10C MA Doc. No. 90004694 GLP: yes Not Published
IIA,7.1.1. 2.1d.	Shaw,D	2002	14C-Chlorotoluron:Anerobic soil metabolism (route and rate of degradation) MA Doc.No. 90004793 GLP: yes Not Published
IIA,7.1.1. 2.1;IIIA,9. 1.1.1	Wahle,U.	1990	Depth dependent degradation of Chlorotoluron, CIB 03/7-12 MA Doc.No.90000482 GLP: yes Not Published
IIA, 7.1.2.a	Krdel,W.	1990	Determination of adsorption/desorption for chlorotoluron, CIB 03/7-13 File No. C2242/578MA Doc.No. 90000213 GLP: yes Not Published
IIA, 7.1.2.b	Aikens, P.	2002	14 C-Desmethyl Chlorotoluron adsorption/desorption in three soils MA Doc. No. 90004350 GLP: yes Not Published
IIA,7.1.3. 2	Schanne,C.	1994	Leaching characteristics of aged residues of 14 C Chlorotoluron in two soils File No. C2242/583MA Doc.No.90000715 GLP: yes Not Published
IIA,7.1.3. 3;IIIA 9.1.2.2	Herrchen,M	1992	Outdoor lysimeter study on chlorotoluron CIB 03/7-11 File No. C2242/504MA Doc.No. 90000094 GLP: yes Not Published

<b>Annex point/ reference number</b>	<b>Author(s)</b>	<b>Year</b>	<b>Title Source (where different from company) Company, Report No. GLP or GEP status (where relevant) Published or not</b>
IIA,7.1.3.3;IIIA,9.1.2.2	Krdel, W. and Klein,M.	2002	Expert opinion on the outdoor lysimeter study on chlorotoluron (CIB 03/7-11) performed by Dr. M. Herrchen MA Doc. No. 9000094S GLP: no Not Published
IIA, 7.2.1.3.2	Kane, T.	2002	14 C-Degradability and fate in the water/sediment sytem MA Doc. No. 90004794 GLP: yes Not Published
IIA, 7.2.1.3.1	Bader, U.	1990	Report on the test for ready biodegradability in the modified sturm test of C2242 technical File No. C2242/377 MA Doc. No. 90000065 GLP. Not Published
IIA, 7.1.2.a	Schanne, C., Morgenroth, U.	1993	Soil adsorption/desorption of <sup>14</sup> C-Chlorotoluron (C2242) on five soils File No. C2242/465 MA Doc. No. 90000077 GLP. Not Published
IIIA, 9.2.1	Adrian, P.	2002	Chlorotoluron -CTU 90 WG- PEC in groundwater in the European Union using the FOCUS groundwater scenarios MA Doc. No. 90004744 No GLP. Not Published
IIIA, 9.2.1	Klein, M.	2002	PECgw Modelling for Chlorotoluron with PELMO 3.20 MA Doc. No. 90004304 No GLP. Not Published
IIIA, 9.2.1	Terry, A.	2002	Predicted Environmental concentrations of Chlorotoluron and its major degradation product in groundwater in the EU MA Doc. No. 90005101 No GLP. Not Published

**B.9 Ecotoxicology**

<b>Annex point/ reference number</b>	<b>Author(s)</b>	<b>Year</b>	<b>Title Source (where different from company) Company, Report No. GLP or GEP status (where relevant) Published or not</b>
IIA,10.1	Norman,S.	2002	Assesment of short term risk to grazing birds and long term risk to herbivorous mammals MA Doc.No. 90004231 GLP: no Not Published
IIA, 8.1.1.1 IIIA, 10.1.1	Roberts, N.L.	1986	The acute oral toxicity (LD50) of tolurex technical to the Japanese quail MA Doc. No.: 5075 GLP: yes Not Published
IIA 8.1.2	Leuschner,J	2002	Acute toxicity study of Chlorotoluron by oral administration via the diet to birds (Japanese quail) MA Doc.No. 90004225 GLP: yes Not Published
IIA 8.1.3	Leuschner,J	2002	Study on reproduction in birds (Japanese quail) with Chlorotoluron by oral administration via the diet. MA Doc.No. 90004972 GLP: yes Not Published
IIIA 10.1	Norman, S.	2002	Chlorotoluron: Assessment of long term risk to birds MA Doc. No. 90004994 GLP: no Not Published
IIA, 8.2.1 IIIA, 10.2.1	Knoch, M.	1995	Acute toxicity study of Tolurex 70 SC in Rainbow Trout (Oncorhynchus mykiss) MA Doc. No.: 8386 GLP: yes Not Published
IIA, 8.2.1 IIIA, 10.2.1	Rufli, H.	1994	Report on the acute toxicity test of C2242 SC 700 to Rainbow Trout (Oncorhynchus mykiss) MA Doc. No.: 90000167 GLP: yes Not Published

<b>Annex point/ reference number</b>	<b>Author(s)</b>	<b>Year</b>	<b>Title Source (where different from company) Company, Report No. GLP or GEP status (where relevant) Published or not</b>
IIA 8.2.1	Heintze,A.	2001	Report on acute toxicity test of Tolurex 90WG in Rainbow Trout MA Doc.No. 90002869 GLP: yes Not Published
IIA, 8.2.2 IIIA, 10.2.5	Bogers, M.	1990	Chlortoluron technical, 21-day prolonged toxicity study in the Rainbow trout (flow trough) MA Doc. No.: 90000714 GLP: yes Not Published
IIA, 8.2.4 IIIA, 10.2.1	Adema, D.M.M	1986	The acute toxicity of Tolurex Tech. on Daphnia Magna MA Doc. No.: 5102 GLP: yes Not Published
IIA, 8.2.4 IIIA, 10.2.1	Grade, R.	1995	Report on the acute toxicity test of C2242 SC 700, (A-6285 J) on Daphnia (Daphnia magna Straus 1820) File No. C2242/574 MA Doc. No.: 90000168 GLP: yes Not Published
IIA, 8.2.4 IIIA, 10.2.1	Heintze, A.	2001	Assessment of toxic effects of Tolurex 90 WG on Daphnia Magna using the 48 h acute immobilization test MA Doc. No.: 90002870 GLP: yes Not Published
IIIA, 10.2.1	Ritter, A.	1990	Dicuran 700 fluessig: 96-hour acute toxicity study (LC50) in the rainbow trout File No. C2242/404 MA Doc. No. 90000156 GLP: yes Not Published
IIIA, 10.2.2/02	Ritter, A.	1990	24-hour acute toxicity of Dicuran 700 fluessig to Daphnia magna (OECD immobilization test) File No. C2242/452 MA Doc. No.: 90000159 GLP: yes Not Published

<b>Annex point/ reference number</b>	<b>Author(s)</b>	<b>Year</b>	<b>Title Source (where different from company) Company, Report No. GLP or GEP status (where relevant) Published or not</b>
IIIA, 10.2.4	Ritter, A.	1990	Dicuran 700 fluessig: 21-day prolonged toxicity study in the rainbow trout under flow-through conditions File No. C2242/403 MA Doc. No. 90000150 GLP: yes Not Published
IIA 8.2.4	Adema, D.M.M	1986	The acute toxicity of Tolurex Tech. on Daphnia Magna. MA Doc.No. 5102 GLP: yes Not Published
IIA, 8.2.5 IIIA, 10.2.5	Ritter, A.	1990	Influence of Chlortoluron technical on the reproduction of Daphnia Magna MA Doc. No.: 90000713 GLP: yes Not Published
IIIA, 10.2.1	Dengler, D.	1995	Testing of toxic effects of Tolurex 70 SC on the single cell green alga Scenedesmus subspicatus MA Doc. No.: 8344 GLP: yes Not Published
IIA, 8.2.6 IIIA, 10.2.1	Heintze, A.	2001	Testing of toxic effects of Tolurex 90 WG on the single cell green alga Desmodesmus subspicatus MA Doc. No.: 90002871 GLP: yes Not Published
IIA, 8.2.6 IIIA, 10.2.1	Oldersma, H.	1986	The acute toxicity of Tolurex Tech on the growth of the alga Selenastrum capricornutum MA Doc. No.: 5101 GLP: yes Not Published
IIA,8.2.6	Dengler, D.	2001	2001Testing of toxic effects of 3-(-chloro-p-tolyl)-1-methylurea on the single cell green alga Desmodesmus subspicatus MA Doc.No.90003394 GLP: yes Not Published

<b>Annex point/ reference number</b>	<b>Author(s)</b>	<b>Year</b>	<b>Title Source (where different from company) Company, Report No. GLP or GEP status (where relevant) Published or not</b>
IIA,8.2.6	Memmert,U.	1999	Toxicity of Chlorotoluron Technical to Anabaena flos-aquata (cyanopta) in a 72-hour algal growth inhibition test. MA Doc.no. 90002968 GLP: yes Not Published
IIA,8.2.6;l IIA,10.1.1 ;IIIA,10.2. 1	Grade,R.	1995	Report on the growth inhibition test of C-2242 SC 700, (A-6285J) to green algae (Scenedesmus subspicatus). File No. C2242/575MA Doc.No.90000169 GLP: yes Not Published
IIA, 8.2.6; IIIA, 10.1.1	Scheerbaum, D.	2003	Chlorotoluron benzoic acid, Alga, growth inhibition test with Desmodesmus subspicatus, 72 h. MA Doc. No. 90005359 GLP: yes Not Published
IIA, 8.2.8	Dirk Scheerbaum	2003	Chlorotoluron benzoic acid. Aquatic Plant Toxicity Test, Lemna gibba, Semi-Static. MA Doc.No.: 90005358 GLP: yes Not Published
IIA,8.2.8; IIIA,10.1. 1;IIIA,10. 2.1	Firth K.A.	2002	Des-methyl Chlorotoluron higher plant (Lemna) growth inhibition test MA Doc.No. 90004742 GLP: yes Not Published
IIA,8.2.8; IIIA,10.1. 1;IIIA,10. 2.1	Firth K.A.	2002	Tolurex 70 SC: Higher plant (Lemna) growth inhibition test. MA Doc.No. 90004743 GLP: yes Not Published
IIA,8.2.8	Memmert,U.	1999	Toxicity of Chlorotoluron Technical to aquatic higher plant Lemna gibba in a 7-day semistatic growth inhibition test. MA Doc.no. 90002969 GLP: yes Not Published

<b>Annex point/ reference number</b>	<b>Author(s)</b>	<b>Year</b>	<b>Title Source (where different from company) Company, Report No. GLP or GEP status (where relevant) Published or not</b>
IIA, 8.3.1.1 IIIA, 10.4.1	Kling, A.	2001	Assessment of side effects of Tolurex 90 WG to Honey bee, <i>Apis mellifera</i> L. MA Doc. No.: 90002872 GLP: yes Not Published
IIA, 8.3.1.1 IIIA, 10.4.1	Nengel, S.	1995	Assessment of side effects of Tolurex 70 SC to the Honey bee, <i>Apis mellifera</i> L. MA Doc. No.: 8349 GLP: yes Not Published
IIA, 8.3.2 IIIA, 10.5.1	Adelberger, I.	2001	Tolurex 90 WG: Acute toxicity to the Predatory Mite, <i>Typhlodromus pyri</i> SCHEUTEN in the laboratory MA Doc. No.: 90002874 GLP: yes Not Published
IIA, 8.3.2 IIIA, 10.5.1	Bargen, H.	2001	Tolurex 90 WG: Acute toxicity to the Aphid Parasitoid, <i>Aphidius</i> Parasitoid, <i>Aphidius rhopalosiphii</i> DeStefani-Perez in the laboratory MA Doc. No.: 90002873 GLP: yes Not Published
IIA, 8.3.2 IIIA, 10.5.1	Kühner	1995	Assessment of side effects of Tolurex 70 SC on the predatory mite, <i>typhlodromus pyri</i> MA Doc. No.: 8345 GLP: yes Not Published
IIA, 8.3.2 IIIA, 10.5.1	Kühner	1995	Assessment of side effects of Tolurex 70 SC on the green lacewing, <i>Chrysoperia carnea</i> Steph in laboratory MA Doc. No.: 8346 GLP: yes Not Published
IIA, 8.3.2 IIIA, 10.5.1	Kühner	1995	Assessment of side effects of Tolurex 70 SC on the ground beetle, <i>Poecilus supreus</i> L. in the laboratory MA Doc. No.: 8347 GLP: yes Not Published

<b>Annex point/ reference number</b>	<b>Author(s)</b>	<b>Year</b>	<b>Title Source (where different from company) Company, Report No. GLP or GEP status (where relevant) Published or not</b>
IIA, 8.3.2 IIIA, 10.5.1	Kühner	1995	Assessment of side effects of Tolurex 70 SC on the Aphid Parasitoid, <i>Aphidius</i> spp. in the laboratory MA Doc. No.: 8449 GLP: yes Not Published
IIA, 8.3.2 IIIA, 10.5.1	Wainwright, M.	2001	Tolurex 70 SC: An extended laboratory test to evaluate the effects of pesticides on adults of cereal aphid parasitoid <i>Aphidius rhopalosiph</i> MA Doc. No.: 90002877 GLP: yes Not Published
IIA, 8.4.1 IIIA, 10.6.1.1	Kühner, C.	1990	Akute toxisität von Dicuran 700 flüssig auf den kompostwurm, <i>Eisenia foetida</i> MA Doc. No.: 90000155 GLP: yes Not Published
IIA, 8.4.1 IIIA, 10.6.1.1	Wachter, S.	2001	Acute toxicity of Tolurex 90 WG on earthworms, <i>Eisenia foetida</i> using an artificial soil test MA Doc. No.: 90002875 GLP: yes Not Published
IIA, 8.4.1 IIIA, 10.6.1.1	Wachter, S.	2001	Acute toxicity of 3-(3-chloro-p-tolyl)-1-methylurea on earthworms, <i>Eisenia foetida</i> using an artificial soil test MA Doc. No.: 90002904 GLP: yes Not Published
IIA, 8.5 IIIA, 10.7.1	Wachter, S	2001	Assessment of side effects of Tolurex 90 WG on the activity of the soil microflora MA Doc. No.: 90002876 GLP: yes Not Published
IIA,8.6; IIIA,10.8	Fiebig,S.	2002	Tolurex 70 SC: Terrestrial plants toxicity, vegetative vigour, Tier II MA Doc.No. 9004781A GLP: yes Not Published
IIA,8.6; IIIA,10.8	Fiebig,S.	2002	Tolurex 70 SC: Terrestrial plants toxicity, seedling emergence, Tier II MA Doc.No. 9004781B GLP: yes



## APPENDIX IV

## List of uses supported by available data

## CHLOROTOLURON

Crop and/or situation (a)	Member State or Country	Product name	F G or I (b)	Pests or Group of pests controlled (c)	Formulation		Application			Application rate per treatment			PHI (days) (k)	Remarks: (l)
					Type (d-f)	Conc. of as, g/l (i)	method kind (f-h)	growth stage (j)	number min-max.	kg as/ha min-max.	water l/ha min-max.	kg as/ha min-max.		
Cereals	North Europe	Chlorotoluron	F	Weeds	SC	500 or 700	Broad	PE/POST	1		200-600	Up to 2.5		
Cereals	South Europe	Chlorotoluron	F	Weeds	SC	500 or 700	Broad	PE/POST	1		300-600	Up to 2.5		
Cereals	South Europe (Spain)	Chlorotoluron	F	Weeds	WP	800	Broad	PE/POST	1		300-600	Up to 2.5		

- Remarks:**
- (a) For crops, the EU and Codex classifications (both) should be used; where relevant, the use situation should be described (e.g. fumigation of a structure)
  - (b) Outdoor or field use (F), glasshouse application (G) or indoor application (I)
  - (c) e.g. biting and suckling insects, soil born insects, foliar fungi, weeds
  - (d) e.g. wettable powder (WP), emulsifiable concentrate (EC), granule (GR)
  - (e) GCPF Codes - GIFAP Technical Monograph No 2, 1989
  - (f) All abbreviations used must be explained
  - (g) Method, e.g. high volume spraying, low volume spraying, spreading, dusting, drench
  - (h) Kind, e.g. overall, broadcast, aerial spraying, row, individual plant, between the plants - type of equipment used must be indicated
  - (i) g/kg or g/l
  - (j) Growth stage at last treatment (BBCH Monograph, Growth Stages of Plants, 1997, Blackwell, ISBN 3-8263-3152-4), including where relevant, information on season at time of application
  - (k) The minimum and maximum number of application possible under practical conditions of use must be provided
  - (l) PHI - minimum pre-harvest interval
  - (m) Remarks may include: Extent of use/economic importance/restrictions