

Value: 487 degree C

Remark: Zuendtemperatur

Source: Hoechst AG Frankfurt/Main, (Reference not available)
25-JUN-2001

(38)

2.9 Flammability

2.10 Explosive Properties

2.11 Oxidizing Properties

2.12 Dissociation Constant

2.13 Viscosity

2.14 Additional Remarks

Remark: Untere Explosionsgrenze: 1.15 Vol-%
Obere Explosionsgrenze: 13.1 Vol-%
Gefährliche Zersetzungsprodukte: Nitrose Gase,
Chlorwasserstoff
Unverträgliche Substanz: Chlornitrobenzole reagieren mit
Reduktionsmitteln.

Source: Hoechst AG Frankfurt/Main, (Reference not available)
25-JUN-2001

(38)

3.1.1 Photodegradation

Type: other: air, indirect photolysis
Method: Calculation of the atmospheric oxidation of
1-chloro-2-nitrobenzene by hydroxyl radicals (AOPWIN v1.90,
2001)
Result: OH rate constant: 0.1714 E-12 cm³/molecule x sec
Half-life : 187.2 days (12 h day; 0.5 E6 OH/cm³)
Reliability: (2) valid with restrictions
Accepted calculation method
Flag: Critical study for SIDS endpoint
12-JUL-2001 (93)

Type: water
Light source: other: mercury high pressure lamps
Light spect.: > 290 nm
DIRECT PHOTOLYSIS
Degradation: = 0 % after 180 minute(s)

Method: other (measured)
Year: 1987
GLP: no
Test substance: other TS: 1-chloro-2-nitrobenzene

Method: irradiation of TS in aqueous solution in the absence and in
the presence of TiO₂; HPLC analysis
Result: quantitative degradation of TS was observed only in the
presence of TiO₂
Reliability: (3) invalid

no detailed description of method, test conditions, and
results
12-JUL-2001 (48)

3.1.2 Stability in Water

Remark: Based on the chemical structure of the compound hydrolysis
is not expected under environmental conditions
Flag: Critical study for SIDS endpoint
25-JUN-2001

3.1.3 Stability in Soil

3.2.1 Monitoring Data (Environment)

3.2.2 Field Studies

3.3.1 Transport between Environmental Compartments

3.3.2 Distribution

Media: air - biota - sediment(s) - soil - water
Method: Calculation according Mackay, Level I
Year: 1991

Remark:	Mackay, Calculation of the environmental distribution of 1-chloro-2-nitrobenzene according to fugacity model level I (1991)	
	Input parameter:	
	Temperature:	20°C
	Vapor pressure:	4.0 Pa
	Water solubility:	441 mg/l
	log Kow:	2.24
	Entry of chemical:	1 mol
Result:	Calculated distribution between environmental compartments: water 65.4 %, air 32.9 %, soil 0.9 %, sediment: 0.8 %, susp. sediment: < 0.1 %, fish: < 0.1 %	
Reliability:	(2) valid with restrictions Accepted calculation method	
Flag:	Critical study for SIDS endpoint	
26-NOV-2003		
Media:	water - air	
Method:	other (calculation): Henry constant	
Result:	H = 1.43 Pa m ³ mol ⁻¹	
Flag:	Critical study for SIDS endpoint	
27-JUL-2001		(61)
Media:	water - soil	
Method:	other (calculation): SCR-PKOCWIN v1.66	
Year:	2000	
Result:	Koc = 315.5	
Reliability:	(2) valid with restrictions Accepted calculation method	
Flag:	Critical study for SIDS endpoint	
10-AUG-2001		(95)
3.4 Mode of Degradation in Actual Use		
3.5 Biodegradation		
Type:	aerobic	
Inoculum:	other: sludge samples from different sewage plants, rivers, bays and a lake, non adapted	
Concentration:	30 mg/l related to Test substance	
Degradation:	8.2 % after 14 day(s)	
Method:	other: Japanese Guideline by MITI of 1974; corresp. OECD 301 C Modified MITI Test I	
GLP:	no data	
Test substance:	other TS: no purity given	
Remark:	Inoculum added: 30 mg/l; BOD measurement Difference to OECD 301C: Initial test substance concentration 30 mg/l instead of 100 mg/l	
Reliability:	(1) valid without restriction Test procedure according to national standards	
Flag:	Critical study for SIDS endpoint	
15-JUL-2002		(64)
Type:	aerobic	
Inoculum:	activated sludge, industrial, non-adapted	
Concentration:	200 mg/l related to DOC (Dissolved Organic Carbon)	

Kinetic:	5 day(s) 80 % 10 day(s) > 90 %	
Method:	OECD Guide-line 302 B "Inherent biodegradability: Modified Zahn-Wellens Test"	
Year:	1982	
GLP:	no	
Remark:	Elimination by Stripping	
Source:	Hoechst AG Frankfurt/Main	
Reliability:	(4) not assignable Original reference not available	
25-JUN-2001		(39)
Type:	aerobic	
Inoculum:	activated sludge	
Concentration:	200 mg/l related to DOC (Dissolved Organic Carbon)	
Degradation:	< 10 % after 15 day(s)	
Kinetic:	5 day(s) < 10 % 10 day(s) < 10 %	
Method:	other: Respirometer Test	
Year:	1982	
GLP:	no	
Source:	Hoechst AG Frankfurt/Main	
Reliability:	(4) not assignable Original reference not available	
25-JUN-2001		(39)
Type:	aerobic	
Inoculum:	predominantly domestic sewage, adapted	
Degradation:	0 % after 20 day(s)	
Result:	under test conditions no biodegradation observed	
Method:	other: comparable to OECD Guide-line 301 D	
Year:	1977	
GLP:	no	
Remark:	related to BOD	
Reliability:	(4) not assignable Original reference not available	
12-JUL-2001		(9)
Type:	aerobic	
Inoculum:	other: activated sludge, non-adapted and adapted	
Method:	other: see remarks	
GLP:	no	
Test substance:	other TS: > 99.9 % purity	
Method:	3 methods were applied: 1) Revised OECD test, 1971 (Determination of the Biodegradability of Anionic Surface Active Agents) 2) Repetitive Die Away Test: Blok, 1979 (A repetitive Die Away test combining several biodegradability test procedures; Int. Biodeterior. Bull. 15, 57-63) 3) Pitter test (Pitter (1976): Determination of biological degradability of organic substances, Water Res. 10, 231-235.)	
Result:	t1/2 >> 4 weeks	

Reliability: (3) invalid
Insufficient documentation: no details on origin and density of inoculum, and on tested concentrations and test conditions
12-JUL-2001 (18)

3.6 BOD5, COD or BOD5/COD Ratio

3.7 Bioaccumulation

Species: *Cyprinus carpio* (Fish, fresh water)
Exposure period: 56 day(s) at 25 degree C
Concentration: .025 mg/l
BCF: = 7.4 - 22.3

Method: other: Japanese Guideline by MITI of 1974; corresp. OECD 305 C Bioaccumulation (1981)
GLP: no data
Test substance: other TS: o-chloronitrobenzene (CAS-No. 88-73-3)

Method: Flow-through system;
Weight/length of exposed fish: 30g / 10cm, lipid content: 2-6 %; water analyzed twice a week, fish every two weeks
Remark: At a o-chloronitrobenzene concentration of 0.25 mg/l and the same test conditions as already described, a BCF of 7.0 - 20.8 was determined

Test condition: flow-rate of test water: 200-800 ml/min
Reliability: (1) valid without restriction

Flag: Test procedure according to national standards
Critical study for SIDS endpoint
12-JUL-2001 (64)

Species: *Poecilia reticulata* (Fish, fresh water)
Exposure period: 3 day(s) at 22 degree C
Concentration: 6 mg/l
BCF: 11.6 - 19.4

Method: other: comparable to OECD 305B (Bioaccumulation: Semi Static Fish Test) (1981)
Year: 1986
GLP: no data
Test substance: other TS: > 99 %

Remark: Test temperature 21-23 °C
Mean fat content of fish: 8 +/- 2 %
Difference to Guideline 305 B: only 1 test concentration at 1/5 of 14 d-LC50 tested

Result: The test result in the publication is given on fat weight basis with BCF_{fat} = 194. The BCF values of 11.6 - 19.4 are calculated from this data to the whole fish for reason of

comparability to other test results.
Reliability: (2) valid with restrictions
Comparable to guideline study with acceptable restrictions (see remark)

27-JUL-2001 (24)

Species: *Oncorhynchus mykiss* (Fish, fresh water)
Exposure period: 36 day(s)

Method: other: fish exposed to a mono- to pentachloronitrobenzene isomer mixture at the same time in a flow-through system

Year: 1989

GLP: no

Test substance: other TS: mono- to pentachloronitrobenzenes

Method: 30 fish exposed to 720 +/-130 mg TS/l in a flow-through system; acetone used as solvent; samples of 6 fish each analyzed at 5, 12, 20, 28 and 36 days of exposure; duplicate water samples taken every 3 or 4 days; GC analysis

Remark: significant differences among sample intervals: BCF decreasing from 134 mg/l (day 5) to 89 mg/l (day 20) and then increasing again to 179 mg/l (day 36)

Result: as the higher chlorinated nitrobenzenes are possibly dechlorinated by metabolism in fish a BCF for o-chloronitrobenzene cannot be derived within this test design

Reliability: (3) invalid
Unsuitable test system (more than one substance tested in the same test vessel)

27-JUL-2001 (78)

3.8 Additional Remarks

AQUATIC ORGANISMS

4.1 Acute/Prolonged Toxicity to Fish

Type: flow through
Species: Brachydanio rerio (Fish, fresh water)
Exposure, period: 96 hour(s)
Unit: mg/l Analytical monitoring: yes
LC50: 34.8 -

Method: other: OECD Guide-line 203 (1984)
Year: 1990
GLP: no data
Test substance: other TS: no purity given

Test condition: 10 fish per concentration step; fish length: 2 cm;
temperature: 23 °C; pH (dilution water) 8.15; 16 h light / 8
h dark

Reliability: (1) valid without restriction
Guideline study

Flag: Critical study for SIDS endpoint
02-AUG-2001 (86)

Type: other: static or semistatic, no details given
Species: Oryzias latipes (Fish, fresh water)
Exposure period: 48 hour(s)
Unit: mg/l Analytical monitoring: no data
LC50: 28 -

Method: other: Japanese Industrial Standard (JIS K 0102-1986-71)
"Testing methods for industrial waste water" (1986)
GLP: no data
Test substance: other TS: o-chloronitrobenzene (CAS-No. 88-73-3)

Test condition: 25 +/- 2 degree C

Reliability: (2) valid with restrictions
Test procedure according to national standards but only
basic data given

10-AUG-2001 (64)

Type: other: semistatic, renewal at 12 hours
Species: Cyprinus carpio (Fish, fresh water)
Exposure period: 96 hour(s)
Unit: mg/l Analytical monitoring: no data
LC50: 25.5 -

Method: other: comparable to OECD 203 (Fish: Acute Toxicity Test,
1992)
Year: 1996
GLP: no data
Test substance: other TS: purity not given (commercial TS)

Remark: Deviation to OECD 203: higher fish load in test vessel
(about 50 g in 16 l test water)

Test condition: 60 fish used in each test; fish weight/length: 5 g/5 cm;
temperature: 20°C

Reliability: (2) valid with restrictions
According to guideline study with acceptable restrictions

Flag: Critical study for SIDS endpoint
27-JUL-2001 (114)

Type: semistatic
Species: Poecilia reticulata (Fish, fresh water)
Exposure period: 14 day(s)
Unit: mg/l Analytical monitoring: yes
LC50: 30 -

Method: other: comparable to OECD 204 (fish, prolonged toxicity test, 1984)
Year: 1987
GLP: no data
Test substance: other TS: > 99 %

Reliability: (2) valid with restrictions
Basic data given: comparable to guideline
02-AUG-2001 (24)

Type: flow through
Species: Brachydanio rerio (Fish, fresh water)
Exposure period: 14 day(s)
Unit: mg/l Analytical monitoring: yes
NOEC: 2.9 -
LOEC: 5.9 -

Method: other: OECD 204: Fish, Prolonged Toxicity Test: 14-day Study (4 April 1984)
Year: 1990
GLP: no data

Remark: The 14 d-LOEC of 5.9 mg/l corresponds to the feeding behaviour of the fish. A 14 d-LOEC concerning lethal effect was determined to be 24.8 mg/l.

Reliability: (1) valid without restriction
Guideline study
27-JUL-2001 (86)

Type: static
Species: Poecilia reticulata (Fish, fresh water)
Exposure period: 96 hour(s)
Unit: mg/l Analytical monitoring: no
LC50: = 30 -

Method: other: according to OECD Proposal (1979:) Report on the Assessment of Potential Environmental Effects of Chemicals 1984
Year: 1984
GLP: no data
Test substance: other TS: 1-chloro-2-nitrobenzene; purity > 99.9 %

Reliability: (3) invalid
Documentation insufficient for assessment
12-JUL-2001 (18)

Type: static
Species: Leuciscus idus (Fish, fresh water)
Exposure period: 24 hour(s)
Unit: mg/l Analytical monitoring: no
LC0: 5 -
LC100: 10 -

Method: other: Bestimmung der Wirkung von Wasserinhaltsstoffen auf Fische, DIN 38412 Teil 15

Year: 1974
GLP: no

Reliability: (3) invalid
Range-finding test with two fish only
Original report not available

12-JUL-2001 (9)

4.2 Acute Toxicity to Aquatic Invertebrates

Type: static
Species: other: Daphnia carinata
Exposure period: 48 hour(s)
Unit: mg/l Analytical monitoring: no data
EC50: 21.3 -

Method: other: comparable to OECD 202 part I (Daphnia, Acute Toxicity, 1984)
Year: 1996
GLP: no data
Test substance: other TS: purity not given

Reliability: (2) valid with restrictions
Basic data given: comparable to guideline
Flag: Critical study for SIDS endpoint

12-JUL-2001 (114)

Type: static
Species: Daphnia magna (Crustacea)
Exposure period: 24 hour(s)
Unit: mg/l Analytical monitoring: no
EC0: 5 -
EC50: 12 -

Method: other: Daphnien-Schwimmunfaehigkeits-Test, UBA-Verfahrensvorschlag Mai 1984, Bestimmung der Schwimmunfaehigkeit beim Wasserfloh Daphnia magna, EC0, EC50, EC100 24h, statisches System
Year: 1987
GLP: no data

Remark: Pretest to reproduction test
Reliability: (2) valid with restrictions
Basic data given
Flag: Critical study for SIDS endpoint

27-JUL-2001 (57)

Type: static
Species: Daphnia magna (Crustacea)
Exposure period: 48 hour(s)
Unit: mg/l Analytical monitoring: no data
EC50: 23.9 -

Method: other: according to the Protocol of the Dutch Standards Organisation, NEN 6501 (1980)
Year: 1988
GLP: no data
Test substance: other TS: no purity given

Test condition: Daphnids < 24 h old; temperature: 20 °C; illumination 12 h/day; hardness: 200 mg/l as CaCO₃; pH 8.4; dissolved oxygen > 7.9 mg/l
 Reliability: (2) valid with restrictions
 Basic data given
 Flag: Critical study for SIDS endpoint
 27-JUL-2001 (23)

Type: static
 Species: Daphnia magna (Crustacea)
 Exposure period: 48 hour(s)
 Unit: mg/l Analytical monitoring: no
 EC50: 3.2 -
 LC50 : 49 -

Method: other: OECD Proposal (1979: Report on the assessment of Potential Environmental Effects of Chemicals I)
 Year: 1979
 GLP: no data
 Test substance: other TS: 1-chloro-2-nitrobenzene; purity > 99.9 %

Remark: no data on test conditions
 Reliability: (3) invalid
 Documentation insufficient for assessment
 11-JUL-2001 (18)

4.3 Toxicity to Aquatic Plants e.g. Algae

Species: Chlorella pyrenoidosa (Algae)
 Endpoint: biomass
 Exposure period: 96 hour(s)
 Unit: mg/l Analytical monitoring: no data
 EC50: 6.9 -

Method: other: According to Modified OECD 201 (Algae, growth inhibition test, 1984)
 Year: 1988
 GLP: no data
 Test substance: other TS: purity not given

Reliability: (2) valid with restrictions
 Basic data given: comparable to guideline
 Flag: Critical study for SIDS endpoint
 07-SEP-2001 (23)

Species: Scenedesmus subspicatus (Algae)
 Endpoint: biomass
 Exposure period: 48 hour(s)
 Unit: mg/l Analytical monitoring: no data
 EC10: 11 -
 EC50: 34 -

Method: other: Scenedesmus-Zellvermehrungs-Hemmtest, DIN 38412 Teil 9, Bestimmung der Hemmwirkung von Wasserinhaltsstoffen auf Gruenalgen (1988)
 Year: 1988
 GLP: no data
 Test substance: other TS: purity not given

Remark: modification of test procedure: bottles with ground glass stoppers were used

Result:	Effect levels determined for the endpoint growth rate: EC10: 19 mg/l EC50: 75 mg/l	
Reliability:	(2) valid with restrictions Test procedure according to national standards, but only basic data given	
Flag:	Critical study for SIDS endpoint	
10-AUG-2001		(56)
Species:	other algae: Scenedesmus obliquus	
Endpoint:	growth rate	
Exposure period:	96 hour(s)	
Unit:	mg/l	Analytical monitoring: no data
EC50:	18.1 -	
Method:	other: comparable to OECD 201 (Algae, Growth inhibition test, 1984)	
Year:	1996	
GLP:	no data	
Test substance:	other TS: purity not given	
Reliability:	(2) valid with restrictions Comparable to guideline study with acceptable restrictions	
12-JUL-2001		(114)
Species:	Scenedesmus pannonicus (Algae)	
Endpoint:	growth rate	
Exposure period:	72 hour(s)	
Unit:	mg/l	Analytical monitoring: yes
EC50:	= 24 -	
Method:	other: OECD Proposal (1979: Report on the Assessment of Potential Environmental Effects of Chemicals I	
Year:	1984	
GLP:	no data	
Test substance:	other TS: 1-chloro-2-nitrobenzene; > 99.9 % purity	
Reliability:	(3) invalid Documentation insufficient for assessment	
12-JUL-2001		(18)
4.4 Toxicity to Microorganisms e.g. Bacteria		
Type:	aquatic	
Species:	Pseudomonas putida (Bacteria)	
Exposure period:	30 minute(s)	
Unit:	mg/l	Analytical monitoring: no
EC0:	100 -	
Method:	other: Bewertung toxischer Wasserinhaltsstoffe aus ihrer Inhibitorwirkung auf die Substratoxydation von Pseudomonas Stamm Berlin mit Hilfe polarographischer Sauerstoffmessungen. Robra, K.H.: gwf wasser/abwasser 117 (2), 80-86 (1976)	
Year:	1983	
GLP:	no	
Test substance:	other TS: no purity given	
Reliability:	(4) not assignable Original reference not available	
12-JUL-2001		(9)

Type:	aquatic
Species:	anaerobic bact. from a domestic water treatment plant
Exposure period:	24 hour(s)
Unit:	mg/l Analytical monitoring: no
EC0:	ca. 80 -
Method:	ETAD Fermentation tube method "Determination of damage to effluent bacteria by the Fermentation Tube Method"
Year:	1982
GLP:	no
Test substance:	other TS: no purity given
Source:	Hoechst AG Frankfurt/Main
Reliability:	(4) not assignable Publication/report not available
27-JUL-2001	(39)
Type:	other: phytopathogen
Species:	other fungi: Pythium ultimum
Exposure period:	88 hour(s)
Unit:	mg/l Analytical monitoring: no data
ED 50 :	157.6 -
Year:	1961
GLP:	no
Test substance:	other TS: recrystallized
Method:	Growth inhibition test: test substance incorporated in agar medium which is filled into a growth tube; inoculation after solidification of agar with 8 mm plug of an 48 h fungi culture. Evaluation of linear growth.
Reliability:	(2) valid with restrictions Acceptable, well-documented publication/study report which meets basic scientific principles
12-JUL-2001	(27)
Type:	other: phytopathogen
Species:	other fungi: Rhizoctonia solani
Exposure period:	88 hour(s)
Unit:	mg/l Analytical monitoring: no data
ED 50 :	48.9 -
Year:	1961
GLP:	no
Test substance:	other TS: recrystallized
Method:	Growth inhibition test: test substance incorporated in agar medium which is filled into a growth tube; inoculation after solidification of agar with 8 mm plug of an 48 h fungi culture. Evaluation of linear growth.
Reliability:	(2) valid with restrictions Acceptable, well-documented publication/study report which meets basic scientific principles
13-JUL-2001	(27)

4.5 Chronic Toxicity to Aquatic Organisms

4.5.1 Chronic Toxicity to Fish

Species:	Pimephales promelas (Fish, fresh water)
Endpoint:	other: weight and length of juveniles
