

SUBSTANCE**SUBSTANCE IDENTIFICATION**

General name	Thiacloprid		S
Description	Neonicotinoid		S
CAS-No	111988-49-9		S
EC-notification no.			D
EINECS no.			D

PHYSICO-CHEMICAL PROPERTIES

Molecular weight	252.73	[g.mol-1]	S
Melting point	136	[oC]	S
Boiling point	270	[oC]	S
Vapour pressure at test temperature	3E-10	[Pa]	S
Temperature at which vapour pressure was measured	25	[oC]	D
Vapour pressure at 25 [oC]	3E-10	[Pa]	O
Octanol-water partition coefficient	1.26	[log10]	S
Water solubility at test temperature	184	[mg.l-1]	S
Temperature at which solubility was measured	25	[oC]	D
Water solubility at 25 [oC]	184	[mg.l-1]	O

PARTITION COEFFICIENTS AND BIOCONCENTRATION FACTORS**SOLIDS-WATER**

Chemical class for Koc-QSAR	Predominantly hydrophobics		S
Organic carbon-water partition coefficient	13.2	[l.kg-1]	O
Solids-water partition coefficient in soil	0.264	[l.kg-1]	O
Solids-water partition coefficient in sediment	0.661	[l.kg-1]	O
Solids-water partition coefficient suspended matter	1.32	[l.kg-1]	O
Solids-water partition coefficient in raw sewage sludge	3.96	[l.kg-1]	O
Solids-water partition coefficient in settled sewage sludge	3.96	[l.kg-1]	O
Solids-water partition coefficient in activated sewage sludge	4.89	[l.kg-1]	O
Solids-water partition coefficient in effluent sewage sludge	4.89	[l.kg-1]	O
Soil-water partition coefficient	0.596	[m3.m-3]	O
Suspended matter-water partition coefficient	1.23	[m3.m-3]	O
Sediment-water partition coefficient	1.13	[m3.m-3]	O

AIR-WATER

Environmental temperature	12	[oC]	D
Water solubility at environmental temperature	153	[mg.l-1]	O
Vapour pressure at environmental temperature	1.19E-10	[Pa]	O
Sub-cooled liquid vapour pressure	2.29E-09	[Pa]	O
Fraction of chemical associated with aerosol particles	1	[-]	O
Henry's law constant at 25 [oC]	4.12E-10	[Pa.m3.mol-1]	O
Henry's law constant at environmental temperature	1.97E-10	[Pa.m3.mol-1]	O
Air-water partitioning coefficient	8.33E-14	[m3.m-3]	O

BIOCONCENTRATION FACTORS**PREDATOR EXPOSURE**

Bioconcentration factor for earthworms	1.06	[l.kgwwt-1]	O
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HUMAN AND PREDATOR EXPOSURE

Bioconcentration factor for fish	2.35	[l.kgwwt-1]	O
QSAR valid for calculation of BCF-Fish	Yes		O
Biomagnification factor in fish	1	[-]	O
Biomagnification factor in predator	1	[-]	O

RELEASE ESTIMATION**CHARACTERIZATION AND TONNAGE**

High Production Volume Chemical	Yes		S
Production volume of chemical in EU	100	[tonnes.yr-1]	S
Fraction of EU production volume for region	7.954	[%]	S
Regional production volume of substance	7.95	[tonnes.yr-1]	O
Continental production volume of substance	92	[tonnes.yr-1]	O
Volume of chemical imported to EU	0	[tonnes.yr-1]	D
Volume of chemical exported from EU	0	[tonnes.yr-1]	D
Tonnage of substance in Europe	100	[tonnes.yr-1]	O

USE PATTERNS**PRODUCTION STEPS****EMISSION INPUT DATA [1 "THIACLOPRID DOSSIER"]**

Usage/production title	Thiacloprid dossier		S
Industry category	1 Agricultural chemicals		S
Use category	38 Plant protection products, agricultural		S
Extra details on use category	No extra details necessary		D
Extra details on use category	No extra details necessary		D
Main category production	III Multi-purpose equipment		D
Use specific emission scenario	No		D
Emission scenario	no special scenario selected/available		S
Fraction of tonnage for application	1	[-]	O
Total of fractions for all production steps	1	[-]	O
Relevant production volume for usage	100	[tonnes.yr-1]	O
Regional production volume of substance	7.95	[tonnes.yr-1]	O
Regional production volume for usage	7.95	[tonnes.yr-1]	O

OTHER LIFE CYCLE STEPS**EMISSION INPUT DATA [2 "THIACLOPRID DOSSIER"]**

Usage/production title	Thiacloprid dossier		S
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USE PATTERN

Industry category	1 Agricultural chemicals		S
Use category	38 Plant protection products, agricultural		S
Extra details on use category	No extra details necessary		D
Extra details on use category	No extra details necessary		D

PECS**REGIONAL**

Regional PEC in surface water (total)	2.1E-04	[mg.l-1]	O
Regional PEC in seawater (total)	2.07E-05	[mg.l-1]	O
Regional PEC in surface water (dissolved)	2.1E-04	[mg.l-1]	O
Qualitative assessment might be needed (TGD Part II, 5.6)	No		O
Regional PEC in seawater (dissolved)	2.07E-05	[mg.l-1]	O
Qualitative assessment might be needed (TGD Part II, 5.6)	No		O
Regional PEC in air (total)	5.23E-11	[mg.m-3]	O
Regional PEC in agricultural soil (total)	2.86E-04	[mg.kgwwt-1]	O
Regional PEC in pore water of agricultural soils	8.15E-04	[mg.l-1]	O
Regional PEC in natural soil (total)	1.01E-05	[mg.kgwwt-1]	O
Regional PEC in industrial soil (total)	1.05E-05	[mg.kgwwt-1]	O
Regional PEC in sediment (total)	2.03E-04	[mg.kgwwt-1]	O
Regional PEC in seawater sediment (total)	2.03E-05	[mg.kgwwt-1]	O