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1-ethoxy-1,1,2,2,3,3,4,4,4-nonafluorobutane; reaction mass of: 1-ethoxy-1,1,2,3,3,3-hexafluoro-2-(trifluoromethyl)propane

REACH

EC number: 425-340-0 | CAS number: 1337538-18-7



Substance identity

Identification

Display Name:	-
EC Number:	425-340-0
EC Name:	-
CAS Number:	1337538-18-7
IUPAC Name:	1-ethoxy-1,1,2,2,3,3,4,4,4-nonafluorobutane; 1-ethoxy-1,1,2,3,3,3-hexafluoro-2-(trifluoromethyl)propane

Type of Substance

Substance Identifiers

Trade name

- Not applicable, substance is not marketed as such.

Compositions

Boundary Composition(s)

Reaction mass of 2-(ethoxydifluoromethyl)-1,1,1,2,3,3,3-heptafluoropropane and 1-ethoxy-1,1,2,2,3,3,4,4,4-nonafluorobutane

State Form: liquid

Legal Entity Composition(s)

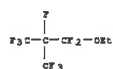
Reaction mass of 2-(ethoxydifluoromethyl)-1,1,1,2,3,3,3-heptafluoropropane and 1-ethoxy-1,1,2,2,3,3,4,4,4-nonafluorobutane

State Form: liquid

Reactionmass of 1-ethoxy-1,1,2,3,3,3-hexafluoro-2-(trifluoromethyl)propane and 1-ethoxy-1,1,2,2,3,3,4,4,4-nonafluorobutane

State Form: liquid

Constituent 1



Reference substance name: 1-ethoxy-1,1,2,3,3,3-hexafluoro-2-(trifluoromethyl)propane

CAS Number: 163702-06-5

Molecular formula: C6H5F9O

IUPAC Name: 1-ethoxy-1,1,2,3,3,3-hexafluoro-2-(trifluoromethyl)propane

Constituent 2



Reference substance name: 1-ethoxy-1,1,2,2,3,3,4,4,4-nonafluorobutane

CAS Number: 163702-05-4

Molecular formula: C6H5F9O

IUPAC Name: 1-ethoxy-1,1,2,2,3,3,4,4,4-nonafluorobutane

Composition(s) generated upon use

Other types of composition(s)

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REACH



Environmental fate & pathways

Phototransformation in air

001 Key | Experimental result

Administrative data

Endpoint:	phototransformation in air
Type of information:	experimental study
Adequacy of study:	key study

Data source

Reference

Reference Type:	publication
Title:	Unnamed
Year:	1997
Report date:	1998

Materials and methods

Test guideline

Qualifier:	no guideline available
Deviations:	not applicable

Test material

Test material information

Constituent 1

Results and discussion

Dissipation half-life of parent compound

Dissipation half-life of parent compound 1

DT50:	ca. 0.6 yr
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Dissipation half-life of parent compound 2

DT50:	ca. 0.5 yr
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Degradation rate constant

Degradation rate constant 1

Reaction with: other:

Rate constant: 0 cm³ molecule⁻¹ d⁻¹

Degradation rate constant 2

Reaction with: other:

Rate constant: 0 cm³ molecule⁻¹ d⁻¹

Applicant's summary and conclusion

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EC number: 425-340-0 | CAS number: 1337538-18-7



Environmental fate & pathways

Hydrolysis

001 Disregarded | Experimental result

Administrative data

Endpoint:	hydrolysis
Type of information:	experimental study
Adequacy of study:	disregarded due to major methodological deficiencies

Data source

Reference	
Reference Type:	study report
Title:	Unnamed
Year:	2003
Report date:	2003

Materials and methods

Test guideline	
Qualifier:	according to guideline
Guideline:	OECD Guideline 111 (Hydrolysis as a Function of pH)
Deviations:	yes

Test material

Test material information	
Constituent 1	

Radiolabelling: no

Results and discussion

Total recovery of test substance (in %)	
% Recovery:	80.33 - 107.53
Temp.:	50 °C
Duration:	4 d

Dissipation DT50 of parent compound

Temp.:	50 °C
DT50:	≥ 0 - ≤ 421 d
Type:	(pseudo-)first order (= half-life)

Applicant's summary and conclusion

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Environmental fate & pathways

Biodegradation in water: screening tests

001 Key | Experimental result

Administrative data

Endpoint:	biodegradation in water: ready biodegradability
Type of information:	experimental study
Adequacy of study:	key study

Data source

Reference	
Reference Type:	study report
Title:	Unnamed
Year:	1996
Report date:	1996

Materials and methods

Test guideline	
Qualifier:	according to guideline
Guideline:	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)
Deviations:	no

Test material

Test material information	
Constituent 1	

Study design

Oxygen conditions:	aerobic
Inoculum or test system:	other:
Duration of test (contact time):	28 d

Initial test substance concentration

Initial conc.: 2.37 mg/L

Based on: test mat.

Results and discussion**% Degradation****% Degradation 1**

Parameter: % degradation (O2 consumption)

Value: 0

Sampling time: 28 d

% Degradation 2

Parameter: % degradation (test mat. analysis)

Value: 0 - 13

Sampling time: 28 d

Applicant's summary and conclusion

Validity criteria fulfilled: yes

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Environmental fate & pathways

Bioaccumulation: aquatic / sediment

001 Disregarded | Experimental result

Administrative data

Endpoint:	bioaccumulation in aquatic species: fish
Type of information:	experimental study
Adequacy of study:	disregarded due to major methodological deficiencies

Data source

Reference	
Reference Type:	study report
Title:	Unnamed
Year:	1996
Report date:	1996

Materials and methods

Test guideline	
Qualifier:	according to guideline
Guideline:	OECD Guideline 305 C (Bioaccumulation: Test for the Degree of Bioconcentration in Fish)
Deviations:	yes

Test material

Test material information	
Constituent 1	

Radiolabelling: no

Test organisms

Test organisms (species): Cyprinus carpio

Study design

Route of exposure: aqueous

Test type:	flow-through
Water / sediment media type:	natural water: freshwater
Total exposure / uptake duration:	56 d

Test conditions

Reference substance (positive control):	no
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Results and discussion

Lipid content

Lipid content:	3.5 %
Time point:	other:
Remarks on result:	other:

Bioaccumulation factor

Bioaccumulation factor 1

Type:	BCF
Value:	136 - 919 dimensionless
Basis:	whole body w.w.
Time of plateau:	2 wk
Calculation basis:	steady state
Remarks on result:	other:

Bioaccumulation factor 2

Type:	BCF
Value:	158 - 624 dimensionless
Basis:	whole body w.w.
Time of plateau:	2 wk
Calculation basis:	steady state
Remarks on result:	other:

Depuration

Elimination:	no
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Applicant's summary and conclusion

Validity criteria fulfilled:	yes
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Environmental fate & pathways

Adsorption / desorption

Administrative data

Endpoint:	adsorption / desorption: screening
Type of information:	experimental study
Adequacy of study:	key study

Data source

Reference	
Reference Type:	study report
Title:	Unnamed
Year:	1997
Report date:	1997

Materials and methods

Test guideline	
Qualifier:	equivalent or similar to guideline
Guideline:	OECD Guideline 121 (Estimation of the Adsorption Coefficient (Koc) on Soil and on Sewage Sludge using High Performance Liquid Chromatography (HPLC))
Deviations:	no

Type of method:	HPLC estimation method
Media:	soil

Test material

Test material information	
Constituent 1	

Results and discussion

Adsorption coefficient

Type:	Koc
Value:	130
Temp.:	20 °C
Remarks on result:	other:

Applicant's summary and conclusion

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Ecotoxicological information

Ecotoxicological Summary

Administrative data

Hazard for aquatic organisms

Freshwater

Hazard assessment conclusion:	PNEC aqua (freshwater)
PNEC value:	0.002 mg/L
Assessment factor:	1 000

Marine water

Hazard assessment conclusion:	PNEC aqua (marine water)
PNEC value:	0 mg/L
Assessment factor:	10 000

STP

Hazard assessment conclusion:	no emission to STP expected
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Sediment (freshwater)

Hazard assessment conclusion:	PNEC sediment (freshwater)
PNEC value:	0.039 mg/kg sediment dw
Extrapolation method:	equilibrium partitioning method

Sediment (marine water)

Hazard assessment conclusion:	PNEC sediment (marine water)
PNEC value:	0.004 mg/kg sediment dw
Extrapolation method:	equilibrium partitioning method

Hazard for air

Air

Hazard assessment conclusion:	no hazard identified
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Hazard for terrestrial organisms

Soil

Hazard assessment conclusion:	PNEC soil
PNEC value:	0.004 mg/kg soil dw
Extrapolation method:	equilibrium partitioning method

Hazard for predators

Secondary poisoning

Hazard assessment conclusion:	no potential for bioaccumulation
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Additional information

Conclusion on classification

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Toxicological information

Toxicological Summary**Administrative data****Workers - Hazard via inhalation route****Systemic effects****Long term exposure**

Hazard assessment conclusion: no hazard identified

Acute/short term exposure

Hazard assessment conclusion: no hazard identified

DNEL related information**Local effects****Long term exposure**

Hazard assessment conclusion: no hazard identified

Acute/short term exposure

Hazard assessment conclusion: no hazard identified

DNEL related information**Workers - Hazard via dermal route****Systemic effects****Long term exposure**

Hazard assessment conclusion: no hazard identified

Acute/short term exposure

Hazard assessment conclusion: no hazard identified

DNEL related information**Local effects****Long term exposure**

Hazard assessment conclusion: no hazard identified

Acute/short term exposure

Hazard assessment no hazard identified
conclusion:

Workers - Hazard for the eyes

Local effects

Hazard assessment no hazard identified
conclusion:

Additional information - workers

General Population - Hazard via inhalation route

Systemic effects

Long term exposure

Hazard assessment no hazard identified
conclusion:

Acute/short term exposure

Hazard assessment no hazard identified
conclusion:

DNEL related information

Local effects

Long term exposure

Hazard assessment no hazard identified
conclusion:

Acute/short term exposure

Hazard assessment no hazard identified
conclusion:

DNEL related information

General Population - Hazard via dermal route

Systemic effects

Long term exposure

Hazard assessment no hazard identified
conclusion:

Acute/short term exposure

Hazard assessment no hazard identified
conclusion:

DNEL related information

Local effects

Long term exposure

Hazard assessment no hazard identified
conclusion:

Acute/short term exposure

Hazard assessment no hazard identified
conclusion:

General Population - Hazard via oral route

Systemic effects

Long term exposure

Hazard assessment no hazard identified
conclusion:

Acute/short term exposure

Hazard assessment conclusion: no hazard identified

DNEL related information

General Population - Hazard for the eyes

Local effects

Hazard assessment conclusion: no hazard identified

Additional information - General Population

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