

I U C L I D

D a t a s e t

Existing Chemical Substance ID: 62-54-4
CAS No. 62-54-4
EINECS Name calcium di(acetate)
EINECS No. 200-540-9
Molecular Formula C₂H₄O₂.1/2Ca

Dataset created by: EUROPEAN COMMISSION - European Chemicals Bureau

This dossier is a compilation based on data reported by the European Chemicals Industry following 'Council Regulation (EEC) No. 793/93 on the Evaluation and Control of the Risks of Existing Substances'. All (non-confidential) information from the single datasets, submitted in the IUCLID/HEDSET format by individual companies, was integrated to create this document.

The data have not undergone any evaluation by the European Commission.

Creation date: 18-FEB-2000

Number of Pages: 19

Chapters: all

Edition: Year 2000 CD-ROM edition

Flags: non-confidential

(C) 2000 EUROPEAN COMMISSION
European Chemicals Bureau

1.0.1 OECD and Company Information

Name: Dr.Paul Lohmann GmbH KG
Street: Postfach 1220
Town: 31857 Emmerthal
Country: Germany
Phone: 05155/63-0
Telefax: 05155/63-105
Telex: 92858 lohma d

Name: Verdugt B.V.
Street: Postbus 60
Town: 4000 AB Tiel
Country: Netherlands
Phone: 03440-15224
Telefax: 03440-11475
Telex: 47200

1.0.2 Location of Production Site

-

1.0.3 Identity of Recipients

-

1.1 General Substance Information

Substance type: inorganic
Physical status: solid

1.1.1 Spectra

-

1.2 Synonyms

Acetic Acid, Calcium Salt
Source: Verdugt B.V. Tiel

1.3 Impurities

-

1.4 Additives

-

1.5 Quantity

-

1.6.1 Labelling

-

1.6.2 Classification

-

1.7 Use Pattern

-

1.7.1 Technology Production/Use

-

1.8 Occupational Exposure Limit Values

-

1.9 Source of Exposure

-

1.10.1 Recommendations/Precautionary Measures

-

1.10.2 Emergency Measures

-

1.11 Packaging

-

1.12 Possib. of Rendering Subst. Harmless

-

1.13 Statements Concerning Waste

-

1.14.1 Water Pollution

-

1.14.2 Major Accident Hazards

-

1.14.3 Air Pollution

-

1.15 Additional Remarks

-

1.16 Last Literature Search

-

1.17 Reviews

-

1.18 Listings e.g. Chemical Inventories

-

2.1 Melting Point

Value:
Decomposition: yes
Remark: Calciumacetat zersetzt sich beim Erhitzen über 160° C in Aceton und Calciumcarbonat.
Source: Dr.Paul Lohmann GmbH KG Emmerthal

2.2 Boiling Point

Value:
Remark: Nicht anwendbar.
Source: Dr.Paul Lohmann GmbH KG Emmerthal

2.3 Density

Type: density
Value: ca. 1.5 g/cm³ at 20 degree C
Source: Dr.Paul Lohmann GmbH KG Emmerthal

Type: bulk density
Value: ca. 440 - 700 kg/m³
Source: Verdugt B.V. Tiel

(1)

2.3.1 Granulometry

-

2.4 Vapour Pressure

-

2.5 Partition Coefficient

-

2.6.1 Water Solubility

Value: ca. 400 g/l at 0 degree C
Qualitative: slightly soluble
pH: ca. 7 - 9 at 50 g/l and 20 degree C
Method: other
Year: 1995
GLP: no
Source: Dr.Paul Lohmann GmbH KG Emmerthal

Value: = 340 g/l at 25 degree C
Qualitative: of high solubility
pH: = 7 - 8 at 10 g/l and 20 degree C
Source: Verdugt B.V. Tiel

(1)

Value: ca. 300 g/l at 100 degree C
Qualitative: slightly soluble
Method: other
Year: 1995
GLP: no
Source: Dr.Paul Lohmann GmbH KG Emmerthal

2.6.2 Surface Tension

-

2.7 Flash Point

-

2.8 Auto Flammability

-

2.9 Flammability

Result: flammable
Remark: Zündtemperatur: 680 - 730° C, Daten abhängig vom Medianwert der Korngrößenverteilung.
Source: Dr.Paul Lohmann GmbH KG Emmerthal

(2)

2.10 Explosive Properties

Result: other
Remark: Untere Explosionsgrenze: 250 - 500 g/m³, Daten abhängig vom Medianwert der Korngrößenverteilung.
Source: Dr.Paul Lohmann GmbH KG Emmerthal

(2)

2.11 Oxidizing Properties

Result: other
Remark: Kenngrößen abgelagerten Staubes, Brennbarkeit <250µm, BZ 2. (BZ 2: kurzes Anbrennen und rasches Auslöschen).
Source: Dr.Paul Lohmann GmbH KG Emmerthal

(2)

2.12 Additional Remarks

-

3.1.1 Photodegradation

Type:
Method:
Year: GLP:
Test substance:
Remark: Relevante Angaben liegen nicht vor.
Source: Dr.Paul Lohmann GmbH KG Emmerthal

3.1.2 Stability in Water

Type: abiotic
Method:
Year: GLP:
Test substance:
Source: Dr.Paul Lohmann GmbH KG Emmerthal

3.1.3 Stability in Soil

Type: Radiolabel:
Concentration:
Cation exch.
capac.
Microbial
biomass:
Method:
Year: GLP:
Test substance:
Remark: Relevante Angaben liegen nicht vor.
Source: Dr.Paul Lohmann GmbH KG Emmerthal

3.2 Monitoring Data (Environment)

Type of
measurement:
Medium: food
Remark: The calcium salt of acetic acid is widely used as a rope
inhibitor in bread and bakery products at levels of ca.
2.000 ppm. Calcium Acetate is also used in feed products.
Source: Verdugt B.V. Tiel

Type of
measurement:
Medium:
Remark: Relevante Angaben liegen nicht vor.
Source: Dr.Paul Lohmann GmbH KG Emmerthal

3.3.1 Transport between Environmental Compartments

Type:
Media:
Method:
Year:
Remark: Relevante Angaben liegen nicht vor.
Source: Dr.Paul Lohmann GmbH KG Emmerthal

3.3.2 Distribution

Media:
Method:
Year:
Remark: Relevante Angaben liegen nicht vor.
Source: Dr.Paul Lohmann GmbH KG Emmerthal

3.4 Mode of Degradation in Actual Use

-

3.5 Biodegradation

Type: aerobic
Inoculum: activated sludge, industrial
Result: readily biodegradable
Method:
Year: GLP:
Test substance:
Source: Dr.Paul Lohmann GmbH KG Emmerthal

3.6 BOD5, COD or BOD5/COD Ratio

C O D

Method: other
Year: GLP: no
COD: ca. 735 mg/g substance
Source: Dr.Paul Lohmann GmbH KG Emmerthal

3.7 Bioaccumulation

Species:

Exposure period:

Concentration:

BCF:

Elimination:

Method:

Year:

GLP:

Test substance:

Remark: Relevante Angaben liegen nicht vor.

Source: Dr.Paul Lohmann GmbH KG Emmerthal

3.8 Additional Remarks

-

AQUATIC ORGANISMS**4.1 Acute/Prolonged Toxicity to Fish**

Type:
Species:
Exposure period:
Unit: Analytical monitoring:
Method:
Year: GLP:
Test substance:
Remark: Relevante Angaben liegen nicht vor.
Source: Dr.Paul Lohmann GmbH KG Emmerthal

4.2 Acute Toxicity to Aquatic Invertebrates

Species:
Exposure period:
Unit: Analytical monitoring:
Method:
Year: GLP:
Test substance:
Remark: Relevante Angaben liegen nicht vor.
Source: Dr.Paul Lohmann GmbH KG Emmerthal

4.3 Toxicity to Aquatic Plants e.g. Algae

Species:
Endpoint:
Exposure period:
Unit: Analytical monitoring:
Method:
Year: GLP:
Test substance:
Remark: Relevante Angaben liegen nicht vor.
Source: Dr.Paul Lohmann GmbH KG Emmerthal

4.4 Toxicity to Microorganisms e.g. Bacteria

Type:
Species:
Exposure period:
Unit: Analytical monitoring:
Method:
Year: GLP:
Test substance:
Remark: Relevante Angaben liegen nicht vor.
Source: Dr.Paul Lohmann GmbH KG Emmerthal

4.5 Chronic Toxicity to Aquatic Organisms

4.5.1 Chronic Toxicity to Fish

-

4.5.2 Chronic Toxicity to Aquatic Invertebrates

-

TERRESTRIAL ORGANISMS

4.6.1 Toxicity to Soil Dwelling Organisms

Type:

Species:

Endpoint:

Exposure period:

Unit:

Method:

Year:

GLP:

Test substance:

Remark: Relevante Angaben liegen nicht vor.

Source: Dr.Paul Lohmann GmbH KG Emmerthal

4.6.2 Toxicity to Terrestrial Plants

Species:

Endpoint:

Expos. period:

Unit:

Method:

Year:

GLP:

Test substance:

Remark: Relevante Angaben liegen nicht vor.

Source: Dr.Paul Lohmann GmbH KG Emmerthal

4.6.3 Toxicity to other Non-Mamm. Terrestrial Species

Species:

Endpoint:

Expos. period:

Unit:

Method:

Year:

GLP:

Test substance:

Remark: Relevante Angaben liegen nicht vor.

Source: Dr.Paul Lohmann GmbH KG Emmerthal

4.7 Biological Effects Monitoring

Remark: Relevante Angaben liegen nicht vor.

Source: Dr.Paul Lohmann GmbH KG Emmerthal

4.8 Biotransformation and Kinetics

Type:

Remark: Relevante Angaben liegen nicht vor.

Source: Dr.Paul Lohmann GmbH KG Emmerthal

4.9 Additional Remarks

Remark: Wassergefährdungsklasse (WGK): 1, schwach wassergefährdend.

Source: Dr.Paul Lohmann GmbH KG Emmerthal

(3)

5.1 Acute Toxicity

5.1.1 Acute Oral Toxicity

Type: LD50
Species: rat
Sex:
Number of Animals:
Vehicle:
Value: = 4280 mg/kg bw
Method:
Year: **GLP:**
Test substance: as prescribed by 1.1 - 1.4
Source: Verdugt B.V. Tiel

(4)

Type:
Species:
Sex:
Number of Animals:
Vehicle:
Value:
Method:
Year: **GLP:**
Test substance:
Remark: Relevante Angaben liegen nicht vor.
Source: Dr.Paul Lohmann GmbH KG Emmerthal

5.1.2 Acute Inhalation Toxicity

Type:
Species:
Sex:
Number of Animals:
Vehicle:
Exposure time:
Value:
Method:
Year: **GLP:**
Test substance:
Remark: Relevante Angaben liegen nicht vor.
Source: Dr.Paul Lohmann GmbH KG Emmerthal

5.1.3 Acute Dermal Toxicity

Type:
Species:
Sex:
Number of
Animals:
Vehicle:
Value:
Method:
Year: GLP:
Test substance:
Remark: Relevante Angaben liegen nicht vor.
Source: Dr.Paul Lohmann GmbH KG Emmerthal

5.1.4 Acute Toxicity, other Routes

Type: LD50
Species: mouse
Sex:
Number of
Animals:
Vehicle:
Route of admin.: i.v.
Value: = 52 mg/kg bw
Method:
Year: GLP:
Test substance:
Source: Dr.Paul Lohmann GmbH KG Emmerthal

(5)

Type: LDLo
Species: rat
Sex:
Number of
Animals:
Vehicle:
Route of admin.: i.v.
Value: = 147 mg/kg bw
Method:
Year: GLP:
Test substance:
Source: Dr.Paul Lohmann GmbH KG Emmerthal

(5)

5.2 Corrosiveness and Irritation

5.2.1 Skin Irritation

Species:

Concentration:

Exposure:

Exposure Time:

Number of
Animals:

PDII:

Result:

EC classificat.:

Method:

Year:

GLP:

Test substance:

Remark: Relevante Angaben liegen nicht vor.

Source: Dr.Paul Lohmann GmbH KG Emmerthal

5.2.2 Eye Irritation

Species:

Concentration:

Dose:

Exposure Time:

Comment:

Number of
Animals:

Result:

EC classificat.:

Method:

Year:

GLP:

Test substance:

Remark: Relevante Angaben liegen nicht vor.

Source: Dr.Paul Lohmann GmbH KG Emmerthal

5.3 Sensitization

Type:

Species:

Number of
Animals:

Vehicle:

Result:

Classification:

Method:

Year:

GLP:

Test substance:

Remark: Relevante Angaben liegen nicht vor.

Source: Dr.Paul Lohmann GmbH KG Emmerthal

5.4 Repeated Dose Toxicity

Species: Sex:
Strain:
Route of admin.:
Exposure period:
Frequency of
treatment:
Post. obs.
period:
Doses:
Control Group:
Method:
Year: GLP:
Test substance:
Remark: Relevante Angaben liegen nicht vor.
Source: Dr.Paul Lohmann GmbH KG Emmerthal

5.5 Genetic Toxicity 'in Vitro'

Type:
System of
testing:
Concentration:
Metabolic
activation:
Result:
Method:
Year: GLP:
Test substance:
Remark: Relevante Angaben liegen nicht vor.
Source: Dr.Paul Lohmann GmbH KG Emmerthal

5.6 Genetic Toxicity 'in Vivo'

Type:
Species: Sex:
Strain:
Route of admin.:
Exposure period:
Doses:
Result:
Method:
Year: GLP:
Test substance:
Remark: Relevante Angaben liegen nicht vor.
Source: Dr.Paul Lohmann GmbH KG Emmerthal

5.7 Carcinogenicity

Species: Sex:
Strain:
Route of admin.:
Exposure period:
Frequency of
treatment:
Post. obs.
period:
Doses:
Result:
Control Group:
Method:
Year: GLP:
Test substance:
Remark: Relevante Angaben liegen nicht vor.
Source: Dr.Paul Lohmann GmbH KG Emmerthal

5.8 Toxicity to Reproduction

Type:
Species: Sex:
Strain:
Route of admin.:
Exposure Period:
Frequency of
treatment:
Duration of test:
Doses:
Control Group:
Method:
Year: GLP:
Test substance:
Remark: Relevante Angaben liegen nicht vor.
Source: Dr.Paul Lohmann GmbH KG Emmerthal

5.9 Developmental Toxicity/Teratogenicity

Species: Sex:
Strain:
Route of admin.:
Exposure period:
Frequency of
treatment:
Duration of test:
Doses:
Control Group:
Method:
Year: GLP:
Test substance:
Remark: Relevante Angaben liegen nicht vor.
Source: Dr.Paul Lohmann GmbH KG Emmerthal

5.10 Other Relevant Information

Type: other: biochemical aspects

Remark: Calcium is an essential nutrient. It is present in large quantities in the body. Its absorption and metabolism are related to vitamin D and phosphorus intake and to the functional activity of the parathyroid glands. It is unlikely that a relatively small addition to the daily calcium intake would have any effects in the body and even larger doses would be likely to cause effects only if vitamin D intake were also increased.

The acetate of the compounds can be disregarded from a toxicological point of view. It enters naturally into the metabolism of the body.

Source: Verdugt B.V. Tiel

(6)

Type:

Remark: SAFETY PROFILE: Poison by intravenous route. Mutation data reported. When heated to decomposition it emits acrid smoke and fumes.

Source: Dr. Paul Lohmann GmbH KG Emmerthal

(5)

5.11 Experience with Human Exposure

Remark: Relevante Angaben liegen nicht vor.

Source: Dr. Paul Lohmann GmbH KG Emmerthal

- (1) Verdugt B.V. Material Safety Data Sheet, Calcium Acetate, 1992.
- (2) Brenn- und Explosions- Kenngrößen von Stäuben, Erich Schmidt Verlag, Bielefeld.
- (3) Katalog wassergefährdender Stoffe (allgemeine Verwaltungsvorschrift v. 9.3.1990).
- (4) Smyth et al.: Am. Ind. Hyg. Assoc. J. 30,470 (1969).
- (5) Sax's Dangerous Properties of Industrial Materials, Verlag Van Nostrand Reinhold, New York.
- (6) WHO Food Additive Series, No.5, p. 415, 1974.

7.1 Risk Assessment

-