



Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 21.06.2021

Version number 1

Revision: 21.06.2021

SECTION 1: Identification of the substance/mixture and of the company/undertaking

· 1.1 Product identifier

· **Product name:** 3',4'-Dihydrospiro[androst-4,6-diene-17,2'(5'H)-furan]-3,5'-dione
(Canrenone)

· **Part number:** MM0197.01-0250

· **CAS Number:**
976-71-6

· **EC number:**
213-554-5

· 1.2 Relevant identified uses of the substance or mixture and uses advised against

No further relevant information available.

· **Application of the substance / the mixture** Reference material for laboratory use only

· 1.3 Details of the supplier of the safety data sheet

· **Manufacturer/Supplier:**

LGC Limited
Queens Road
Teddington
Middlesex TW11 0LY
UNITED KINGDOM

Tel : +44 (0) 20 8943 7000
Fax : +44 (0) 20 8943 2767
eMail : gb@lgcstandards.com
Web : www.lgcstandards.com

· **Further information obtainable from:**

Product safety department
eMail : sds-request@lgcgroup.com

· 1.4 Emergency telephone number:

For Hazardous Materials or Dangerous Goods Incident
Spill, Leak, Fire Exposure, or Accident
Call CHEMTREC:
USA & Canada 1-800-424-9300
Rest of the world +1 703-741-5970

SECTION 2: Hazards identification

· 2.1 Classification of the substance or mixture

· **Classification according to Regulation (EC) No 1272/2008**



health hazard

Carc. 2 H351 Suspected of causing cancer.

Repr. 2 H361 Suspected of damaging fertility or the unborn child.



environment

Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.

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- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
The substance is classified and labelled according to the CLP regulation.
- **Hazard pictograms**



GHS08 GHS09

- **Signal word** Warning
- **Hazard statements**
H351 Suspected of causing cancer.
H361 Suspected of damaging fertility or the unborn child.
H411 Toxic to aquatic life with long lasting effects.
- **Precautionary statements**
P273 Avoid release to the environment.
P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
P308+P313 IF exposed or concerned: Get medical advice/attention.
P391 Collect spillage.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
- **2.3 Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

- **3.1 Substances**
- **CAS No. Description**
976-71-6 Spironolactone Related Compound A
- **Identification number(s)** None
- **EC number:** 213-554-5
- **RTECS:** TU3493000
- **Additional information:** For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

- **4.1 Description of first aid measures**
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:** Rinse opened eye for several minutes under running water.

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- **After swallowing:** Rinse mouth. Do not induce vomiting.
- **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **4.3 Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:** Use fire extinguishing methods suitable for surrounding conditions.
- **5.2 Special hazards arising from the substance or mixture**
Formation of toxic gases is possible during heating or in case of fire.
- **5.3 Advice for firefighters**
- **Protective equipment:** Wear self-contained respiratory protective device.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures** Avoid formation of dust.
- **6.2 Environmental precautions:**
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**
Dispose of contaminated material as waste according to item 13.
- **6.4 Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling** Store in cool, dry place in tightly closed receptacles.
- **Information about fire - and explosion protection:** No special measures required.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**
Please refer to the manufacturer's certificate for specific storage and transport temperature conditions.
Store only in the original receptacle unless other advice is given on the CoA.
Keep container in a well-ventilated place. Keep away from sources of ignition and heat.
- **Information about storage in one common storage facility:** Store away from foodstuffs.
- **Further information about storage conditions:** None.
- **7.3 Specific end use(s)** No further relevant information available.

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SECTION 8: Exposure controls/personal protection

- **8.1 Control parameters**
- **Ingredients with limit values that require monitoring at the workplace:** Not required.
- **Additional information:** Lists used were valid at the time of SDS preparation.
- **8.2 Exposure controls**
- **Appropriate engineering controls** No further data; see item 7.
- **Individual protection measures, such as personal protective equipment**
- **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Wash hands before breaks and at the end of work.
- **Respiratory protection:**
Not required.
Use suitable respiratory protective device in case of insufficient ventilation.
- **Hand protection**
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374



Protective gloves

- **Material of gloves** Butyl rubber, BR
- **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eyeface protection** Safety glasses

SECTION 9: Physical and chemical properties

- **9.1 Information on basic physical and chemical properties**
- **General Information**
- **Physical state** Solid
- **Colour:** Light yellow
- **Odour:** Odourless
- **Odour threshold:** Not determined.
- **Melting point/freezing point:** 150 °C
- **Boiling point or initial boiling point and boiling range** Not determined.
- **Flammability** Not determined.

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· Lower and upper explosion limit	
· Lower:	Not determined.
· Upper:	Not determined.
· Flash point:	Not applicable.
· Auto-ignition temperature:	Not determined.
· Decomposition temperature:	Not determined.
· pH	Not applicable.
· Viscosity:	
· Kinematic viscosity	Not applicable.
· Dynamic:	Not applicable.
· Solubility	Acetone, Chloroform, Methanol
· water at 20 °C:	0.027 g/l
· Partition coefficient n-octanol/water (log value)	2.68 Log P
· Vapour pressure:	Not applicable.
· Density and/or relative density	
· Density:	Not determined.
· Relative density	Not determined.
· Vapour density	Not applicable.

· 9.2 Other information	
· Appearance:	
· Form:	Solid
· Important information on protection of health and environment, and on safety.	
· Ignition temperature:	Not determined
· Explosive properties:	Not determined.
· Change in condition	
· Evaporation rate	Not applicable.

· Information with regard to physical hazard classes	
· Explosives	Not applicable
	Not applicable
· Flammable gases	Not applicable
	Not applicable
· Aerosols	Not applicable
	Not applicable
· Oxidising gases	Not applicable
	Not applicable
· Gases under pressure	Not applicable
	Not applicable
· Flammable liquids	Not applicable
	Not applicable
· Flammable solids	Not applicable
	Not applicable
· Self-reactive substances and mixtures	Not applicable
	Not applicable

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· Pyrophoric liquids	Not applicable
· Pyrophoric solids	Not applicable
· Self-heating substances and mixtures	Not applicable
· Substances and mixtures, which emit flammable gases in contact with water	Not applicable
· Oxidising liquids	Not applicable
· Oxidising solids	Not applicable
· Organic peroxides	Not applicable
· Corrosive to metals	Not applicable
· Desensitised explosives	Not applicable

SECTION 10: Stability and reactivity

· 10.1 Reactivity

Stable under normal conditions.

No further relevant information available.

· 10.2 Chemical stability

Stable under normal conditions.

· Thermal decomposition / conditions to be avoided:

Formation of toxic gases is possible during heating or in case of fire.

· 10.3 Possibility of hazardous reactions

No dangerous reactions known.

· 10.4 Conditions to avoid

Heat.

· 10.5 Incompatible materials:

Strong oxidizing agents.

· 10.6 Hazardous decomposition products:

Formation of toxic gases is possible during heating or in case of fire.

SECTION 11: Toxicological information

· 11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

· Acute toxicity

· LD/LC50 values relevant for classification:

Oral	LD50	>5,000 mg/kg (rat)
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· Skin corrosion/irritation

Based on available data, the classification criteria are not met.

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- **Serious eye damage/irritation** Based on available data, the classification criteria are not met.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Suspected of causing cancer.
- **Reproductive toxicity** Suspected of damaging fertility or the unborn child.
- **Additional toxicological information:**
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
Carc. 2, Repr. 2
- **11.2 Information on other hazards**
- **Endocrine disrupting properties** Substance is not listed.

SECTION 12: Ecological information

· 12.1 Toxicity

· Aquatic toxicity:

EC50/48 h	11 mg/l (daphnia)
LC50/96 h	7.5-15.2 mg/l (fish)

- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Endocrine disrupting properties** For information on endocrine disrupting properties see section 11.
- **12.7 Other adverse effects**
- **Remark:** Toxic for fish
- **Additional ecological information:**
- **General notes:**
Water hazard class 3 (German Regulation) (Self-assessment): extremely hazardous for water
Do not allow product to reach ground water, water course or sewage system, even in small quantities.
Danger to drinking water if even extremely small quantities leak into the ground.
Also poisonous for fish and plankton in water bodies.
Toxic for aquatic organisms

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packaging:**
- **Recommendation:** Dispose of in accordance with national regulations.

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SECTION 14: Transport information


· **14.1 UN number or ID number**
· **ADR, IMDG, IATA**
· **ADR**

· **IMDG**

· **IATA**

UN3077
3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Spironolactone Related Compound A)
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Spironolactone Related Compound A), MARINE POLLUTANT
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Spironolactone Related Compound A)

· **14.3 Transport hazard class(es)**
· **ADR, IMDG, IATA**



· **Class**
· **Label**

9 Miscellaneous dangerous substances and articles.
9

· **14.4 Packing group**
· **ADR, IMDG, IATA**

III

· **14.5 Environmental hazards:**
· **Marine pollutant:**
· **Special marking (ADR):**
· **Special marking (IATA):**

Symbol (fish and tree)
Symbol (fish and tree)
Symbol (fish and tree)

· **14.6 Special precautions for user**

· **Hazard identification number (Kemler code):**
· **EMS Number:**
· **Stowage Category**
· **Stowage Code**

Warning: Miscellaneous dangerous substances and articles.
90
F-A,S-F
A
SW23 When transported in BK3 bulk container, see 7.6.2.12 and 7.7.3.9.

· **14.7 Maritime transport in bulk according to IMO instruments**

Not applicable.

· **Transport/Additional information:**

· **ADR**
· **Limited quantities (LQ)**
· **Excepted quantities (EQ)**

· **Transport category**

5 kg
Code: E1
Maximum net quantity per inner packaging: 30 g
Maximum net quantity per outer packaging: 1000 g
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· Tunnel restriction code	E
· UN "Model Regulation":	UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (SPIRONOLACTONE RELATED COMPOUND A), 9, III

SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I Substance is not listed.**
- **Seveso category E2 Hazardous to the Aquatic Environment**
- **Qualifying quantity (tonnes) for the application of lower-tier requirements 200 t**
- **Qualifying quantity (tonnes) for the application of upper-tier requirements 500 t**
- **15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.**

SECTION 16: Other information

The information in this safety data sheet (SDS) has been prepared with due care and is true and accurate to the best of our knowledge. The user must determine the suitability of the information for its particular purpose, ensure compliance with existing laws and regulations, and be aware that other or additional safety or performance considerations may arise when using, handling and/ or storing the material. The information in this SDS does not purport to be all inclusive or a guarantee as to the properties of the material supplied, and should be used only as a guide. British Pharmacopoeia Commission Office makes no warranties or representations as to the accuracy and completeness of the information contained herein, shall not be held responsible for the suitability of this information for the user's intended purposes or the consequences of such use, and shall not be liable for any damage or loss, howsoever arising, direct or otherwise.

· Abbreviations and acronyms:

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Carc. 2: Carcinogenicity – Category 2

Repr. 2: Reproductive toxicity – Category 2

Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2

· Sources

Tables 3.1 and 3.2 from Annex 6 of EC 1272/2008, EC 1907/2006, EH40/2005 as amended 2011, Registry of Toxic Effects of Chemical Substances (RTECS), The Dictionary of Substances and their Effects, 1st Edition, IUCLID.

- **Data compared to the previous version altered.** All sections have been updated.