

Safety Data Sheet

according to Regulation (EC) No 1907/2006 (REACH)
Classifications according to Regulation (EC) No 1272/2008.
Printdate 26 Oct 2023

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product name:

Warfarin

1.1. Catalog No.:

685220

1.2. Relevant identified uses of the substance or mixture

Identified: Laboratory chemical
uses: R&D

1.3. Uses advised against:

HPC Standards GmbH
Am Wieseneck 7

04451 Cunnersdorf
Deutschland

Tel. +49 34291 3372-36
Fax. +49 34291 3372-39
contact@hpc-standards.com

1.4. Emergency telephone number

HPC Standards Tel. +49 34291 3372-36
This number is only available during office hours.

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture
Classification according to Regulation (EC) No 1272/2008
Acute toxicity, Oral (Category 1), H300
Acute toxicity, Dermal (Category 4), H312
Reproductive toxicity (Category 1A), H360
Specific target organ toxicity - repeated exposure (Category 1), H372
Chronic aquatic toxicity (Category 3), H412

2.2. Label elements

2.2.1. Pictogram



2.2.2.

2.2 Label elements
Labelling according Regulation (EC) No 1272/2008

Pictogram Signal word Danger

Hazard statement(s)

H300 Fatal if swallowed.

H312 Harmful in contact with skin. H360 May damage fertility or the unborn child.

H372 Causes damage to organs through prolonged or repeated exposure.

H412 Harmful to aquatic life with long lasting effects.

Precautionary statement(s)

P201 Obtain special instructions before use.

P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

P301 + P330 + P331 + P310 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER/doctor.

P308 + P313 IF exposed or concerned: Get medical advice/ attention.

Supplemental Hazard

Statements

none

Restricted to professional users.

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Synonyms : Coumafene

4-Hydroxy-3-(3-oxo-1-phenylbutyl)coumarin

Formula : C1=CC=C(C=C1)C(=O)CC(=O)C2=CC=CC=C2C3=CC=CC=C3C(=O)O3

Molecular weight : 308.33 g/mol

CAS-No. : 81-81-2

EC-No. : 201-377-6

Index-No. : 607-056-00-0

Hazardous ingredients according to Regulation (EC) No 1272/2008

Component Classification Concentration

Warfarin

CAS-No.

EC-No.

Index-No.

81-81-2

201-377-6

607-056-00-0

Acute Tox. 1; Acute Tox. 4;

Repr. 1A; STOT RE 1; Aquatic

Chronic 3; H300, H312, H360,

H372, H412

<= 100 %

3.1.1. Formula

C19H16O4

3.1.2. Molecular Weight (g/mol)

308.33

3.1.3. CAS-No.

81-81-2

4. FIRST AID MEASURES

4.1 Description of first aid measures

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

In case of eye contact

Flush eyes with water as a precaution.

If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician 4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed

No data available

5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture

Carbon oxides

5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information

No data available

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Wear respiratory protection. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.
For personal protection see section 8.

6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

6.3 Methods and materials for containment and cleaning up

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

For disposal see section 13.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Avoid exposure - obtain special instructions before use.

Provide appropriate exhaust ventilation at places where dust is formed.

For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

Storage class (TRGS 510): Non-combustible, acute toxic Cat. 1 and 2 / very toxic hazardous materials

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

a) Appearance Form: solid

Colour: white

b) Odour No data available

c) Odour Threshold No data available

d) pH No data available

e) Melting point/freezing point

Melting point/range: 162 - 164 °C - lit.

f) Initial boiling point and boiling range

No data available

g) Flash point No data available

h) Evaporation rate No data available

i) Flammability (solid, gas) No data available

j) Upper/lower

flammability or

explosive limits

No data available

k) Vapour pressure No data available
l) Vapour density No data available
m) Relative density No data available
n) Water solubility insoluble
o) Partition coefficient: noctanol/
water
No data available
p) Auto-ignition
temperature
No data available q) Decomposition
temperature
No data available
r) Viscosity No data available
s) Explosive properties No data available
t) Oxidizing properties No data available
9.2 Other safety information
No data available

10. STABILITY AND REACTIVITY

10.1 Reactivity
No data available
10.2 Chemical stability
Stable under recommended storage conditions.
10.3 Possibility of hazardous reactions
No data available
10.4 Conditions to avoid
No data available
10.5 Incompatible materials
Strong oxidizing agents, Strong acids, Strong bases
10.6 Hazardous decomposition products
Hazardous decomposition products formed under fire conditions. - Carbon oxides
Other decomposition products - No data available
In the event of fire: see section 5

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects
Acute toxicity
LD50 Oral - Rat - 1.6 mg/kg(Warfarin)
LD50 Dermal - Rat - 1,400 mg/kg(Warfarin)
Remarks: Sense Organs and Special Senses (Nose, Eye, Ear, and Taste):Eye:Chromodacryorrhea.
Behavioral:Muscle weakness. Kidney, Ureter, Bladder:Hematuria.
Skin corrosion/irritation
No data available(Warfarin)
Serious eye damage/eye irritation
No data available(Warfarin)
Respiratory or skin sensitisation
No data available(Warfarin)
Germ cell mutagenicity
No data available(Warfarin)
Carcinogenicity
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as
probable, possible or confirmed human carcinogen by IARC.
Reproductive toxicity
May cause congenital malformation in the fetus.(Warfarin)
Known human reproductive toxicant(Warfarin)
Specific target organ toxicity - single exposure
No data available(Warfarin) Specific target organ toxicity - repeated exposure
No data available

Aspiration hazard
No data available(Warfarin)
Additional Information
RTECS: GN4550000
Inhibition of blood coagulation., Abnormal clotting, bruising or bleeding.(Warfarin)

12. ECOLOGICAL INFORMATION

12.1 Toxicity
Toxicity to fish LC50 - Oncorhynchus mykiss (rainbow trout) - > 16 mg/l - 96.0 h(Warfarin)
Toxicity to daphnia and other aquatic invertebrates
EC50 - Daphnia magna (Water flea) - > 17 mg/l - 48 h(Warfarin)
12.2 Persistence and degradability
Biodegradability Result: - Readily biodegradable (OECD Test Guideline 301D)
12.3 Bioaccumulative potential
No data available
12.4 Mobility in soil
No data available(Warfarin)
12.5 Results of PBT and vPvB assessment
This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.
12.6 Other adverse effects
Harmful to aquatic life with long lasting effects

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods
Product
Offer surplus and non-recyclable solutions to a licensed disposal company. Dissolve or mix the material with a combustible solvent and burn in a chem scrubber.
Contaminated packaging
Dispose of as unused product.

14. TRANSPORT INFORMATION

14.1 UN number
ADR/RID: 2811 IMDG: 2811 IATA: 2811
14.2 UN proper shipping name
ADR/RID: TOXIC SOLID, ORGANIC, N.O.S. (Warfarin)
IMDG: TOXIC SOLID, ORGANIC, N.O.S. (Warfarin)
IATA: Toxic solid, organic, n.o.s. (Warfarin)
14.3 Transport hazard class(es)
ADR/RID: 6.1 IMDG: 6.1 IATA: 6.1
14.4 Packaging group
ADR/RID: I IMDG: I IATA: I
14.5 Environmental hazards
ADR/RID: no IMDG Marine pollutant: no IATA: no
14.6 Special precautions for user

No data available

15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

15.2 Chemical safety assessment

For this product a chemical safety assessment was not carried out

16. OTHER INFORMATION

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide.
The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. For lab use only!