



 Version
 Revision Date:
 SDS Number:
 Date of last issue: 06.04.2024

 4.0
 28.09.2024
 6111711-00012
 Date of first issue: 15.07.2020

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

1.1 Product identifier

Trade name : Warfarin Formulation

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

Use of the Sub- : Veterinary product

stance/Mixture

Recommended restrictions

on use

Not applicable

1.3 Details of the supplier of the safety data sheet

Company : MSD

20 Spartan Road

1619 Spartan, South Africa

Telephone : +27119239300

E-mail address of person

responsible for the SDS

: EHSDATASTEWARD@msd.com

# 1.4 Emergency telephone number

+1-908-423-6000

# **SECTION 2: Hazards identification**

## 2.1 Classification of the substance or mixture

#### Classification (REGULATION (EC) No 1272/2008)

Acute toxicity, Category 3 H301: Toxic if swallowed. Acute toxicity, Category 2 H330: Fatal if inhaled.

Acute toxicity, Category 4 H312: Harmful in contact with skin. Reproductive toxicity, Category 1A H360D: May damage the unborn child.

Specific target organ toxicity - repeated H372: Causes damage to organs through pro-

exposure, Category 1 longed or repeated exposure.

#### 2.2 Label elements

# Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :

Signal word : Danger

Hazard statements : H301 Toxic if swallowed.

H312 Harmful in contact with skin.



# **Warfarin Formulation**

 Version
 Revision Date:
 SDS Number:
 Date of last issue: 06.04.2024

 4.0
 28.09.2024
 6111711-00012
 Date of first issue: 15.07.2020

H330 Fatal if inhaled.

H360D May damage the unborn child.

H372 Causes damage to organs through prolonged or re-

peated exposure.

Precautionary statements : Prevention:

P201 Obtain special instructions before use.

P280 Wear protective gloves/ protective clothing/ eye protec-

tion/ face protection.

Response:

P301 + P310 + P330 IF SWALLOWED: Immediately call a

POISON CENTER/ doctor. Rinse mouth.

P302 + P352 + P312 IF ON SKIN: Wash with plenty of wa-

ter. Call a POISON CENTER/ doctor if you feel unwell.

P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a

POISON CENTER/ doctor.

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

attention.

Hazardous components which must be listed on the label:

Warfarin

#### **Additional Labelling**

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.

Dust contact with the eyes can lead to mechanical irritation.

Contact with dust can cause mechanical irritation or drying of the skin.

May form combustible dust concentrations in air.

## **SECTION 3: Composition/information on ingredients**

## 3.2 Mixtures

#### Components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
Warfarin	81-81-2 201-377-6 607-056-00-0	Acute Tox. 2; H300 Acute Tox. 1; H330 Acute Tox. 1; H310 Eye Irrit. 2; H319 Repr. 1A; H360D STOT RE 1; H372 (Blood) Aquatic Chronic 2; H411	>= 1 - < 2,5





 Version
 Revision Date:
 SDS Number:
 Date of last issue: 06.04.2024

 4.0
 28.09.2024
 6111711-00012
 Date of first issue: 15.07.2020

For explanation of abbreviations see section 16.

## **SECTION 4: First aid measures**

#### 4.1 Description of first aid measures

General advice : In the case of accident or if you feel unwell, seek medical ad-

vice immediately.

When symptoms persist or in all cases of doubt seek medical

advice.

Protection of first-aiders : First Aid responders should pay attention to self-protection,

and use the recommended personal protective equipment when the potential for exposure exists (see section 8).

If inhaled : If inhaled, remove to fresh air.

If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

In case of skin contact : In case of contact, immediately flush skin with plenty of water.

Remove contaminated clothing and shoes.

Get medical attention. Wash clothing before reuse.

Thoroughly clean shoes before reuse.

In case of eye contact : If in eyes, rinse well with water.

Get medical attention if irritation develops and persists.

If swallowed : If swallowed, DO NOT induce vomiting.

Call a physician or poison control centre immediately.

Rinse mouth thoroughly with water.

Never give anything by mouth to an unconscious person.

## 4.2 Most important symptoms and effects, both acute and delayed

Risks : Toxic if swallowed.

Harmful in contact with skin.

Fatal if inhaled.

May damage the unborn child.

Causes damage to organs through prolonged or repeated

exposure.

Contact with dust can cause mechanical irritation or drying of

the skin.

Dust contact with the eyes can lead to mechanical irritation.

## 4.3 Indication of any immediate medical attention and special treatment needed

Treatment : Treat symptomatically and supportively.





Version Revision Date: SDS Number: Date of last issue: 06.04.2024 4.0 28.09.2024 6111711-00012 Date of first issue: 15.07.2020

# **SECTION 5: Firefighting measures**

5.1 Extinguishing media

Suitable extinguishing media : Water spray

Alcohol-resistant foam Carbon dioxide (CO2)

Dry chemical

Unsuitable extinguishing

media

High volume water jet

5.2 Special hazards arising from the substance or mixture

Specific hazards during fire-

fighting

: Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a

potential dust explosion hazard.

Do not use a solid water stream as it may scatter and spread

fire.

Exposure to combustion products may be a hazard to health.

Hazardous combustion prod: :

ucts

Carbon oxides Sulphur oxides

Nitrogen oxides (NOx)

5.3 Advice for firefighters

Special protective equipment :

for firefighters

In the event of fire, wear self-contained breathing apparatus.

Use personal protective equipment.

Specific extinguishing meth-

. ods Use extinguishing measures that are appropriate to local cir-

cumstances and the surrounding environment.
Use water spray to cool unopened containers.

Remove undamaged containers from fire area if it is safe to do

SO.

Evacuate area.

#### **SECTION 6: Accidental release measures**

# 6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Evacuate personnel to safe areas.

Only trained personnel should re-enter the area.

Follow safe handling advice (see section 7) and personal pro-

tective equipment recommendations (see section 8).

6.2 Environmental precautions

Environmental precautions : Avoid release to the environment.

Prevent further leakage or spillage if safe to do so. Retain and dispose of contaminated wash water.

Local authorities should be advised if significant spillages

cannot be contained.





 Version
 Revision Date:
 SDS Number:
 Date of last issue: 06.04.2024

 4.0
 28.09.2024
 6111711-00012
 Date of first issue: 15.07.2020

## 6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Soak up with inert absorbent material.

Avoid dispersal of dust in the air (i.e., clearing dust surfaces

with compressed air).

Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration. For large spills, provide dyking or other appropriate containment to keep material from spreading. If dyked material can be pumped, store recovered material in appropriate container. Clean up remaining materials from spill with suitable absorbent.

Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to deter-

mine which regulations are applicable.

Sections 13 and 15 of this SDS provide information regarding

certain local or national requirements.

#### 6.4 Reference to other sections

See sections: 7, 8, 11, 12 and 13.

## **SECTION 7: Handling and storage**

#### 7.1 Precautions for safe handling

Technical measures : Static electricity may accumulate and ignite suspended dust

causing an explosion.

Provide adequate precautions, such as electrical grounding

and bonding, or inert atmospheres.

Local/Total ventilation : If sufficient ventilation is unavailable, use with local exhaust

ventilation.

Advice on safe handling : Do not get on skin or clothing.

Do not breathe dust, fume, gas, mist, vapours or spray.

Do not swallow.

Avoid contact with eyes.

Wash skin thoroughly after handling.

Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure as-

sessment

Keep container tightly closed.

Minimize dust generation and accumulation. Keep container closed when not in use. Keep away from heat and sources of ignition.

Take precautionary measures against static discharges. Do not eat, drink or smoke when using this product.

Take care to prevent spills, waste and minimize release to the

environment.

Hygiene measures : If exposure to chemical is likely during typical use, provide eye

flushing systems and safety showers close to the working place. When using do not eat, drink or smoke. Wash contami-

nated clothing before re-use.

The effective operation of a facility should include review of engineering controls, proper personal protective equipment,



# **Warfarin Formulation**

 Version
 Revision Date:
 SDS Number:
 Date of last issue: 06.04.2024

 4.0
 28.09.2024
 6111711-00012
 Date of first issue: 15.07.2020

appropriate degowning and decontamination procedures, industrial hygiene monitoring, medical surveillance and the

use of administrative controls.

#### 7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers

Keep in properly labelled containers. Store locked up. Keep tightly closed. Keep in a cool, well-ventilated place. Store in

accordance with the particular national regulations.

Advice on common storage : Do not store with the following product types:

Strong oxidizing agents

Self-reactive substances and mixtures

Organic peroxides Flammable liquids Flammable solids Pyrophoric liquids Pyrophoric solids

Self-heating substances and mixtures

Substances and mixtures, which in contact with water, emit

flammable gases Explosives Gases

7.3 Specific end use(s)

Specific use(s) : No data available

## **SECTION 8: Exposure controls/personal protection**

#### 8.1 Control parameters

#### **Occupational Exposure Limits**

Components	CAS-No.	Value type (Form	Control parameters	Basis
		of exposure)		
Paraffin waxes and	8002-74-2	OEL-RL (Fumes)	4 mg/m3	ZA OEL
Hydrocarbon wax-				
es				
	Further information: Occupational Exposure Limits - Restricted Limits For			
	Hazardous Chemical Agents			
Warfarin	81-81-2	OEL-RL (inhala-	0,02 mg/m3	ZA OEL
		ble fraction)		
	Further information: danger of cutaneous absorption, Occupational Exposure			
	Limits - Restricted Limits For Hazardous Chemical Agents			

#### Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006

Substance name	Environmental Compartment	Value
Petrolatum	Oral (Secondary Poisoning)	9,33 mg/kg food

## 8.2 Exposure controls

#### **Engineering measures**

All engineering controls should be implemented by facility design and operated in accordance with GMP principles to protect products, workers, and the environment.



## **Warfarin Formulation**

Version Revision Date: SDS Number: Date of last issue: 06.04.2024 4.0 28.09.2024 6111711-00012 Date of first issue: 15.07.2020

Containment technologies suitable for controlling compounds are required to control at source and to prevent migration of the compound to uncontrolled areas (e.g., open-face containment devices)

Minimize open handling.

Personal protective equipment

Eye/face protection : Wear safety glasses with side shields or goggles.

If the work environment or activity involves dusty conditions,

mists or aerosols, wear the appropriate goggles.

Wear a faceshield or other full face protection if there is a potential for direct contact to the face with dusts, mists, or

aerosols.

Hand protection

Material : Chemical-resistant gloves

Remarks : Consider double gloving.

Skin and body protection : Work uniform or laboratory coat.

Additional body garments should be used based upon the task being performed (e.g., sleevelets, apron, gauntlets, disposable

suits) to avoid exposed skin surfaces.

Use appropriate degowning techniques to remove potentially

contaminated clothing.

Respiratory protection : If adequate local exhaust ventilation is not available or expo-

sure assessment demonstrates exposures outside the rec-

ommended guidelines, use respiratory protection.

Filter type : Combined particulates and organic vapour type (A-P)

# **SECTION 9: Physical and chemical properties**

#### 9.1 Information on basic physical and chemical properties

Appearance : paste Colour : pink

Odour : characteristic
Odour Threshold : No data available

pH : No data available

Melting point/freezing point : No data available

Initial boiling point and boiling

range

320 °C

Flash point : 178 °C

Evaporation rate : Not applicable

Flammability (solid, gas) : May form combustible dust concentrations in air.

Upper explosion limit / Upper

flammability limit

No data available

Lower explosion limit / Lower

flammability limit

No data available

Vapour pressure : Not applicable



# **Warfarin Formulation**

Version Revision Date: SDS Number: Date of last issue: 06.04.2024 4.0 28.09.2024 6111711-00012 Date of first issue: 15.07.2020

Relative vapour density : Not applicable

Relative density : 0,80 - 0,84

Density : No data available

Solubility(ies)

Water solubility : practically insoluble Partition coefficient: n- : Not applicable

octanol/water

Auto-ignition temperature : No data available

Decomposition temperature : No data available

Viscosity

Viscosity, kinematic : Not applicable

Explosive properties : Not explosive

Oxidizing properties : The substance or mixture is not classified as oxidizing.

9.2 Other information

Flammability (liquids) : Not applicable

Molecular weight : No data available

Particle size : No data available

## **SECTION 10: Stability and reactivity**

## 10.1 Reactivity

Not classified as a reactivity hazard.

## 10.2 Chemical stability

Stable under normal conditions.

#### 10.3 Possibility of hazardous reactions

Hazardous reactions : May form combustible dust concentrations in air.

Can react with strong oxidizing agents.

10.4 Conditions to avoid

Conditions to avoid : Heat, flames and sparks.

Avoid dust formation.

10.5 Incompatible materials

Materials to avoid : Oxidizing agents

# 10.6 Hazardous decomposition products

No hazardous decomposition products are known.





Version Revision Date: SDS Number: Date of last issue: 06.04.2024 4.0 28.09.2024 6111711-00012 Date of first issue: 15.07.2020

## **SECTION 11: Toxicological information**

#### 11.1 Information on toxicological effects

Information on likely routes of : Inhalation

exposure

Skin contact Ingestion Eye contact

**Acute toxicity** 

Toxic if swallowed.

Harmful in contact with skin.

Fatal if inhaled.

**Product:** 

Acute oral toxicity : Acute toxicity estimate: 281 mg/kg

Method: Calculation method

Acute inhalation toxicity : Acute toxicity estimate: 0,25 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist Method: Calculation method

Acute dermal toxicity : Acute toxicity estimate: 2.000 mg/kg

Method: Calculation method

#### **Components:**

Warfarin:

Acute oral toxicity : LD50 (Rat): 5,62 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 0,001 - 0,005 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist

Acute dermal toxicity : LD50 (Rat): 40 mg/kg

#### Skin corrosion/irritation

Not classified based on available information.

#### Components:

Warfarin:

Species : Rabbit

Method : OECD Test Guideline 404

Result : No skin irritation

# Serious eye damage/eye irritation

Not classified based on available information.

## **Components:**

Warfarin:

Species : Rabbit



# **Warfarin Formulation**

 Version
 Revision Date:
 SDS Number:
 Date of last issue: 06.04.2024

 4.0
 28.09.2024
 6111711-00012
 Date of first issue: 15.07.2020

Result : Irritation to eyes, reversing within 7 days

## Respiratory or skin sensitisation

#### Skin sensitisation

Not classified based on available information.

#### Respiratory sensitisation

Not classified based on available information.

## Components:

## Warfarin:

Test Type : Maximisation Test
Exposure routes : Skin contact
Species : Guinea pig
Result : negative

## Germ cell mutagenicity

Not classified based on available information.

#### Components:

#### Warfarin:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)

Result: equivocal

Test Type: In vitro mammalian cell gene mutation test

Result: equivocal

Test Type: Chromosome aberration test in vitro

Result: equivocal

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo

cytogenetic assay) Species: Mouse Result: negative

## Carcinogenicity

Not classified based on available information.

#### Reproductive toxicity

May damage the unborn child.

#### **Components:**

#### Warfarin:

Effects on foetal develop-

ment

Test Type: Fertility/early embryonic development

Species: Humans, female Application Route: Ingestion

Result: positive

Reproductive toxicity - As-

sessment

: Positive evidence of adverse effects on development from

human epidemiological studies.



# **Warfarin Formulation**

Version **Revision Date:** SDS Number: Date of last issue: 06.04.2024 28.09.2024 6111711-00012 Date of first issue: 15.07.2020 4.0

## STOT - single exposure

Not classified based on available information.

#### STOT - repeated exposure

Causes damage to organs through prolonged or repeated exposure.

#### Components:

#### Warfarin:

Exposure routes Ingestion Target Organs Blood

Assessment Shown to produce significant health effects in animals at con-

centrations of 10 mg/kg bw or less.

## Repeated dose toxicity

## **Components:**

#### Warfarin:

**Species** Rat

LOAEL < 10 mg/kg Application Route Ingestion Exposure time 90 Days

# **Aspiration toxicity**

Not classified based on available information.

## **SECTION 12: Ecological information**

## 12.1 Toxicity

## **Components:**

#### Warfarin:

Toxicity to daphnia and other : EC50 (Daphnia magna (Water flea)): > 105 mg/l

aquatic invertebrates Exposure time: 48 h

Toxicity to algae/aquatic EC50 (Desmodesmus subspicatus (green algae)): > 83,2 mg/l

Exposure time: 72 h plants

Toxicity to microorganisms EC50 (Photobacterium phosphoreum): 67,5 mg/l

Exposure time: 5 min

Toxicity to fish (Chronic tox-NOEC: 2 mg/l

icity) Exposure time: 21 d

Species: Oncorhynchus mykiss (rainbow trout)

Toxicity to daphnia and other:

NOEC: 0,059 mg/l aquatic invertebrates (Chron-Exposure time: 21 d

ic toxicity) Species: Daphnia magna (Water flea)





 Version
 Revision Date:
 SDS Number:
 Date of last issue: 06.04.2024

 4.0
 28.09.2024
 6111711-00012
 Date of first issue: 15.07.2020

#### 12.2 Persistence and degradability

#### **Components:**

Warfarin:

Biodegradability : Result: Readily biodegradable.

Biodegradation: 92,7 % Exposure time: 28 d

## 12.3 Bioaccumulative potential

## **Components:**

Warfarin:

Bioaccumulation : Species: Oncorhynchus mykiss (rainbow trout)

Bioconcentration factor (BCF): <= 21,6

Partition coefficient: n-

octanol/water

: log Pow: 0,7

## 12.4 Mobility in soil

No data available

## 12.5 Results of PBT and vPvB assessment

#### **Product:**

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

## **Product:**

Endocrine disrupting poten-

tial

The substance/mixture does not contain components considered to have endocrine disrupting properties according to

REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at

levels of 0.1% or higher.

#### **SECTION 13: Disposal considerations**

#### 13.1 Waste treatment methods

Product : Dispose of in accordance with local regulations.

According to the European Waste Catalogue, Waste Codes

are not product specific, but application specific.

Waste codes should be assigned by the user, preferably in

discussion with the waste disposal authorities.

Do not dispose of waste into sewer.

Contaminated packaging : Empty containers should be taken to an approved waste han-

dling site for recycling or disposal.

If not otherwise specified: Dispose of as unused product.



# **Warfarin Formulation**

Version Revision Date: SDS Number: Date of last issue: 06.04.2024 4.0 28.09.2024 6111711-00012 Date of first issue: 15.07.2020

## **SECTION 14: Transport information**

#### 14.1 UN number

ADN : UN 2811
ADR : UN 2811
RID : UN 2811
IMDG : UN 2811
IATA : UN 2811

14.2 UN proper shipping name

ADN : TOXIC SOLID, ORGANIC, N.O.S.

(Warfarin)

ADR : TOXIC SOLID, ORGANIC, N.O.S.

(Warfarin)

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)

Class Subsidiary risks

ADN : 6.1
ADR : 6.1
RID : 6.1
IMDG : 6.1
IATA : 6.1

# 14.4 Packing group

ADN

Packing group : II
Classification Code : T2
Hazard Identification Number : 60
Labels : 6.1

**ADR** 

Packing group : II
Classification Code : T2
Hazard Identification Number : 60
Labels : 6.1
Tunnel restriction code : (D/E)

**RID** 

Packing group : II
Classification Code : T2
Hazard Identification Number : 60



# **Warfarin Formulation**

Version Revision Date: SDS Number: Date of last issue: 06.04.2024 4.0 28.09.2024 6111711-00012 Date of first issue: 15.07.2020

Labels : 6.1

**IMDG** 

Packing group : II Labels : 6.1 EmS Code : F-A, S-A

IATA (Cargo)

Packing instruction (cargo : 676

aircraft)

Packing instruction (LQ) : Y644
Packing group : II
Labels : Toxic

IATA (Passenger)

Packing instruction (passen: 669

ger aircraft)

Packing instruction (LQ) : Y644
Packing group : II
Labels : Toxic

#### 14.5 Environmental hazards

ADN

Environmentally hazardous : no

**ADR** 

Environmentally hazardous : no

RID

Environmentally hazardous : no

**IMDG** 

Marine pollutant : no

#### 14.6 Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

#### 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Remarks : Not applicable for product as supplied.

# **SECTION 15: Regulatory information**

# 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

The components of this product are reported in the following inventories:

AICS : not determined

DSL : not determined

IECSC : not determined



## **Warfarin Formulation**

 Version
 Revision Date:
 SDS Number:
 Date of last issue: 06.04.2024

 4.0
 28.09.2024
 6111711-00012
 Date of first issue: 15.07.2020

#### 15.2 Chemical safety assessment

A Chemical Safety Assessment has not been carried out.

#### **SECTION 16: Other information**

Other information : Items where changes have been made to the previous version

are highlighted in the body of this document by two vertical

lines.

**Full text of H-Statements** 

H300 : Fatal if swallowed.

H310 : Fatal in contact with skin. H319 : Causes serious eye irritation.

H330 : Fatal if inhaled.

H360D : May damage the unborn child.

H372 : Causes damage to organs through prolonged or repeated

exposure.

H411 : Toxic to aquatic life with long lasting effects.

Full text of other abbreviations

Acute Tox. : Acute toxicity

Aguatic Chronic : Long-term (chronic) aguatic hazard

Eye Irrit. : Eye irritation

Repr. : Reproductive toxicity

STOT RE : Specific target organ toxicity - repeated exposure ZA OEL : South Africa. The Regulations for Hazardous Chemical

Agents, Occupational Exposure Limits

ZA OEL / OEL-RL : Occupational Exposure Limit Restricted limit - 8- hour expo-

sure or equivalent (12 hour shifts)

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways: ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA -European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European



## **Warfarin Formulation**

Version Revision Date: SDS Number: Date of last issue: 06.04.2024 4.0 28.09.2024 6111711-00012 Date of first issue: 15.07.2020

Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of very high concern; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

#### **Further information**

Sources of key data used to compile the Safety Data Sheet

Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agency, http://echa.europa.eu/

#### Classification of the mixture: Classification procedure:

Acute Tox. 3	H301	Calculation method
Acute Tox. 2	H330	Calculation method
Acute Tox. 4	H312	Calculation method
Repr. 1A	H360D	Calculation method
STOT RE 1	H372	Calculation method

Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user's end product, if applicable.

ZA / EN