

# SAFETY DATA SHEET



## Oxyclozanide Formulation

Version 3.0 Revision Date: 14.04.2025 SDS Number: 2784871-00014 Date of last issue: 06.04.2024 Date of first issue: 30.05.2018

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### Section 1: Identification

**Product identifier** : Oxyclozanide Formulation

**Recommended use of the chemical and restrictions on use**

Recommended use : Veterinary product  
Restrictions on use : Not applicable

**Manufacturer or supplier's details**

Company : MSD  
Address : 50 Tuas West Drive  
Singapore - Singapore 638408  
Telephone : +1-908-740-4000  
Emergency telephone number : 65 6697 2111 (24/7/365)  
E-mail address : EHSDATASTEWARD@msd.com

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### Section 2: Hazard identification

**Classification of the substance or mixture**

Reproductive toxicity : Category 2  
Long-term (chronic) aquatic hazard : Category 2

**GHS Label elements, including precautionary statements**

Hazard pictograms :

Signal word : Warning

Hazard statements : H361d Suspected of damaging the unborn child.  
H411 Toxic to aquatic life with long lasting effects.

Precautionary statements : **Prevention:**  
P201 Obtain special instructions before use.  
P202 Do not handle until all safety precautions have been read and understood.  
P273 Avoid release to the environment.  
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection/ hearing protection.

# SAFETY DATA SHEET



## Oxyclozanide Formulation

Version 3.0	Revision Date: 14.04.2025	SDS Number: 2784871-00014	Date of last issue: 06.04.2024 Date of first issue: 30.05.2018
----------------	------------------------------	------------------------------	---

### Response:

P308 + P313 IF exposed or concerned: Get medical advice/ attention.  
P391 Collect spillage.

### Storage:

P405 Store locked up.

### Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

### Other hazards which do not result in classification

None known.

## Section 3: Composition/information on ingredients

Substance / Mixture : Mixture

### Components

Chemical name	CAS-No.	Concentration (% w/w)
oxyclozanide	2277-92-1	>= 3 -< 10

## Section 4: First-aid measures

### Description of necessary first-aid measures

General advice : In the case of accident or if you feel unwell, seek medical advice immediately.  
When symptoms persist or in all cases of doubt seek medical advice.

If inhaled : If inhaled, remove to fresh air.  
Get medical attention.

In case of skin contact : In case of contact, immediately flush skin with soap and 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 : Flush eyes with water as a precaution.  
Get medical attention if irritation develops and persists.

If swallowed : If swallowed, DO NOT induce vomiting.  
Get medical attention.  
Rinse mouth thoroughly with water.  
Never give anything by mouth to an unconscious person.

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

Risks : Suspected of damaging the unborn child.

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).

# SAFETY DATA SHEET



## Oxyclozanide Formulation

Version 3.0      Revision Date: 14.04.2025      SDS Number: 2784871-00014      Date of last issue: 06.04.2024  
Date of first issue: 30.05.2018

---

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

Treatment : Treat symptomatically and supportively.

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## Section 5: Fire-fighting measures

### Extinguishing media

Suitable extinguishing media : Water spray  
Alcohol-resistant foam  
Carbon dioxide (CO<sub>2</sub>)  
Dry chemical

Unsuitable extinguishing media : None known.

### Special hazards arising from the substance or mixture

Specific hazards during fire-fighting : Exposure to combustion products may be a hazard to health.

Hazardous combustion products : Carbon oxides  
Chlorine compounds  
Nitrogen oxides (NO<sub>x</sub>)  
Metal oxides

### Special protective actions for fire-fighters

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.  
Use personal protective equipment.

Specific extinguishing methods : Use extinguishing measures that are appropriate to local circumstances 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.

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## Section 6: Accidental release measures

### Personal precautions, protective equipment and emergency procedures

Personal precautions : Use personal protective equipment.  
Follow safe handling advice (see section 7) and personal protective equipment recommendations (see section 8).

### Environmental precautions

Environmental precautions : Avoid release to the environment.  
Prevent further leakage or spillage if safe to do so.  
Prevent spreading over a wide area (e.g. by containment or oil barriers).  
Retain and dispose of contaminated wash water.  
Local authorities should be advised if significant spillages cannot be contained.

**Oxyclozanide Formulation**

Version 3.0	Revision Date: 14.04.2025	SDS Number: 2784871-00014	Date of last issue: 06.04.2024 Date of first issue: 30.05.2018
----------------	------------------------------	------------------------------	---

**Methods and materials for containment and cleaning up**

Methods for cleaning up : Soak up with inert absorbent material. 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 determine which regulations are applicable. Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.

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**Section 7: Handling and storage****Precautions for safe handling**

Technical measures : See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.

Local/Total ventilation : Use only with adequate ventilation.

Advice on safe handling : Do not breathe mist or vapours.  
Do not swallow.  
Avoid contact with eyes.  
Avoid prolonged or repeated contact with skin.  
Wash skin thoroughly after handling.  
Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure assessment  
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 contaminated clothing before re-use.  
The effective operation of a facility should include review of engineering controls, proper personal protective equipment, appropriate degowning and decontamination procedures, industrial hygiene monitoring, medical surveillance and the use of administrative controls.

**Conditions for safe storage, including any incompatibilities**

Conditions for safe storage : Keep in properly labelled containers.  
Store locked up.  
Store in accordance with the particular national regulations.

Materials to avoid : Do not store with the following product types:  
Strong oxidizing agents

**Oxyclozanide Formulation**

Version 3.0 Revision Date: 14.04.2025 SDS Number: 2784871-00014 Date of last issue: 06.04.2024  
Date of first issue: 30.05.2018

---

**Section 8: Exposure controls/personal protection****Control parameters****Occupational Exposure Limits**

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
oxyclozanide	2277-92-1	TWA	0.4 mg/m <sup>3</sup> (OEB 2)	Internal

**Appropriate engineering control measures** : Use appropriate engineering controls and manufacturing technologies to control airborne concentrations (e.g., drip-less quick connections). All engineering controls should be implemented by facility design and operated in accordance with GMP principles to protect products, workers, and the environment. Laboratory operations do not require special containment.

**Individual protection measures, such as personal protective equipment (PPE)**

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.

Skin protection : Work uniform or laboratory coat.

Respiratory protection : If adequate local exhaust ventilation is not available or exposure assessment demonstrates exposures outside the recommended guidelines, use respiratory protection.

Filter type : Particulates type

Hand protection : Chemical-resistant gloves

Material

**Section 9: Physical and chemical properties**

Appearance : liquid

Colour : transparent, Straw-coloured

Odour : No data available

Odour Threshold : No data available

pH : No data available

Melting point/freezing point : No data available

Initial boiling point and boiling : No data available

# SAFETY DATA SHEET



## Oxyclozanide Formulation

Version 3.0      Revision Date: 14.04.2025      SDS Number: 2784871-00014      Date of last issue: 06.04.2024  
Date of first issue: 30.05.2018

---

range

Flash point : No data available  
Evaporation rate : No data available  
Flammability (solid, gas) : Not applicable  
Flammability (liquids) : No data available  
Upper explosion limit / Upper flammability limit : No data available  
Lower explosion limit / Lower flammability limit : No data available  
Vapour pressure : No data available  
Relative vapour density : No data available  
Relative density : No data available  
Density : No data available  
Solubility(ies)  
Water solubility : completely miscible  
Partition coefficient: n-octanol/water : Not applicable  
Auto-ignition temperature : No data available  
Decomposition temperature : No data available  
Viscosity  
Viscosity, kinematic : No data available  
Explosive properties : Not explosive  
Oxidizing properties : The substance or mixture is not classified as oxidizing.  
Molecular weight : No data available  
Particle characteristics  
Particle size : Not applicable

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### Section 10: Stability and reactivity

Reactivity : Not classified as a reactivity hazard.  
Chemical stability : Stable under normal conditions.  
Possibility of hazardous reac- : Can react with strong oxidizing agents.

# SAFETY DATA SHEET



## Oxyclozanide Formulation

Version 3.0      Revision Date: 14.04.2025      SDS Number: 2784871-00014      Date of last issue: 06.04.2024  
Date of first issue: 30.05.2018

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tions

Conditions to avoid : None known.

Incompatible materials : Oxidizing agents

Hazardous decomposition products : No hazardous decomposition products are known.

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### Section 11: Toxicological information

Information on likely routes of exposure : Inhalation  
Skin contact  
Ingestion  
Eye contact

#### Acute toxicity

Not classified based on available information.

#### Components:

##### **oxyclozanide:**

Acute oral toxicity : LD50 (Rat): 3,519 mg/kg  
Target Organs: Central nervous system

Acute toxicity (other routes of administration) : LDLo (sheep): 10 mg/kg  
Application Route: Intravenous

#### **Skin corrosion/irritation**

Not classified based on available information.

#### Components:

##### **oxyclozanide:**

Remarks : Not classified due to lack of data.

#### **Serious eye damage/eye irritation**

Not classified based on available information.

#### Components:

##### **oxyclozanide:**

Remarks : Not classified due to lack of data.

#### **Respiratory or skin sensitisation**

##### **Skin sensitisation**

Not classified based on available information.

##### **Respiratory sensitisation**

Not classified based on available information.

#### Components:

##### **oxyclozanide:**

Exposure routes : Dermal

# SAFETY DATA SHEET



## Oxyclozanide Formulation

Version 3.0      Revision Date: 14.04.2025      SDS Number: 2784871-00014      Date of last issue: 06.04.2024  
Date of first issue: 30.05.2018

||| Remarks : Not classified due to lack of data.

### Germ cell mutagenicity

Not classified based on available information.

#### Components:

##### **oxyclozanide:**

Genotoxicity in vitro	: Test Type: Bacterial reverse mutation assay (AMES) Result: negative
	Test Type: Chromosomal aberration Test system: Human lymphocytes Result: positive
	Test Type: Mouse Lymphoma Result: positive
Genotoxicity in vivo	: Test Type: Micronucleus test Species: Mouse Application Route: Oral Result: negative
	Test Type: unscheduled DNA synthesis assay Species: Rat Cell type: Liver cells Application Route: Oral Result: negative
Germ cell mutagenicity - Assessment	: Weight of evidence does not support classification as a germ cell mutagen.

### Carcinogenicity

Not classified based on available information.

#### Components:

##### **oxyclozanide:**

||| Remarks : Not classified due to lack of data.

### Reproductive toxicity

Suspected of damaging the unborn child.

#### Components:

##### **oxyclozanide:**

Effects on fertility	: Test Type: Two-generation reproduction toxicity study Species: Rat, male and female Application Route: Oral General Toxicity - Parent: NOAEL: 25 - 35 mg/kg body weight Symptoms: Reduced body weight, No effects on embryofoetal
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# SAFETY DATA SHEET



## Oxyclozanide Formulation

Version  
3.0

Revision Date:  
14.04.2025

SDS Number:  
2784871-00014

Date of last issue: 06.04.2024  
Date of first issue: 30.05.2018

---

and postnatal development  
Result: No effects on fertility

Test Type: Two-generation reproduction toxicity study  
Species: Rat  
Application Route: Oral  
General Toxicity - Parent: LOAEL: 75 - 100 mg/kg body weight  
Symptoms: Reduced body weight, No effects on embryofoetal and postnatal development  
Result: No effects on fertility

Test Type: Two-generation reproduction toxicity study  
Species: Rat  
Application Route: Oral  
Early Embryonic Development: LOAEL: 75 - 100 mg/kg body weight  
Result: No fetotoxicity, No teratogenic effects

Test Type: One-generation reproduction toxicity study  
Species: Rat  
Application Route: Oral  
General Toxicity - Parent: LOAEL: 80 - 160 mg/kg body weight  
Result: No fetotoxicity, No teratogenic effects, No effects on fertility

Effects on foetal development

: Test Type: Development  
Species: Rat  
Application Route: Oral  
Developmental Toxicity: NOAEL: 200 mg/kg body weight  
Result: No fetotoxicity, No teratogenic effects

Test Type: Development  
Species: Rat  
Application Route: Oral  
General Toxicity Maternal: LOAEL: 100 mg/kg body weight  
Result: No fetotoxicity, No teratogenic effects

Test Type: Development  
Species: Rabbit  
Application Route: Oral  
Developmental Toxicity: NOAEL: 32 mg/kg body weight  
Result: Fetotoxicity, Skeletal malformations

Reproductive toxicity - Assessment

: Suspected of damaging the unborn child.

### STOT - single exposure

Not classified based on available information.

**Oxyclozanide Formulation**Version  
3.0Revision Date:  
14.04.2025SDS Number:  
2784871-00014Date of last issue: 06.04.2024  
Date of first issue: 30.05.2018**Components:****oxyclozanide:**

Exposure routes	:	Oral
Target Organs	:	Central nervous system
Assessment	:	May cause damage to organs.

**STOT - repeated exposure**

Not classified based on available information.

**Components:****oxyclozanide:**

Target Organs	:	Brain, Liver
Assessment	:	May cause damage to organs through prolonged or repeated exposure.

**Repeated dose toxicity****Components:****oxyclozanide:**

Species	:	Rat
NOAEL	:	9 mg/kg
LOAEL	:	44.5 mg/kg
Application Route	:	Oral
Exposure time	:	3 Months
Target Organs	:	Brain, Liver, spleen, Adrenal gland
Symptoms	:	Liver effects

Species	:	Dog
NOAEL	:	5 mg/kg
LOAEL	:	25 mg/kg
Application Route	:	Oral
Exposure time	:	3 Months
Target Organs	:	Brain, Liver
Symptoms	:	blood effects, alteration in liver enzymes

**Aspiration toxicity**

Not classified based on available information.

**Components:****oxyclozanide:**

Not applicable
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**Experience with human exposure****Components:****oxyclozanide:**

# SAFETY DATA SHEET



## Oxyclozanide Formulation

Version 3.0 Revision Date: 14.04.2025 SDS Number: 2784871-00014 Date of last issue: 06.04.2024 Date of first issue: 30.05.2018

---

||| Ingestion : Symptoms: May cause, Gastrointestinal disturbance, Central nervous system depression

### Section 12: Ecological information

#### Toxicity

##### Components:

###### **oxyclozanide:**

||| Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 0.69 mg/l  
Exposure time: 48 h  
Method: OECD Test Guideline 202

||| M-Factor (Acute aquatic toxicity) : 1

||| M-Factor (Chronic aquatic toxicity) : 1

#### Persistence and degradability

##### Components:

###### **oxyclozanide:**

||| Stability in water : Hydrolysis: 50 %(156 d)  
Method: OECD Test Guideline 111

#### Bioaccumulative potential

##### Components:

###### **oxyclozanide:**

||| Partition coefficient: n-octanol/water : log Pow: 3.99  
pH: 7  
Method: OECD Test Guideline 107

#### Mobility in soil

##### Components:

###### **oxyclozanide:**

||| Distribution among environmental compartments : log Koc: 4.83  
Method: OECD Test Guideline 106

#### Other adverse effects

No data available

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### Section 13: Disposal considerations

#### Disposal methods

Waste from residues : Do not dispose of waste into sewer.

# SAFETY DATA SHEET



## Oxyclozanide Formulation

Version 3.0      Revision Date: 14.04.2025      SDS Number: 2784871-00014      Date of last issue: 06.04.2024  
Date of first issue: 30.05.2018

---

Contaminated packaging : Dispose of in accordance with local regulations.  
Empty containers should be taken to an approved waste handling site for recycling or disposal.  
If not otherwise specified: Dispose of as unused product.

### Section 14: Transport information

#### International Regulations

##### UNRTDG

UN number : UN 3082  
UN proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.  
(oxyclozanide)  
Transport hazard class(es) : 9  
Packing group : III  
Labels : 9  
Environmental hazards : yes

##### IATA-DGR

UN/ID No. : UN 3082  
UN proper shipping name : Environmentally hazardous substance, liquid, n.o.s.  
(oxyclozanide)  
Transport hazard class(es) : 9  
Packing group : III  
Labels : Miscellaneous  
Packing instruction (cargo aircraft) : 964  
Packing instruction (passenger aircraft) : 964  
Environmentally hazardous : yes

##### IMDG-Code

UN number : UN 3082  
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.  
(oxyclozanide)  
Transport hazard class(es) : 9  
Packing group : III  
Labels : 9  
EmS Code : F-A, S-F  
Marine pollutant : yes

#### Transport in bulk according to IMO instruments

Not applicable for product as supplied.

#### 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.

# SAFETY DATA SHEET



## Oxyclozanide Formulation

Version 3.0      Revision Date: 14.04.2025      SDS Number: 2784871-00014      Date of last issue: 06.04.2024  
Date of first issue: 30.05.2018

---

### Section 15: Regulatory information

#### Safety, health and environmental regulations specific for the product in question

Workplace Safety and Health Act and Workplace Safety and Health (General Provisions) Regulations: This product is subject to the requirements in the Act/Regulations.

Environmental Protection and Management Act and : Not applicable

Environmental Protection and Management (Hazardous Substances) Regulations

Fire Safety (Petroleum and Flammable Materials) : Not applicable  
Regulations

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

AICS : not determined

DSL : not determined

IECSC : not determined

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### Section 16: Other information

Revision Date : 14.04.2025

#### Further information

Sources of key data used to : Internal technical data, data from raw material SDSs, OECD compile the Safety Data eChem Portal search results and European Chemicals Agency, <http://echa.europa.eu/>  
Sheet

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

Date format : dd.mm.yyyy

#### Full text of other abbreviations

AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); 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; ERG - Emergency Response Guide; 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

# SAFETY DATA SHEET



## Oxyclozanide Formulation

Version  
3.0

Revision Date:  
14.04.2025

SDS Number:  
2784871-00014

Date of last issue: 06.04.2024  
Date of first issue: 30.05.2018

---

Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; 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 Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; 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; WHMIS - Workplace Hazardous Materials Information System

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.

SG / EN