Section 1 - Identification of the Substance/Mixture and Supplier

Zoetis Australia Pty Ltd

Product Identifier: Cycostat® 66G Coccidiostat

APVMA Approval No: 56688

Other names: Cycostat
Robenidine Hydrochloride 66g/kg

Recommended Use: For use in the feeds of broiler chickens, for the prevention and control of coccidiosis caused by Eimeria spp

Restrictions on use: NOT FOR HUMAN USE. For veterinary use only

Emergency Phone: 1800 814 883 (all hours)

Section 2 - Hazards Identification

Appearance: Gray granular solid

Classification of the Substance or Mixture

GHS - Classification
Acute aquatic toxicity: Category 1
Chronic aquatic toxicity: Category 1

Label Elements

Signal Word: Warning
Hazard Statements: H410 - Very toxic to aquatic life with long lasting effects May form combustible dust concentrations in air

Precautionary Statements: P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking
P240 - Ground/Bond container and receiving equipment
P273 - Avoid release to the environment
P391 - Collect spillage
P501 - Dispose of contents/container in accordance with all local and national regulations

Other Hazards
Short Term: Dust may cause irritation
Long Term: May have the potential to produce effects on the developing fetus.

Note: This document has been prepared in accordance with standards for workplace safety, which requires the inclusion of all known hazards of the product or its ingredients regardless of the potential risk. The precautionary statements and warning included may not apply in all cases. Your needs may vary depending upon the potential for exposure in your workplace.
Section 3 - Composition/Information on Ingredients

Hazardous

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>CAS No</th>
<th>Conc,%</th>
<th>GHS Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calcium sulfate, dehydrate</td>
<td>10101-41-4</td>
<td>25-35</td>
<td>Not Listed</td>
</tr>
<tr>
<td>Robenidine hydrochloride</td>
<td>25875-50-7</td>
<td>6-8</td>
<td>Acute Tox. 4 (H302)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Aq. Acute 1 (H400)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Aq. Chronic 1 (H410)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>CAS No</th>
<th>Conc,%</th>
<th>GHS Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lignosulfonate</td>
<td>8061-52-7</td>
<td>*</td>
<td>Not Listed</td>
</tr>
</tbody>
</table>

Additional Information: * Proprietary Ingredient(s) indicated as hazardous have been assessed under standards for workplace safety. In accordance with 29 CFR 1910.1200, the exact percentage composition of this mixture has been withheld as a trade secret.

This is a commercial product whose exact ratio of components may vary slightly. Minor quantities of other non-hazardous ingredients are also possible.

Section 4 - First Aid Measures

Description of First Aid Measures

Eye Contact: Flush with water while holding eyelids open for at least 15 minutes. Seek medical attention immediately.

Skin Contact: Remove contaminated clothing. Flush area with large amounts of water. Use soap. Seek medical attention.

Ingestion: Never give anything by mouth to an unconscious person. Wash out mouth with water. Do not induce vomiting unless directed by medical personnel. Seek medical attention immediately.

Inhalation: Remove to fresh air and keep patient at rest. Seek medical attention immediately.

Most Important Symptoms and Effects, both Acute and Delayed

Symptoms and Effects of Exposure: For information on potential signs and symptoms of exposure, See Section 2 – Hazards Identification and/or Section 11 - Toxicological Information.

Medical Conditions Aggravated by Exposure: Breathing dust may worsen asthma symptoms.

Indication of the Immediate Medical Attention and Special Treatment Needed

Notes to Physician: None

Section 5 - Fire Fighting Measures

Extinguishing Media: Extinguish fires with CO₂, extinguishing powder, foam, or water.
Special Hazards Arising from the Substance or Mixture

Hazardous Combustion Products:
Formation of toxic gases is possible during heating or fire.

Fire / Explosion Hazards:
During processing, dust may form explosive mixture in air. Fine particles (such as dust and mists) may fuel fires/explosions.

Advice for Fire-Fighters
During all firefighting activities, wear appropriate protective equipment, including self-contained breathing apparatus.

Section 6 - Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures
Avoid dust formation. Personnel involved in clean-up should wear appropriate personal protective equipment (see Section 8). Minimize exposure.

Environmental Precautions
Place waste in an appropriately labeled, sealed container for disposal. Care should be taken to avoid environmental release.

Methods and Material for Containment and Cleaning Up

Measures for Cleaning / Collecting:
Eliminate possible ignition sources (e.g., heat, sparks, flame, impact, friction, electricity), and follow appropriate grounding procedures. Contain the source of the spill if it is safe to do so. Avoid generating airborne dust. Prevent discharge to drains. Collect wash with a noncombustible absorbent material and transfer to labeled container for treatment and disposal.

Additional Consideration for Large Spills:
Avoid generating airborne dust. Eliminate possible ignition sources (e.g., heat, sparks, flame, impact, friction, electricity), and follow appropriate grounding procedures. Non-essential personnel should be evacuated from affected area. Report emergency situations immediately. Clean up operations should only be undertaken by trained personnel.

Section 7 - Handling and Storage

Precautions for Safe Handling
Eliminate possible ignition sources (e.g., heat, sparks, flame, impact, friction, electricity), and follow appropriate grounding and bonding procedures. Avoid contact with eyes, skin and clothing. Avoid breathing dust. Minimize dust generation and accumulation. Use with adequate ventilation. When handling, use appropriate personal protective equipment (see Section 8). Releases to the environment should be avoided. Refer to Section 12 - Ecological Information, for information on potential effects on the environment. Review and implement appropriate technical and procedural waste water and waste disposal measures to prevent occupational exposure or environmental releases. Potential points of process emissions of this material to the atmosphere should be controlled with dust collectors, HEPA filtration systems or other equivalent controls.

Conditions for Safe Storage, Including any Incompatibilities

Storage Conditions: Store at room temperature in properly labeled containers. Keep away from heat, sparks and flames.

Specific end use(s):
No data available

Section 8 - Exposure Controls and Personal Protection

Control Parameters

Calcium sulfate, dehydrate
The purpose of the Occupational Exposure Band (OEB) classification system is to separate substances into different Hazard categories when the available data are sufficient to do so, but inadequate to establish an Occupational Exposure Limit (OEL). The OEB given is based upon an analysis of all currently available data; as such, this value may be subject to revision when new information becomes available.

Robenidine hydrochloride
Zoetis OEB

OEB 1 (control exposure to the range of 1000ug/m³ to 3000ug/m³)

Exposure Controls
Engineering Controls:
Engineering controls should be used as the primary means to control exposures. Keep air contamination levels below the exposure limits or within the OEB range listed above in this section.

Personal Protective Equipment:
Refer to applicable national standards and regulations in the selection and use of personal protective equipment (PPE).

Hands:
Impervious gloves are recommended if skin contact with drug product is possible and for bulk processing operations.

Eyes:
Wear safety glasses or goggles if eye contact is possible.

Skin:
Impervious protective clothing is recommended if skin contact with drug product is possible and for bulk processing operations.

Respiratory protection:
If airborne exposures are within or exceed the Occupational Exposure Band (OEB) range, wear an appropriate respirator with a protection factor sufficient to control exposures to the bottom of the OEB range. If the applicable Occupational Exposure Limit (OEL) is exceeded, wear an appropriate respirator with a protection factor sufficient to control exposures to below the OEL.

Section 9 - Physical and Chemical Properties:

<table>
<thead>
<tr>
<th>Physical State:</th>
<th>Granular solid</th>
<th>Color:</th>
<th>Gray</th>
<th>Odor:</th>
<th>No data available</th>
<th>Odor Threshold:</th>
<th>No data available</th>
<th>Molecular Formula:</th>
<th>Mixture</th>
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<tbody>
<tr>
<td>Robenidine hydrochloride</td>
<td>Measured 3.3 Log P</td>
<td>Decomposition Temperature (°C):</td>
<td>No data available</td>
<td>Evaporation Rate (Gram/s):</td>
<td>No data available</td>
<td>Vapor Pressure (kPa):</td>
<td>No data available</td>
<td>Vapor Density (g/ml):</td>
<td>No data available</td>
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<tr>
<td>Flammability:</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Autoignition Temperature (Solid) (°C):</td>
<td>No data available</td>
</tr>
</tbody>
</table>
Section 10 - Stability and Reactivity

Reactivity: No data available
Chemical Stability: Stable under normal conditions of use.
Possibility of Hazardous Reactions
Oxidizing Properties: No data available
Conditions to Avoid:
Keep away from heat, spark, flames and all other sources of ignition.
Avoid dispersion as a dust cloud. Dust may form explosive mixture in air. Fine particles (such as dust and mists) may fuel fires/explosions.
Incompatible Materials:
As a precautionary measure, keep away from strong oxidizers
Hazardous Decomposition Products:
Thermal decomposition products may include carbon monoxide, carbon dioxide and other toxic vapors.

Section 11 - Toxicological Information

Information on Toxicological Effects
General Information: Toxicological properties of the formulation have not been investigated. The information in this section describes the potential hazards of the individual ingredients and the formulation. Routes of exposure: inhalation, eye contact, skin contact

Acute Toxicity: (Species, Route, End Point, Dose)

Robenidine hydrochloride
Rat Oral LD50 390 mg/kg
Rabbit Dermal LD50 > 5000mg/kg
Rat Inhalation LC50 > 5.2mg/L
Acute Toxicity Comments: A greater than symbol (>) indicates that the toxicity endpoint being tested was not achievable at the highest dose used in the test.

Irritation / Sensitization: (Study Type, Species, Severity)

Robenidine hydrochloride
Eye Irritation Rabbit Non-irritating
Eye Irritation Rabbit Non-irritating
Skin Sensitization - M & K Guinea Pig Negative

Repeated Dose Toxicity: (Duration, Species, Route, Dose, End Point, Target Organ)

Robenidine hydrochloride
2 Year(s) Dog Oral 13 mg/kg/day NOAEL Liver
84 Week(s) Rat Oral 24 mg/kg/day NOAEL None identified

Reproduction & Development Toxicity: (Duration, Species, Route, Dose, End Point, Effect(s))

Robenidine hydrochloride
2 Generation Reproductive Toxicity Rat Oral 500 mg/kg/day NOAEL No effects at maximum dose
Embryo / Fetal Development Rabbit Oral 20 mg/kg/day NOAEL Fetotoxicity

Genetic Toxicity: (Study Type, Cell Type/Organism, Result)

Robenidine hydrochloride
Bacterial Mutagenicity (Ames) Salmonella, E. coli Negative
Chromosome Aberration Chinese Hamster Ovary (CHO) cells Positive at cytotoxic levels
Micronucleus Bone Marrow Negative
Carcinogen Status: None of the components of this formulation are listed as a carcinogen by IARC, NTP or OSHA.

Product Level Toxicity Data
Acute Toxicity Estimate (ATE), oral >5000 mg/kg

Section 12 - Ecological Information

Environmental Overview: Environmental properties of the formulation have not been investigated. The active ingredient in this formulation is Very toxic to aquatic life with long lasting effects. Releases to the environment should be avoided.

Toxicity:

Aquatic Toxicity: (Species, Method, End Point, Duration, Result)

<table>
<thead>
<tr>
<th>Substance</th>
<th>Method</th>
<th>End Point</th>
<th>Duration</th>
<th>Result</th>
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</thead>
<tbody>
<tr>
<td>Robenidine hydrochloride</td>
<td>OECD</td>
<td>LC50</td>
<td>96 Hours</td>
<td>0.036 mg/L</td>
</tr>
<tr>
<td>Daphnia magna (Water Flea)</td>
<td>OECD</td>
<td>EC50</td>
<td>48 Hours</td>
<td>0.061 mg/L</td>
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<tr>
<td>Scenedesmus subspicatus (Green Alga)</td>
<td>OECD</td>
<td>EC50</td>
<td>72 Hours</td>
<td>0.03 mg/L</td>
</tr>
</tbody>
</table>

Persistence and Degradability: No data available

Bio-accumulative Potential: No data available

Robenidine hydrochloride Measured 3.3 Log P

Mobility in Soil: No data available

Section 13 - Disposal Considerations

Disposal: Shake and empty contents into medicated feed. Do not dispose of undiluted chemicals on site. Puncture and bury empty containers in a local authority land fill. If not available bury the container below 500mm in a disposal pit specifically marked and set up for this purpose clear of waterways vegetation and roots. Empty containers and product should not be burnt. Dispose of waste in accordance with all applicable local laws and regulations.

Section 14 - Transport Information

ADG: Not regulated for transportation due to Special Provision AU01

As of January 1, 2015, materials offered for transport that are classified for transportation only as Marine Pollutants and which are packaged in single or combination packaging's containing a net quantity per single or inner packaging of 5 Liters or less for liquids or having a net mass per single or inner packaging of 5 kilograms or less for solids are NOT subject to IATA, IMDG, or ADG transport regulations provided the general packaging requirements of those regulations are met.

UN number: UN 3077
UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S (robenidine hydrochloride)
Transport hazard class(es): 9
Packing group: III
Environmental Hazard(s): Marine Pollutant

Please refer to the applicable dangerous goods regulations for additional information. Transport according to the requirements of the appropriate regulatory body.
Section 15 - Regulatory Information

Safety, Health and Environmental Regulations/Legislation Specific for the Substance or Mixture

Calcium sulfate, dehydrate
  Australia (AICS): Present

Lignosulfonate
  Australia (AICS): Present

Poison Schedule: None allocated.

AICS: All of the significant ingredients in this formulation are compliant with NICNAS regulations.

The following ingredient: Robenidine, is mentioned in the SUSMP.

Section 16 - Other Information

This SDS contains only safety-related information. For other data see product literature.

Data Sources: The data contained in this SDS may have been gathered from confidential internal sources, raw material suppliers, or from the published literature.

Acronyms:

ADG Code               Australian Code for the Transport of Dangerous Goods by Road and Rail (7th edition)
AICS                   Australian Inventory of Chemical Substances
SWA                    Safe Work Australia, formerly ASCC and NOHSC
CAS number             Chemical Abstracts Service Registry Number
Hazchem Code           Emergency action code of numbers and letters that provide information to emergency services especially firefighters
IARC                   International Agency for Research on Cancer
NOS                    Not otherwise specified
NTP                    National Toxicology Program (USA)
SUSMP                  Standard for the Uniform Scheduling of Medicines & Poisons
UN Number              United Nations Number

This version issued: 21 September 2021 and is valid for 5 years from this date.

Supersedes: Revision issued 1 Oct 2016

Revision History:

<table>
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<tr>
<th>Date of Revision</th>
<th>Reason</th>
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<tbody>
<tr>
<td>19 February 2015</td>
<td>Update to GHS</td>
</tr>
<tr>
<td>1 Oct 2016</td>
<td>Remove NOHSC information and formatting changes</td>
</tr>
<tr>
<td>21 Sep 2021</td>
<td>Periodical revision</td>
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</table>

Contact Points:

<table>
<thead>
<tr>
<th>Zoetis</th>
<th>1800 814 883</th>
</tr>
</thead>
<tbody>
<tr>
<td>Police and Fire Brigade:</td>
<td>Dial 000</td>
</tr>
</tbody>
</table>

If ineffective: Dial Poisons Information Centre (13 11 26 from anywhere in Australia)

THIS SDS SUMMARISES OUR CURRENT AND BEST KNOWLEDGE OF THE HEALTH AND SAFETY HAZARD INFORMATION ABOUT THE PRODUCT DETAILED IN THIS SDS, AND HOW TO SAFELY HANDLE AND USE THE PRODUCT IN THE WORKPLACE FOR THE RECOMMENDED USE. EACH USER OF THE PRODUCT MUST REVIEW THIS SDS IN THE CONTEXT OF HOW THE PRODUCT WILL BE HANDLED AND USED IN THEIR OWN
Please read all labels carefully before using product.

This SDS is prepared in accord with the SWA document “Preparation of Safety Data Sheets for Hazardous Chemicals - Code of Practice” (December 2011)

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End of Safety Data Sheet