



SAFETY DATA SHEET

A18308/02/AUS

KETOL ANTI-KETOGENIC AGENT

SECTION 1 – IDENTIFICATION, CONTACTS

Bayer Australia Ltd
875 Pacific Highway
Pymble NSW 2073

Emergency Telephone Number
1800 033 111
24 hour Emergency Service Australia Wide, Toll Free

Contact Point (for non-emergency calls)
Animal Health Division
(02) 9391 6000

Full Product Name **KETOL ANTI-KETOGENIC AGENT**

Other Names N/A

Product Use **FOR ANIMAL TREATMENT ONLY**
As an aid in the treatment and prevention of Ketosis (acetomenia) in cattle and pregnancy toxemia in sheep.

Creation Date March 2013

Revision Date 12 November 2016

SECTION 2 – HAZARD IDENTIFICATION	
Hazard Classification	NOT CLASSIFIED AS A HAZARDOUS SUBSTANCE NOT CLASSIFIED AS DANGEROUS GOODS according to the criteria of the Australian Dangerous Goods Code, 7th Edition.
GHS-Classification	Nil
Signal Word	Nil
Hazard Statements	Nil
Precautionary statements	Nil

SECTION 3 – COMPOSITION/INFORMATION ON INGREDIENTS	
Hazardous Components	<p>Also contains</p> <p>Cobalt sulphate Concentration [Weight percent] <0.1 CAS-No.: 68786-66-3 GHS Classification: Acute toxicity – oral: Category 4 Respiratory sensitization: Category 1 Skin sensitization: Category 1 Carcinogenicity: Category 2 Toxic to reproduction: Category 2 Specific target organ toxicity (repeated exposure): Category 2 Hazardous to the aquatic environment, Category 1</p>

SECTION 4 – FIRST AID MEASURES	
Inhalation	Move affected person to fresh air and keep at rest until recovered. If breathing has stopped perform mouth to mouth resuscitation and seek immediate medical advice.
Skin contact	If sprayed on skin, wash thoroughly with plenty of soap and water. If sprayed in mouth rinse mouth with water. If skin irritation or rash occurs, seek medical advice.
Eye contact	If in eyes, hold eyes open, flood with water for at least 15 minutes and seek medical advice.
Ingestion	If swallowed, do NOT induce vomiting. Give a glass of water. If vomiting occurs, lean patient forward or place on left side to maintain open airway and prevent aspiration. Rinse mouth with water and then allow small volumes of water to be swallowed slowly.
Advice to doctor	Propylene glycol is primarily a CNS depressant in large doses and may cause hypoglycaemia, lactic acidosis and seizures. The usual measures are supportive care and decontamination (Ipecac/lavage/activated charcoal/ cathartics), within 2 hours of exposure should suffice. Check the anion gap, arterial pH, renal function and glucose levels. Treat symptomatically.

SECTION 5 – FIRE FIGHTING MEASURES	
Flammability	Combustible. Slight fire hazard when exposed to high heat.
Extinguishing Media	Foam, dry chemical powder, carbon dioxide, water spray or fog
Fire and Explosion Hazards	Slight fire hazard when exposed to heat or flame.
Hazardous Combustion Products	On combustion, may emit toxic fumes of carbon monoxide and acrid smoke. Combustion products include, carbon dioxide (CO ₂), other pyrolysis products typical of burning organic material.
Fire Fighting	<p>Wear self-contained breathing apparatus and protective gloves.</p> <p>In well ventilated areas wear full face mask with a combination filter. (Offers no protection from carbon monoxide)</p> <p>In enclosed premises: respirator with independent air supply</p> <p>DO NOT approach containers suspected to be hot.</p> <p>Cool fire exposed containers with water spray from protected location. If safe, remove containers from path of the fire.</p>

SECTION 6 – ACCIDENTAL RELEASE MEASURES	
Accidental Release	<p><u>Emergency Procedures:</u> Keep unnecessary persons away.</p> <p><u>Method of Containment and Clean up Procedures:</u> In the event of a major spill, prevent the spillage from entering drains or waterways. No smoking or ignition sources. Increase ventilation. Wear breathing apparatus and protective gloves. Stop leak if safe to do so. Contain the spill using sand, soil or vermiculite. Collect and seal in properly labelled drums for disposal. After a spill, wash the area, preventing the run-off entering the drain. Dispose of waste in approved landfill.</p>

SECTION 7 – HANDLING AND STORAGE	
Safe Handling	Avoid eye and skin contact. Avoid inhalation of fumes, vapour or mist. Wear protective clothing to minimize eye and skin contact, when there is risk of exposure. Use in a well-ventilated area. If there is risk of inhalation wear a respirator. Do not smoke, eat or drink while handling or using the product. Observe good personal hygiene by washing hands before and after use.
Storage	Store below 30°C (Air conditioning) in the closed, original container, in a dry, well-ventilated area. Keep out of reach of children.

SECTION 8 – EXPOSURE CONTROLS AND PERSONAL PROTECTION	
Exposure Limits	Exposure limits have not been established for this formulation. The TWA for propylene glycol is set at 150 ppm (474mg/m ³ /8hr). The TWA for choline chloride is set at (12.4mg/m ³ /8hr). The TWA for propylene glycol is set at (0.02mg/m ³ /8hr).
Ventilation	Natural ventilation should be adequate under normal use conditions. If the air concentration of vapour or mist is high, the process should be modified to reduce the problem. If there is risk of inhalation wear a respirator. Keep containers closed when not in use.
Eye Protection	Avoid eye contact. Eye protection such as protective glasses or goggles is recommended.
Skin Protection	Avoid contact with skin. Wear chemical protective clothing eg. PVC gloves and safety footwear or gumboots eg. rubber. Wash hands or other exposed areas after handling and use. Note: The material may produce skin sensitisation in predisposed individuals. Care must be taken, when removing gloves and other protective equipment, to avoid all skin contact.
Respirator	Do not inhale vapour or mists. No respirator is required under normal conditions of use. If there is risk of inhalation wear a respirator.

SECTION 9 – PHYSICAL & CHEMICAL PROPERTIES	
Physical State	Liquid
Colour	Clear pale pink
Solubility	Soluble in water
Odour	Faint odour
Specific gravity	1.04 – 1.05
pH	6.5 – 8.0
Flash point	~99°C

SECTION 10 – STABILITY & REACTIVITY	
Chemical Stability	Stable under normal ambient and anticipated storage conditions of temperature and pressure
Conditions to Avoid	Keep away from extreme heat and open flames.
Incompatible Materials	Avoid strong oxidising agents
Hazardous Decomposition	Combustion products include carbon dioxide, hydrogen chloride phosgene, nitrogen oxides, phosphorus oxides, sulfur oxides, metal oxides, other pyrolysis products typical of burning organic material. May emit poisonous and corrosive fumes.
Hazardous Reactions	This product will not spontaneously polymerise.

SECTION 11 – TOXICOLOGICAL INFORMATION	
Reproductive Effects	Cobalt (II) Sulphate has been classified as a category 2 reproductive toxin; substances which should be regarded as if they impair fertility to humans or cause development toxicity in humans. None of the other ingredients of the formulation have been shown to produce reproductive or teratogenic effects.
Mutagenicity	Cobalt (II) Sulphate has been classified as a category 3; a possible mutagen. None of the other ingredients of the formulation have been shown to produce mutagenic effects.
Carcinogenic Effects	Cobalt (II) Sulphate has been classified by the IARC as possibly carcinogenic to humans. None of other ingredients of the formulation have been shown to produce carcinogenic effects.
Health Hazard Information	<p><u>ACUTE</u></p> <p>No adverse health effects are expected, if the product is handled in accordance with this Safety Data Sheet and the product label.</p> <p>Propylene Glycol Oral (rat) LD50: 20000 mg/kg Eye (rabbit): 100mg - mild irritant Skin (human): irritating (mild to moderate)</p> <p>Choline chloride Oral (rat) LD50: 3400 mg/kg IV (mouse): LD50: 53mg/kg</p> <p>Cobalt(II) Sulphate Oral (rat) LD50: 424 mg/kg</p> <p>For Complete Formulation Eye: May be an eye irritant. Skin: Contact with skin may result in irritation</p> <p>Inhalation: Not normally a hazard due to the non-volatile nature of product. Inhalation of vapour may cause drowsiness and dizziness. This may be accompanied by sleepiness, reduced alertness, loss of reflexes, lack of co-ordination and vertigo. Cobalt (II) Sulphate has been classified by the IARC as possibly carcinogenic to humans when inhaled.</p> <p><u>CHRONIC</u></p> <p>There is limited evidence that, skin contact with this product is more likely to cause a sensitisation reaction in some persons compared to the general population. Propylene glycol is though, by some, to be a sensitizing principal following the regular use of topical creams by eczema patients. Predictive contact skin sensitisation tests indicate that propylene glycol is an intermediate grade sensitiser with an index of 1% of tested subjects.</p> <p>On the basis of epidemiological data, it has been concluded that prolonged inhalation of the material (specifically Cobalt (II) sulphate), in an occupational setting, may produce cancer in humans.</p>

SECTION 12 – ECOLOGICAL INFORMATION	
Ecotoxicity	<p>Harmful to aquatic life. Cobalt (II) Sulphate is toxic to aquatic organisms. Choline chloride may be an environmental hazard.</p> <p><u>Propylene glycol</u> Daphnia magna: LC50 (48hrs): >10,000mg/L. Fish (Guppy) LC50 (48hrs): > 10000mg/L Fish (Gold fish)LC50(24hrs): > 5000mg/L Propylene glycol is readily biodegradable and the products of biodegradation are less toxic than propylene glycol itself.</p> <p><u>Choline chloride</u> Daphnia magna: LC50 (48hrs): 349mg/L. Freshwater Fish (<i>O. latipes</i>) LC50 (96hrs): > 100mg/L Saltwater Fish (<i>L. limanda</i>)LC50(96hrs): > 1000mg/L Choline chloride is readily biodegradable, reaching 93% degradation within 14 days and therefore, bioaccumulation is not expected.</p> <p><u>Cobalt (II) Sulphate</u> Daphnia magna: LC50 (48hrs): 1.1mg/L. Rainbow Trout (<i>O. mykiss</i>) EC50 (96hrs): ~1.4mg/L Blue-green algae (<i>S. platensis</i>)EC50(96hrs): 23.8mg/L</p>

SECTION 13 – DISPOSAL INFORMATION	
After Intended Use	Do not dispose of undiluted chemicals on site. Puncture or shred and bury empty containers in a local authority landfill. If not available, bury the containers below 500mm in a disposal pit specifically marked and set up for this purpose clear of waterways, vegetation and roots. Product should not be burnt.
After spill or accident	Dispose of sealed containers at an approved waste disposal site.

SECTION 14 – TRANSPORT INFORMATION	
UN No	Not classified
UN Proper Shipping Name	Not classified
Class & Subsidiary Risk	Not classified
Packaging Group	Not classified
Hazchem Code	Not classified

SECTION 15 – REGULATORY INFORMATION	
APVMA Registration	The product is registered by the APVMA.
Registration Number	36021
Labelling	All necessary directions, precautions and warnings for normal use of the product are included on the product label.

SECTION 16 – OTHER INFORMATION	
Summary of Changes	GHS update.
Acronyms	<p>ADG Code Australian Code for the Transport of Dangerous Goods by Road and Rail</p> <p>APVMA Australian Pesticides and Veterinary Medicines Authority</p> <p>CAS Chemical Abstracts Service Registry Number</p> <p>GHS Globally Harmonized System of Classification and Labelling of Chemicals</p> <p>HDPE High density polyethylene</p> <p>LDPE Low density polyethylene</p> <p>OECD Organisation for Economic Co-operation and Development</p> <p>STOT Specific Target Organ Toxicity</p> <p>SUSDP Standard for the Uniform Scheduling of Drugs and Poisons</p> <p>TWA Time Weighted Average – average airborne concentration of a particular substance when calculated over a normal eight-hour working day, for a five-day working week.</p> <p>UN Number United Nations number</p>
Disclaimer	<p>This Safety Data Sheet has been developed according to the Globally Harmonized System of Classification and Labelling of Chemicals (GHS) Third revised edition. United Nations, 2009. The data, information and recommendations herein ("information") are represented in good faith and believed to be correct as of the date hereof. The purpose of this Safety Data Sheet is to describe product in terms of their safety requirements. Bayer Australia Limited makes no representation of merchantability, fitness for a particular purpose or application, or of any other nature with respect to the information or the product to which the information refers ("the product"). The information is supplied upon the condition that the persons receiving same will make their own determination as to its suitability for their purposes prior to use of the product. The physical data shown herein are typical values based on material tested. These values should not be construed as a guaranteed analysis of any specific lot or as guaranteed specification for the product or specific lots thereof. Due care should be taken to make sure that the use or disposal of this product and / or its packaging is in compliance with relevant Federal, State and Local Government regulations.</p>

END OF SDS