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C29691

MATERIAL SAFETY DATA SHEET

Merck AgVet

CORID 20% SOLUBLE POWDER

MANUFACTURER'S NAME: MERCK AGVET DIVISION
P.O. BOX 2000
RAHWAY, NJ 07065
EMERGENCY TELEPHONE NUMBERS: 1-800-854-6588
1-908-750-2380
PRODUCT NAME: CORID 20% SOLUBLE POWDER
PLANT MSDS CODE: AG-018

SECTION 1 - MATERIAL IDENTIFICATION

CHEMICAL NAME: 1-[(4-amino-2-propyl-5-pyrimidinyl)-methyl]-
2-methyl pyridinium chloride - Amprolium
TRADE NAME: Corid 20% soluble powder
SYNONYMS: None
MERCK ID CODE: 23091
EPA REGISTRATION NO.: Not available
CHEMICAL CLASSIFICATION: Complex molecule
INTENDED USE: Veterinary coccidiostatic agent for cattle

SECTION 2 - PRINCIPAL HAZARDOUS COMPONENT(S)

Component (CAS Number)	Molecular Formula	Molecular Weight	Percent (%)
Amprolium 121-25-5	C14H19ClN4	278.8	20.4
Fumaric Acid 110-17-8	C4H4O4	116.07	2.5
Sugar (Sucrose) 57-50-1	C12H22O11	342.30	76.4

SECTION 3 - PHYSICAL PROPERTY DATA

APPEARANCE: Clean, white or practically white powder
ODOR/THRESHOLD LEVEL (ppm): Slight or no odor
BOILING POINT (deg C/deg F): Not applicable
FREEZING POINT (deg C/deg F): Not applicable
MELTING RANGE (deg C/deg F): Not available
pH: 1.7-3.2
SOLUBILITY IN WATER: Soluble
SPECIFIC GRAVITY (Water=1): Not applicable
VAPOR DENSITY (Air=1): Not applicable
VAPOR PRESSURE (mm Hg @ deg C/deg F): Not applicable
VOLATILE COMPONENTS (% w/w): Not applicable

SECTION 4 - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (deg C/deg F): Not applicable
FLASH POINT TEST METHOD: Not applicable
AUTOIGNITION TEMPERATURE (deg C/deg F): Not available
FLAMMABLE LIMITS:
LEL (%): Not applicable
UEL (%): Not applicable
EXTINGUISHING MEDIA: Use water spray or all purpose dry
chemical.
SPECIAL FIRE FIGHTING PROCEDURES: Firefighters should wear
self-contained breathing apparatus and full protective
equipment. Avoid creating dusty conditions.
FIRE AND EXPLOSION HAZARDS: Materials will burn if ignited.
As with all organic dust, finely divided particles
dispersed with air in sufficient concentrations may
generate an explosive mixture if an ignition source is
present.
HAZARDOUS DECOMPOSITION PRODUCTS RESULTING FROM A FIRE: If
involved in a fire, toxic gases including organic
chlorides, HCl, oxides of nitrogen, CO, CO2, and smoke
can be generated.

SECTION 5 - REACTIVITY DATA

STABILITY: Stable under normal conditions of storage and
use.
STORAGE CONDITIONS TO AVOID: None known
INCOMPATIBILITIES (MATERIALS TO AVOID): Strong acids and
bases.
HAZARDOUS POLYMERIZATIONS: None

SECTION 6 - EMERGENCY AND FIRST AID PROCEDURES

EYE CONTACT: Flush thoroughly with plenty of water for at
least 5 minutes. Get medical attention if irritation
occurs or persists.
SKIN CONTACT: Flush thoroughly with plenty of water and
wash contact area with soap and water. If skin is
irritated or skin rash develops, get immediate medical
attention. Remove contaminated clothing and wash before
reuse.
INHALATION: Get to fresh air. If discomfort occurs or
breathing is difficult, get immediate medical attention.
INGESTION: If large quantities are ingested, drink plenty
of water and get immediate medical attention.
MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Asthma-like
conditions may be aggravated.

SECTION 7 - HEALTH HAZARD DATA

Component	ACGIH-1991-92		
	OSHA Permissible Exposure Limit (PEL)	Threshold Limit Value (TLV)	Merck Exposure Control Limit (ECL)
Amprolium	Not established	Not established	5 mg/m3
Fumaric acid	Not established	Not established	5 mg/m3
Sugar (Sucrose)	15 mg/M3	10 mg/M3	10 mg/m3

CARCINOGEN DESIGNATION: Not listed as a carcinogen with
NTP, IARC, or OSHA.

EFFECTS OF ACUTE EXPOSURE:

EYE CONTACT: Direct contact may cause eye irritation.
SKIN CONTACT: Direct contact may cause skin irritation.
May cause an allergic reaction.
INHALATION: Inhalation of dust may cause irritation to
the respiratory tract and may cause an asthma-like
allergic reaction.

INGESTION: Essentially non-toxic by the oral route.

EFFECTS OF CHRONIC EXPOSURE: Limited chronic data. One
study in preruminant lambs showed severe decreases in
bone marrow cells and brain hemorrhages. Amprolium tested
negative in an assay used to measure drug induced
chromosomal aberrations.

QUANTITATIVE TOXICITY DATA:

TEST	SPECIES	ROUTE	RESULT
AMPROLIUM:			
LD50	Mouse (F)	Oral	6.170 g/kg (non- toxic)
Skin	Rabbit	Topical	Slightly irritating to abraded skin and non-irritating to intact skin
Eye	Rabbit	Direct contact	Slightly irritating
FUMARIC ACID:			
LD50	Rat	Oral	10.7 g/kg (non- toxic)
LD50	Rabbit	Dermal	20 g/kg
Skin	Rabbit	Topical	Mildly irritating
Eye	Rabbit	Direct contact	Moderately irritating

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SECTION 8 - SPILL/LEAK/DISPOSAL PROCEDURE

STEPS TO BE TAKEN IN CASE MATERIALS ARE RELEASED:

Immediately contact emergency response personnel. Keep unnecessary persons away. If emergency response personnel are unavailable, vacuum, shovel or sweep up spilled material and place in an appropriate container for disposal. Use suitable protective equipment (Section 9). Follow all fire prevention procedures (Section 4).

ENVIRONMENTAL DATA: Pure Amprolium: LC50 (Daphnia Magna) EPA classification = 110.8 ppm (practically non-toxic to aquatic organisms).

Avoid contact of spilled materials and runoff with soil and surface waterways. Dispose of or treat all spill residues including contaminated soils following all federal, state and local regulations.

For additional assistance, CHEMTREC provides a toll-free Hotline for chemical emergencies regarding spills, leaks, exposure or accidents: 1-800-424-9300.

SECTION 9 - SPECIAL PROTECTION INFORMATION

RESPIRATORY: An MSHA-NIOSH approved respirator for dusts is recommended for any direct exposure to the dust.

HANDS/ARMS: Impervious gloves to minimize skin contact.

EYE/FACE: Safety goggles.

ADDITIONAL PROTECTIVE EQUIPMENT: Individuals developing an allergic reaction to amprolium should wear protective coveralls, long sleeves and additional respiratory protection with higher protection factor. If allergy continues, consider removing from further exposure.

VENTILATION: Local exhaust recommended to keep exposures to a minimum. Proper ventilation should be maintained at all times to prevent high dust concentrations.

SECTION 10 - SPECIAL PRECAUTIONS

SPECIAL PRECAUTIONS TO BE TAKEN WHEN:

HANDLING AND STORING, ETC.: Avoid generating dust.

Eliminate all sources of ignition in dusty conditions. Store in a cool, dry place. Avoid contact with skin and eyes. Do not breathe dust. Do not ingest. Wash thoroughly after use.

OTHER: Keep container closed when not in use.

SECTION 11 - BASIC TRANSPORTATION DESCRIPTION

SHIPPING REQUIREMENTS: Medicinal feed compounds
Class 50 NMFC 67070 RVNX

SECTION 12 - MSDS PREPARATION

Revision 2

E.V. Sargent

Corporate Safety & Industrial Hygiene

DATE: June 5, 1989

F.J. Lewandowski, Jr.

Merck AgVet

DATE: June 5, 1989

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COMPAS Code: 11400160