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Section 1: Identification of the Substance and Supplier

Product name	Alliance Liquid containing 80 g/litre levamisole hydrochloride, 2 g/litre Abamectin, 45.3g/L oxfendazole and 2.4 g/litre sodium selenate
Recommended use	Oral combination drench for sheep and cattle
Company details	Schering-Plough Animal Health Limited 33 Whakatiki Street, Upper Hutt Phone: 0800 800 543 Fax: 0800 808 100 Website: www.spah.co.nz Hours 8am – 5 pm, Mon – Fri
Emergency telephone	0800 764 766 (0800 POISON) 24 hours human health 0800 243 622 (0800 CHEMCALL) 24 hours
Date of preparation	June 2009

Section 2: Hazards Identification

Hazard classifications	6.1D, 6.5B, 6.6B, 6.8B, 6.8C, 6.9A, 9.1A, 9.2C, 9.3C, 9.4A
Priority identifiers	Warning - Keep out of reach of children Ecotoxic
Secondary identifier	6.1D May be harmful if swallowed, inhaled or absorbed through the skin 6.5B May cause an allergic skin reaction 6.6B Suspected of causing genetic defects 6.8B Suspected of damaging fertility or the unborn child from repeated oral exposure 6.8C May cause harm to breast-fed children from repeated oral exposure 6.9A May cause damage to the heart, liver, blood and the haematopoietic systems through prolonged or repeated oral exposure at high doses. 9.1A Very toxic to aquatic life with long lasting effects 9.2C Harmful to the soil environment 9.3C Harmful to terrestrial vertebrates 9.4A Very toxic to terrestrial invertebrates
Risk & Safety Phrases	R48/22 Harmful: danger of serious damage to health by prolonged exposure if swallowed R63 Possible risk of harm to the unborn child R64 May cause harm to breast-fed babies R50 Very toxic to aquatic organisms

Section 3: Composition/Information on Ingredients

Chemical name	CAS number	Concentration
Abamectin	71751-41-2	0.2%
Levamisole Hydrochloride	16595-80-5	8%
Oxfendazole	53716-50-0	4.53%
Disodium cobalt EDTA	15137-09-4	<10%
Sodium selenate	13410-01-0	<1%

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Section 4: First Aid Measures

Necessary first aid measures

INHALATION: Remove to fresh air and provide oxygen if necessary. If any trouble breathing, get immediate medical attention. Administer artificial respiration if breathing has ceased. If irritation or symptoms occur or persist, consult a doctor.

SKIN CONTACT: In case of skin contact, while wearing protective gloves, carefully remove any contaminated clothing, including shoes, and wash skin thoroughly with soap and water. If irritation or symptoms occur or persist, consult a doctor.

EYE CONTACT: In case of eye contact, immediately rinse eyes thoroughly with plenty of water. If wearing contact lenses, remove only after initial rinse, and continue rinsing eyes for at least 15 minutes. If irritation occurs or persists, consult a doctor.

INGESTION: Rinse mouth and drink a glass of water. Do not induce vomiting unless under the direction of a qualified medical professional or National Poisons Centre. If symptoms persist, consult a doctor.

Required instructions

For advice contact the National Poisons Centre 0800 POISON (0800 764 766) or a doctor.

Notes for medical personnel

The information presented below pertains to the following individual ingredients, and not to the mixture(s). Only information about the ingredients that are expected to contribute significantly to the potential health hazard profile of the formulation(s) are presented:

Levamisole is an anthelmintic and immunostimulant. Acute exposure to levamisole may cause nausea, vomiting, diarrhoea, abdominal pain, dizziness, or headache. Chronic exposure may cause hypersensitivity reactions including fever, flu-like syndrome, arthralgia, muscle pain, skin rashes, or cutaneous vasculitis, CNS effects including headache, insomnia, dizziness, or convulsions, haematological abnormalities including agranulocytosis, leucopenia, or thrombocytopenia, or gastrointestinal effects including abnormal taste in the mouth.

Oxfendazole is not-irritating, not-sensitizing, and practically not-toxic acutely. Based on animal studies, oxfendazole may cause liver, bone marrow, testes, gastrointestinal tract, and blood cell effects following chronic exposure.

All selenium salts can produce toxicity by ingestion, inhalation, and dermal absorption; however, acute poisonings with selenium and its salts are rare.

Workplace facilities

Emergency showers and eyewashes may be warranted depending on quantity and type of use.

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Section 5: Fire Fighting Measures

Type of hazard	Not classified as flammable
Fire hazard properties	Not applicable
Regulatory requirements	Not applicable
Extinguishing media and methods	Water, carbon dioxide (CO ₂), foam, or dry chemical.
Hazchem code	3Z
Recommended protective clothing	Wear self-contained breathing apparatus (SCBA) plus protective gloves.

Section 6: Accidental Release Measures

Emergency procedures	Wear chemical resistant gloves and overalls, facemask or goggles. Prevent further spillage. Adsorb spilled product and place in sealable container for disposal. Wash down affected area with water plus detergent. Absorb and collect washings and place in the same sealable container for disposal. Seek advice from the local authority regarding disposal. Avoid contamination of any water source or soil with product or empty container.
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Section 7: Handling and Storage

Precautions for safe handling	Avoid contact with skin, eyes, and mucosa. Keep containers adequately sealed during material transfer, transport, or when not in use. See Section 8 (Exposure Controls) for additional guidance.
Regulatory requirements	Signage required where quantities greater than 100L are present. Emergency Plan required where quantities greater than 100L are present.
Handling practices	Avoid contact with skin. Keep containers adequately sealed during material transfer, transport, or when not in use.
Approved handlers	Not required.
Conditions for safe storage	Store in original container in a cool, dry, ventilated place away from direct heat or direct sunlight. Keep container sealed when not in use.
Store site requirements	Store in a cool, dry, well ventilated area. Store between 5 and 30 °C.
Packaging	PG III

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Section 8: Exposure Control/Personal Protection

Workplace exposure standards	No WES is set for this substance at this time.
Application in the workplace	Ensure adequate ventilation. Keep container sealed when not in use.
Exposure standards outside the workplace	No TEL is set for this substance at this time No EEL is set for this substance at this time
Personal protection	Wear chemical resistant gloves, facemask or goggles.
Engineering controls	The health hazard risks of handling this material are dependent on many factors, including physical form, duration and frequency of process or task, and effectiveness of engineering controls. Site-specific risk assessments should be conducted to determine the feasibility and the appropriateness of all exposure control measures. Exposure controls for normal operating or routine procedures follow a tiered strategy. Engineering controls are the preferred means of long-term or permanent exposure control. If engineering controls are not feasible, appropriate use of personal protective equipment (PPE) may be considered as alternative control measures. Exposure controls for non-routine operations must be evaluated and addressed as part of the site-specific risk assessment.

Section 9: Physical and Chemical Properties

Appearance	Pale purple liquid
Boiling Point	Approx 100°C
Melting/Softening point	Not applicable
Vapour Pressure	Not determined
Specific Gravity	1.07 at 20°C
Solubility (H ₂ O)	Miscible
Percent Volatiles	Not determined
Evaporation Rate	Not determined

Section 10: Stability and Reactivity

Stability of the substance	Stable under normal conditions.
Conditions to avoid	Avoid high temperatures
Material to avoid	Avoid food products
Hazardous decomposition products	Carbon oxides (CO _x), Sulphur oxides (SO _x), and Nitrogen oxides (NO _x).

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Section 11: Toxicological Information

Acute effects for individual ingredients only

ORAL	Abamectin: LD50 8.7-12.8mg/kg B1a+B1b [ERMA] Levamisole: LD50 200mg/kg bw (rat/mouse) [ERMA] Sodium selenate: LD50 25mg/kg/bw [INCLASS] Sodium selenate: Toxic by inhalation [INCLASS]
DERMAL INHALATION	Cobalt EDTA LC50
TEL	No TEL is set for this substance at this time.

Chronic/long term effects for individual ingredients only

Levamisole: Mutagenic effects -levamisole induced chromosome gaps and breaks in human lymphocytes in vitro and in vivo after volunteers were given 2 mg/kg. No chromosomal damage occurred in mice given 2.5 mg/kg subcutaneously. Levamisole: ADI of 0-6 µg/kg based on LOAEL of 1.25 mg/kg/day haemolytic effects in dogs, safety factor of 200.

Abamectin: No evidence of mutagenic or carcinogenic effects. Abamectin and its delta-8,9 isomer have caused foetal abnormalities including cleft palate, skeletal abnormalities and abdominal wall defects in mice and rabbits at doses toxic to the mother. These effects are considered to be not relevant to normal exposure to this product as the effects on the foetus occurred at doses which were toxic to the mother.

Oxfendazole: NOEL 20mg/kg/bw/day for reproductive effects [ERMANZ]

Oxfendazole: Hepatotoxicity/ Alimentary system (liver) effects were observed in rats and mice. The NOEL was 10 mg/kg in the diet, equal to 0.7 mg/kg/bw/day in males and 0.9 mg/kg/bw/day in females [INCHEM]

Cobalt: causes respiratory tract irritation, may cause asthma and shortness of breath.

Sodium selenate: NOAEL of 0.37mg/kg/bw/day for Hepatotoxicity/ Alimentary system (liver) effects.

Section 12: Environmental Information

Effects for individual ingredients only.

AQUATIC	Abamectin: 96 LC50 3.6ppb (Rainbow trout) [ERMA] Oxfendazole: 48-hr LC50 0.52mg/L (<i>Daphnia magna</i>) [ERMA] Sodium selenate: 96-hr LC50 0.69mg/L (Fathead minnow) [ECOTOX]
SOIL	Abamectin: DT50>30days
TERRESTRIAL VERTEBRATES	Abamectin: 8.7-12.8mg/kg B1a+B1b [ERMA] Levamisole: LD50 200mg/kg bw (rat/mouse) [ERMA]
TERRESTRIAL INVERTEBRATES	Abamectin: Acute oral LD50 0.0094ug/bee, contact LD50 0.002ug/bee [ERMA]
EEL	No EEL is set for this substance at this time.

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Section 13: Disposal Considerations

Disposal information	Disposal Dispose of this product only by using according to the label, or at an approved landfill, or other approved facility. Avoid contamination of any water source or the environment with product or empty container. Container Disposal Triple rinse empty container. Recycle at Agrecovery or crush/puncture and bury in a suitable landfill.
Reference	Current version of NZS 8409 Management of Agrichemicals

Section 14: Transport Information

Relevant information	UN3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Oxfendazole & Abamectin) Class 9 PG III Limited quantities: 5L Maximum quantity for own agricultural use: 250L
Other requirements	Refer to Haznote.

Section 15: Regulatory Information

Regulatory status	HSNO Approval Code: HSR007798. ACVM registration number: A010249 For conditions of registration see www.nzfsa.govt.nz/acvm
HSNO and ACVM controls	Signage: 100 Litres Emergency Plan: 100 Litres

Section 16: Other Information

Additional information	Alliance is a trademark of Schering-Plough Animal Health Limited
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Schering-Plough urges each user or recipient of this SDS to read the entire data sheet to become aware of the potential hazards associated with this material. This SDS summarises, at the date of issue, our best knowledge of the health and safety hazard information. Although reasonable care has been taken in the preparation of this document, Schering-Plough Animal Health Ltd extend no warranties and make no representations as to the accuracy or completeness of the information contained therein, and assume no responsibility regarding the suitability of this information for the user's intended purposes or for the consequence of its use. Each individual should make a determination as to the suitability of the information for their particular purpose(s).