SAFETY DATA SHEET

Cosal®

Section 1: Identification of the Substance and Supplier

Product name
Cosal

Liquid containing 15 - 22 g/litre albendazole and 35 - 42 g/litre closantel sodium

Recommended use
An oral anthelmintic for sheep.

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
January 2007

Section 2: Hazards Identification

Hazard classifications
6.5B, 6.6B, 6.8A, 6.9B, 9.1C

Priority identifiers
Danger
Ecotoxic

Secondary identifier
6.5B May cause an allergic skin reaction
6.6B Suspected of causing genetic defects
6.8A May damage fertility or the unborn child from repeated oral exposure.
6.9B May cause damage to the liver and organ damage from prolonged or repeated oral exposure at high doses
9.1C Harmful to aquatic life

Risk & Safety Phrases
R22 Harmful if swallowed
R61 May cause harm to the unborn child
R50 Very toxic to aquatic organisms

Section 3: Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS number</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Closantel sodium</td>
<td>57808-65-8</td>
<td>3.87%</td>
</tr>
<tr>
<td>Albendazole</td>
<td>54965-21-8</td>
<td>1.9%</td>
</tr>
<tr>
<td>Propylene Glycol</td>
<td>57-55-6</td>
<td>20-30%</td>
</tr>
</tbody>
</table>
Section 4: First Aid Measures

Necessary first aid measures
Remove to fresh air. 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 Poison Control 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
Inhalation: remove to fresh air & provide oxygen if breathing is difficult

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

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 (CO₂), foam, or dry chemical.

Hazchem code
Not applicable

Recommended protective clothing
Wear full protective clothing and self-contained breathing apparatus (SCBA).

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.
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 1000L are present. Emergency Plan required where quantities greater than 1000L 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.

Packaging
PGIII

Section 8: Exposure Control/Personal Protection

Workplace exposure standards
Propylene glycol: TWA 150ppm 474mg/m3

Application in the workplace
Ensure adequate ventilation. Keep container sealed when not in use.

Exposure standards outside the workplace
No TEL or EEL are 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

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Off white suspension with mild odour</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>Not determined</td>
</tr>
<tr>
<td>Melting/Softening point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Vapour Pressure</td>
<td>100kPa</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>1.035 - 1.051@20°C</td>
</tr>
<tr>
<td>Solubility (H₂O)</td>
<td>Soluble</td>
</tr>
<tr>
<td>Percent Volatiles</td>
<td>Not determined</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>Not determined</td>
</tr>
</tbody>
</table>
Section 10: Stability and Reactivity

Stability of the substance
Stable under normal conditions.

Conditions to avoid
Avoid high temperatures

Material to avoid
Strong acids and bases. Oxidisers.

Hazardous decomposition products
Carbon oxides (COx)

Section 11: Toxicological Information

Acute effects for individual ingredients only

<table>
<thead>
<tr>
<th>Route</th>
<th>Albendazole: LD50 500mg/kg bw (rabbit) [WHO]</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Closantel sodium: 24-hr LC50 2.5mg/L (common eel)</td>
</tr>
</tbody>
</table>

TEL
No TEL is set for this substance at this time.

Chronic/long term effects for individual ingredients only

Albendazole: NOEL 5mg/kg/bw/day oral (rats/rabbits) tetrogene (666. Albendazole (WHO) [INCHEM]

Closantel Sodium; Adverse effects on reproduction were probably associated with toxicity to the male reproductive organs, and were seen only at doses of 2.5 mg/kg body weight per day and above. In a fertility study in rats, in which closantel was administered in the diet, there was a reduced pregnancy rate in untreated females paired with males receiving the highest dose of 40 mg per kg of body weight per day. (Closantel – WHO)

Closantel Sodium: NOAEL 2.5mg/kg/bw/day (rat) for Hepatotoxicity/ Alimentary system (liver) toxicity [WHO]

Section 12: Environmental Information

Effects for individual ingredients only

<table>
<thead>
<tr>
<th>Route</th>
<th>Closantel sodium: 24-hr LC50 2.5mg/L (common eel)</th>
</tr>
</thead>
<tbody>
<tr>
<td>AQUATIC</td>
<td></td>
</tr>
<tr>
<td>EEL</td>
<td></td>
</tr>
</tbody>
</table>

No EEL is set for this substance at this time.

Section 13: Disposal Considerations

Disposal information
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. Burn in an appropriate incinerator, if circumstances such as wind direction permit. Otherwise crush or puncture and bury in a suitable landfill or recycle if appropriate.

Reference
Current version of NZS 8409 Management of Agrichemicals
Section 14: Transport Information

Relevant information
Not classified as a dangerous good for transport.

Section 15: Regulatory Information

Regulatory status
ERMA Approval Code: HSR001886
For full listings of controls see www.ermanz.govt.nz
ACVM Registration No: A005093
For conditions of registration see www.nzfsa.govt.nz/acvm/

HSNO and ACVM controls
Signage: 1,000 Litres
Emergency Plan: 1,000 Litres

Section 16: Other Information

Additional information
® Registered trademark of Janssen Animal Health BVBA.

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).