MATERIAL SAFETY DATA SHEET

Metabolase Forte

SECTION 1 – IDENTIFICATION OF THE MATERIAL AND SUPPLIER

IDENTIFICATION OF THE MIXTURE AND OF THE COMPANY

Product Identifier: Metabolase Forte
ACVM Code: A011064
EPA Approval Code: HSR002521
Status of a substance #: SOS1002887
Chemical nature: Injectable solution for cattle, sheep, pigs and horses
Trade Name: Metabolase Forte
Product Use: Animal injection for use as described on the product label.

Details of the supplier of the safety data sheet:
Company name: Ethical Agents Veterinary Marketing Limited
Company Address: 54 Hobill Avenue
Wiri, Auckland 2104, New Zealand
Tel: +64 9 262 1388
Fax: +64 9 262 1411
Email: info@ethicalagents.co.nz
Website: www.eavm.nz
Emergency telephone number: Poisons Information Centre - New Zealand ph: 0800 POISONS (0800 764 766)

SECTION 2 – HAZARDS IDENTIFICATION

GHS Signal word: NONE. Not hazardous.

PREVENTION
P262: Do not get in eyes, on skin, or on clothing.
P264: Wash contacted areas thoroughly after handling.
P281: Use personal protective equipment as required.

RESPONSE
P363: Wash contaminated clothing before reuse.
P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P370+P378: In case of fire, use carbon dioxide, dry chemical, foam, water fog.

STORAGE
P410: Protect from sunlight.
P402+P404: Store in a dry place. Store in a closed container.

DISPOSAL
P501: Dispose of contents and containers as specified on the registered label.
EMERGENCY OVERVIEW

Physical Description & Colour: Red clear or opalescent liquid
Odour: No data.
Major Health Hazards: no significant risk factors have been found for this product.

SECTION 3 – COMPOSITION INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS – no.</th>
<th>TWA (mg/m³)</th>
<th>STEL (mg/m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>L-Carnitine HCl</td>
<td>6645-46-1</td>
<td>Not set</td>
<td>Not set</td>
</tr>
<tr>
<td>Benzyl alcohol</td>
<td>100-51-6</td>
<td>Not set</td>
<td>Not set</td>
</tr>
<tr>
<td>Other excipients</td>
<td>secret</td>
<td>Not set</td>
<td>Not set</td>
</tr>
<tr>
<td>Water</td>
<td>7732-18-5</td>
<td>Not set</td>
<td>Not set</td>
</tr>
</tbody>
</table>

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

The SWA TWA exposure value is the average airborne concentration of a particular substance when calculated over a normal 8 hour working day for a 5-day working week. The STEL (Short Term Exposure Limit) is an exposure value that may be equalled (but should not be exceeded) for no longer than 15 minutes and should not be repeated more than 4 times per day. There should be at least 60 minutes between successive exposures at the STEL. The term “peak” is used when the TWA limit, because of the rapid action of the substance, should never be exceeded, even briefly.

SECTION 4 – FIRST AID MEASURES

General Information:

You should call The Poisons Information Centre if you feel that you may have been poisoned, burned or irritated by this product. The number is 0800 764 766 in New Zealand and is available at all times. Have this SDS with you when you call.

Self-Injection: Accidental self-injection may lead to an inflammatory response. Medical advice should be sought on the management of deep injections, particularly those near a joint or associated with bruising. If possible the application of gentle squeezing pressure with absorbent material (e.g. facial tissues) at the injection site will swab up unabsorbed liquid. Strong squeezing of the site should be avoided. The damaged area should be thoroughly cleansed and a topical antiseptic applied. Check your tetanus immunisation status.

Inhalation: First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.

Skin Contact: Irritation is unlikely. However, if irritation does occur, flush with lukewarm, gently flowing water for 5 minutes or until chemical is removed.

Eye Contact: No effects expected. If irritation does occur, flush contaminated eye(s) with lukewarm, gently flowing water for 5 minutes or until the product is removed. Obtain medical advice if irritation becomes painful or lasts more than a few minutes. Take special care if exposed person is wearing contact lenses.
**Ingestion:** If product is swallowed or gets in mouth, do NOT induce vomiting; wash mouth with water and give some water to drink. If symptoms develop, or if in doubt contact a Poisons Information Centre or a doctor.

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**SECTION 5 – FIREFIGHTING MEASURES**

**Fire and Explosion Hazards:** The major hazard in fires is usually inhalation of heated and toxic or oxygen deficient (or both), fire gases. There is no risk of an explosion from this product under normal circumstances if it is involved in a fire. This product is likely to decompose only after heating to dryness, followed by further strong heating. Fire decomposition products from this product may be toxic if inhaled. Take appropriate protective measures.

**Extinguishing Media:** In case of fire, use carbon dioxide, dry chemical, foam, water fog.

**Fire Fighting:** If a significant quantity of this product is involved in a fire, call the fire brigade.

**Flash point:** Will not burn until water component is driven off.

**Upper Flammability Limit:** Does not burn.

**Lower Flammability Limit:** Does not burn.

**Autoignition temperature:** Does not burn.

**Flammability Class:** Does not burn.

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**SECTION 6 – ACCIDENTAL RELEASE MEASURES**

**Accidental release:** This product is sold in small packages, and the accidental release from one of these is not usually a cause for concern. For minor spills, refer to product label for specific instructions. No special protective clothing is normally necessary because of this product. However, it is good practice to wear latex gloves when handling injectables. In the event of a major spill, prevent spillage from entering drains or water courses and call emergency services.

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**SECTION 7 – HANDLING AND STORAGE**

**Handling:** Keep exposure to this product to a minimum, and minimise the quantities kept in work areas. Check Section 8 of this SDS for details of personal protective measures, and make sure that those measures are followed. The measures detailed below under "Storage" should be followed during handling in order to minimise risks to persons using the product in the workplace. Also, avoid contact or contamination of product with incompatible materials listed in Section 10.

**Storage:** Protect this product from light. Store in the closed original container in a dry, cool, well-ventilated area out of direct sunlight. Make sure that the product does not come into contact with substances listed under "Incompatibilities" in Section 10. Some liquid preparations settle or separate on standing and may require stirring before use. Check packaging - there may be further storage instructions on the label.
SECTION 8 – EXPOSURE CONTROLS/PERSOANL PROTECTION

The following Standards will provide general advice regarding safety clothing and equipment: Respiratory equipment: AS/NZS 1715, Protective Gloves: AS 2161, Occupational Protective Clothing: AS/NZS 4501 set 2008, Industrial Eye Protection: AS1336 and AS/NZS 1337, Occupational Protective Footwear: AS/NZS2210. Exposure limits have not been established by SWA for any of the significant ingredients in this product. No special equipment is usually needed when occasionally handling small quantities. The following instructions are for bulk handling or where regular exposure in an occupational setting occurs without proper containment systems.

Ventilation: This product should only be used where there is ventilation that is adequate to keep exposure below the TWA levels. If necessary, use a fan.

Eye Protection: Eye protection such as protective glasses or goggles is recommended when this product is being used.

Skin Protection: The information at hand indicates that this product is not harmful and that normally no special skin protection is necessary. However, we suggest that you routinely avoid contact with all chemical products and that you wear suitable gloves (preferably elbow-length) when lengthy skin contact is likely. Protective Material Types: We suggest that protective clothing be made from the following materials: butyl rubber. Respirator: Usually, no respirator is necessary when using this product. However, if you have any doubts consult the Australian Standard mentioned above.

Protective Material Types: We suggest that protective clothing be made from the following materials: butyl rubber.

Respirator: Usually, no respirator is necessary when using this product. However, if you have any doubts consult the Australian Standard mentioned above.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Physical Description &amp; colour:</th>
<th>Red clear or opalescent liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Odour:</td>
<td>No data.</td>
</tr>
<tr>
<td>Boiling Point:</td>
<td>Approximately 100°C at 100kPa.</td>
</tr>
<tr>
<td>Freezing/Melting Point:</td>
<td>Approximately 0°C.</td>
</tr>
<tr>
<td>Volatiles:</td>
<td>Water component.</td>
</tr>
<tr>
<td>Vapour Pressure:</td>
<td>2.37 kPa at 20°C (water vapour pressure).</td>
</tr>
<tr>
<td>Vapour Density:</td>
<td>As for water.</td>
</tr>
<tr>
<td>Specific Gravity:</td>
<td>1.07-1.09</td>
</tr>
<tr>
<td>Water Solubility:</td>
<td>Completely soluble in water.</td>
</tr>
<tr>
<td>pH:</td>
<td>4.0-5.5</td>
</tr>
<tr>
<td>Volatility:</td>
<td>No data.</td>
</tr>
<tr>
<td>Odour Threshold:</td>
<td>No data.</td>
</tr>
<tr>
<td>Evaporation Rate:</td>
<td>As for water.</td>
</tr>
<tr>
<td>Coeff Oil/water Distribution:</td>
<td>No data</td>
</tr>
<tr>
<td>Autoignition temp:</td>
<td>Does not burn.</td>
</tr>
</tbody>
</table>
SECTION 10 – STABILITY AND REACTIVITY

Reactivity: This product is unlikely to react or decompose under normal storage conditions. However, if you have any doubts, contact the supplier for advice on shelf life properties.

Conditions to Avoid: Protect this product from light. Store in the closed original container in a dry, cool, well ventilated area out of direct sunlight.

Incompatibilities: No particular Incompatibilities.

Fire Decomposition: This product is likely to decompose only after heating to dryness, followed by further strong heating. Combustion forms carbon dioxide, and if incomplete, carbon monoxide and possibly smoke. Water is also formed. Carbon monoxide poisoning produces headache, weakness, nausea, dizziness, confusion, dimness of vision, disturbance of judgment, and unconsciousness followed by coma and death.

Polymerisation: This product will not undergo polymerisation reactions.

SECTION 11 – TOXICOLOGICAL INFORMATION

Local Effects:
Target Organs: There is no data to hand indicating any particular target organs

Classification of Hazardous Ingredients

Ingredient Risk Phrases
Benzyl Alcohol No risk phrases at concentrations found in this product
  • Acute toxicity – category 4

Potential Health Effects

Inhalation:
Short Term Exposure: Available data indicates that this product is not harmful. In addition, the product is unlikely to cause any discomfort or irritation.
Long Term Exposure: No data for health effects associated with long term inhalation.

Skin Contact:
Short Term Exposure: Available data indicates that this product is not harmful. It should present no hazards in normal use. However, product may be mildly irritating, but is unlikely to cause anything more than mild discomfort which should disappear once contact ceases.
Long Term Exposure: No data for health effects associated with long term skin exposure.
Eye Contact:
Short Term Exposure: This product may be irritating to eyes, but is unlikely to cause anything more than mild transient discomfort.
Long Term Exposure: No data for health effects associated with long term eye exposure.

Ingestion:
Short Term Exposure: Significant oral exposure is considered to be unlikely. Available data shows that this product is not harmful. However, this product may be irritating to mucous membranes but is unlikely to cause anything more than transient discomfort.
Long Term Exposure: No data for health effects associated with long term ingestion.

Carcinogen Status:
SWA: No significant ingredient is classified as carcinogenic by SWA.
NTP: No significant ingredient is classified as carcinogenic by NTP.
IARC: No significant ingredient is classified as carcinogenic by IARC.

SECTION 12 ECOLOGICAL INFORMATION-

Insufficient data to be sure of status.

SECTION 13 DISPOSAL CONSIDERATIONS-

Disposal: Special help is available for the disposal of Agricultural Chemicals. The product label will give general advice regarding disposal of small quantities, and how to cleanse containers. However, for help with the collection of unwanted rural chemicals, contact ChemClear 1800 008 182 http://www.chemclear.com.au/ and for help with the disposal of empty drums, contact DrumMuster http://www.drummuster.com.au/ where you will find contact details for your area. Dispose of empty containers by wrapping with paper and putting in garbage. Discarded needles should immediately be placed in a designated and appropriately labelled sharps container. For larger quantities, if recycling or reclaiming is not possible, use a commercial waste disposal service.

SECTION 14 – TRANSPORT INFORMATION

No special transport conditions are necessary unless required by other regulations.

SECTION 15 – REGULATORY INFORMATION

AICS: All of the significant ingredients in this formulation are compliant with NICNAS regulations.
SECTION 16– OTHER INFORMATION

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

Acronyms:

DG Code
Code for the Transport of Dangerous Goods by Road and Rail
(7th edition)

ICS
Inventory of Chemical Substances

SW
Safe Work, formerly SCC 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

THIS SDS SUMMARISES OUR BEST KNOWLEDGE OF THE HEALTH AND SAFETY HAZARD INFORMATION OF THE PRODUCT AND HOW TO SAFELY HANDLE AND USE THE PRODUCT IN THE WORKPLACE. EACH USER MUST REVIEW THIS SDS IN THE CONTEXT OF HOW THE PRODUCT WILL BE HANDLED AND USED IN THE WORKPLACE. IF CLARIFICATION OR FURTHER INFORMATION IS NEEDED TO ENSURE THAT AN APPROPRIATE RISK ASSESSMENT CAN BE MADE, THE USER SHOULD CONTACT THIS COMPANY SO WE CAN ATTEMPT TO OBTAIN ADDITIONAL INFORMATION FROM OUR SUPPLIERS.

OUR RESPONSIBILITY FOR PRODUCTS SOLD IS SUBJECT TO OUR STANDARD TERMS AND CONDITIONS, A COPY OF WHICH IS SENT TO OUR CUSTOMERS AND IS ALSO AVAILABLE ON REQUEST.