1. IDENTIFICATION

Product Name
TUMIL-K® Potassium Gluconate Powder

Recommended use of the chemical and restrictions on use
Potassium supplement for cats and dogs

Identified uses
For animal use only.

Restrictions on Use
For animal use only.

Company Identification
Virbac AH, Inc.
P.O. Box 162059
Fort Worth, Texas 76161

Customer Information Number
(800) 338-3659

Emergency Telephone Number
CHEMTREC Number
(800) 424-9300

Other Emergency Number:
Poison Control Center: 1-800-222-1222 (human)
HOT LINE NUMBER: 1-800-345-4735 (human and pet)

Issue Date
April 24, 2017

Supersedes Date
September 18, 2015

Safety Data Sheet prepared in accordance with OSHA’s Hazard Communication Standard (29 CFR 1910.1200) and the Globally Harmonized System of Classification and Labelling of Chemicals (GHS)

2. HAZARD IDENTIFICATION

Hazard Classification
Sensitization - Respiratory - Category 1

Label Elements
Hazard Symbols

Signal Word: Danger

Hazard Statements
May cause allergy or asthma or breathing difficulties if inhaled.

Precautionary Statements
Prevention
Avoid breathing dust.
In case of inadequate ventilation wear respiratory protection.

Response
If inhaled: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.
If experiencing respiratory symptoms: Call a poison center or doctor.

Storage
None

Disposal
Dispose of contents/container in accordance with local regulation.

Other Hazards
This product may cause a reaction in individuals with pork allergies.
2. HAZARD IDENTIFICATION

Specific Concentration Limits
The values listed below represent the percentages of ingredients of unknown toxicity.
Acute oral toxicity 20 - 30%
Acute dermal toxicity 20 - 30%
Acute inhalation toxicity 20 - 30%
Acute aquatic toxicity 20 - 30%

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms:
This product is a mixture.

<table>
<thead>
<tr>
<th>Component Name</th>
<th>CAS Number</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potassium Gluconate</td>
<td>299-27-4</td>
<td>70 - 80%</td>
</tr>
<tr>
<td>Desiccated Pork Liver</td>
<td>NA</td>
<td>20 - 30%</td>
</tr>
</tbody>
</table>

4. FIRST-AID MEASURES

Description of necessary first-aid measures

Eyes
Immediately flood the eye with plenty of water for at least 15 minutes, holding the eye open. Obtain medical attention if soreness or redness persists.

Skin
Wash skin with soap and water. Obtain medical attention if redness or soreness persists.

Ingestion
Contact a physician immediately if ingested. Physician may call a poison control center for advice concerning human ingestion.

Inhalation
Remove person to fresh air. Seek medical attention if symptoms persist.

Most important symptoms/effects, acute and delayed
Aside from the information found under Description of necessary first aid measures (above) and Indication of immediate medical attention and special treatment needed, no additional symptoms and effects are anticipated.

Indication of immediate medical attention and special treatment needed

Notes to Physicians
Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Extinguishing Media
Use extinguishing media appropriate for surrounding materials.

Unusual Fire and Explosion Hazards
This product is a dust and if significant amounts are suspended in air may pose an explosion risk during a fire.
5. **FIRE - FIGHTING MEASURES**

   **Protective Equipment for Fire-Fighting**
   Wear full protective clothing and self-contained breathing apparatus.

6. **ACCIDENTAL RELEASE MEASURES**

   **Personal precautions, protective equipment and emergency procedures**
   Wear appropriate protective clothing. Prevent skin and eye contact.

   **Environmental Precautions**
   Prevent the material from entering drains or watercourses.

   **Methods and materials for containment and cleaning up**
   Sweep up and transfer into suitable containers for recovery or disposal.

7. **HANDLING AND STORAGE**

   **Precautions for safe handling**
   Wear appropriate protective clothing. Prevent skin and eye contact. Wash hands thoroughly after handling.

   **Conditions for safe storage**
   Store in original container at controlled room temperature of 59°- 86° F (15°-30°C) away from children and pets.

8. **EXPOSURE CONTROLS/PERSONAL PROTECTION**

   **Control parameters**
   Exposure limits are listed below, if they exist.

   **Potassium Gluconate**
   None established.

   **Appropriate engineering controls**
   No specific measures necessary. Good general room ventilation is expected to be adequate to control airborne levels.

   **Individual protection measures**
   **Respiratory Protection**
   Not required under normal conditions of use.
   **Skin Protection**
   Not required under normal conditions of use.
   **Eye/Face Protection**
   Safety glasses or goggles.
   **Body Protection**
   Normal work wear.
9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Solid (powder)</td>
</tr>
<tr>
<td>Physical State</td>
<td></td>
</tr>
<tr>
<td>Color</td>
<td>Brown/white mix</td>
</tr>
<tr>
<td>Odor</td>
<td>None</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Specific gravity</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling Range/Point (°C/F)</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting Point (°C/F)</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash Point (PMCC) (°C/F)</td>
<td>Not flammable</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Evaporation Rate (BuAc=1)</td>
<td>No data available</td>
</tr>
<tr>
<td>Solubility in Water</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor Density (Air = 1)</td>
<td>No data available</td>
</tr>
<tr>
<td>VOC</td>
<td>No data available</td>
</tr>
<tr>
<td>Partition coefficient (n-octanol/water)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Auto-ignition Temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition Temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Upper explosive limit</td>
<td>No data available</td>
</tr>
<tr>
<td>Lower explosive limit</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No data available</td>
</tr>
</tbody>
</table>

10. STABILITY AND REACTIVITY

Reactivity
- Data is not available.

Chemical Stability
- Stable under normal conditions.

Possibility of hazardous reactions
- Hazardous polymerization will not occur.

Conditions to Avoid
- Heat - high temperatures

Incompatible Materials
- Strong oxidizers – strong acids – strong bases

Hazardous Decomposition Products
- Oxides of carbon – potassium oxides

11. TOXICOLOGICAL INFORMATION

Acute Toxicity
- Potassium Gluconate:
  - LD50 Oral (rat) >5000 mg/kg (based on similar substance)
  - LD50 Dermal (rat) >2000 mg/kg (based on similar substance)
11. TOXICOLOGICAL INFORMATION

Specific Target Organ Toxicity (STOT) – single exposure
Potassium Gluconate: Available data indicates this ingredient is not expected to cause target organ effects after a single exposure.

Specific Target Organ Toxicity (STOT) – repeat exposure
Potassium Gluconate: Available data indicates this ingredient is not expected to cause target organ effects after repeated exposure.

Serious Eye damage/Irritation
Potassium Gluconate: Available data indicates this ingredient is not expected to cause eye irritation.

Skin Corrosion/Irritation
Potassium Gluconate: Available data indicates this ingredient is not expected to cause skin irritation.

Respiratory or Skin Sensitization
Desiccated Pork Liver: May cause allergy or asthma or breathing difficulties if inhaled.

Carcinogenicity
Not considered carcinogenic by NTP, IARC, and OSHA.

Germ Cell Mutagenicity
Potassium Gluconate: Available data indicates this ingredient is not expected to be mutagenic.

Reproductive Toxicity
Potassium Gluconate: Available data indicates this ingredient is not expected to cause reproductive toxicity or birth defects.

Aspiration Hazard
Not an aspiration hazard.

12. ECOLOGICAL INFORMATION

Ecotoxicity
Potassium Gluconate:
LC50 (Oryzias latipes) >100 mg/l 96 h (based on similar substance)
EC50 (Daphnia magna) >1000 mg/l 48hr (based on similar substance)

Mobility in soil
Potassium gluconate: Completely soluble in water.

Persistence/Degradability
Potassium gluconate: Readily biodegradable.

Bioaccumulative Potential
Potassium gluconate: None

Other adverse effects
No relevant studies identified.
13. DISPOSAL CONSIDERATIONS

Disposal Methods
Dispose of in accordance with all applicable local and national regulations.

14. TRANSPORT INFORMATION

Contact supplier for transport information.

15. REGULATORY INFORMATION

United States TSCA Inventory
This product is excluded from the US EPA Toxic Substance Control Act and is regulated under the Food, Drug and Cosmetic Act.

California Proposition 65
This product does not contain any materials which the State of California has found to cause cancer, birth defects or other reproductive harm.

SARA Title III Sect. 311/312 Categorization
Respiratory Sensitization

SARA Title III Sect. 313
This product contains a chemical that is listed in Section 313 at or above de minimis concentrations. The following listed chemicals are present: None

16. OTHER INFORMATION

Legend
ACGIH: American Conference of Governmental Industrial Hygienists
BOD: Biological Oxygen Demand
CAS#: Chemical Abstracts Service Number
ECHA: European Chemicals Agency
FIFRA: Federal Insecticide, Fungicide and Rodenticide Act
IARC: International Agency for Research on Cancer
LC50: Lethal Concentration 50%
LD50: Lethal Dose 50%
N/A: Denotes no applicable information found or available
NTP: National Toxicology Program
OSHA: Occupational Safety and Health Administration
PEL: Permissible Exposure Limit
STEL: Short Term Exposure Limit
TLV: Threshold Limit Value
TSCA: Toxic Substance Control Act

Revision Date: April 24, 2017
Replaces: September 18, 2015
Changes made: Update to Sections 1 and 15.

Information Source and References
This SDS is prepared by Hazard Communication Specialists based on information provided by internal company references.
16. OTHER INFORMATION

Prepared By: EnviroNet LLC.

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