1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name: CASSAVA STARCH

Recommended use of the chemical and restrictions on use:

Food/Pharmaceutical Ingredient
(Excipient, tablet disintegrant or as binder)

Critical Quality Attributes (CQAs):

Physical, chemical, biological, or microbiological property or characteristic that should be within an appropriate limit, range, or distribution to ensure the desired product quality with strict adherence to International Standards. CQAs additionally include those properties (e.g., particle size distribution, bulk density) that affect downstream processability with Good Manufacturing Practices (GMP) which are used to guide the product and process development. Mandatory Conformity Assessment Program (MANCAP: ISO 22000) Certification for Nigerian Industrial Standards (NIS) by Standards Organization of Nigeria SON.

Supplier: Psaltry International Company Ltd.
Factory Address: Alayide/Wasimi Village, Ado Awaye Iseyin LGA, Oyo State Nigeria
Web address: www.psaltryinternational.com
E-mail: info@psaltryinternational.com
Telephone Number: +2348028911415

2. HAZARDS IDENTIFICATION

Road and Rail; NON-DANGEROUS GOODS.
Based on available information, not classified as hazardous according to International Labour Organization (ILO);
NON-HAZARDOUS SUBSTANCE.

Poisons Schedule: Standard For The Uniform Scheduling Of Medicines And Poisons (SUSMP): None allocated.
Product Name: Cassava Starch

Issued: 09/01/2015
3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS Number</th>
<th>Proportion</th>
<th>Hazard Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Starch</td>
<td>9005-25-8</td>
<td>&gt;=98%</td>
<td>-</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

For advice, contact a doctor.

**Inhalation:**
Remove victim from area of exposure - avoid becoming a casualty. Seek medical advice if effects persist.

**Skin Contact:**
If skin contact occurs, remove contaminated clothing and wash skin with running water. If irritation occurs seek medical advice.

**Eye Contact:**
If in eyes, wash out immediately with water. In all cases of eye contamination it is a sensible precaution to seek medical advice.

**Ingestion:**
Although swallowing is unlikely to cause problems, it is a sensible precaution to rinse the mouth with water and give a glass of water to drink.

**Indication of immediate medical attention and special treatment needed:**
Treat symptomatically.

5. FIRE FIGHTING MEASURES

**Suitable Extinguishing Media:**
Fine water spray, normal foam, dry agent (carbon dioxide, dry chemical powder).

**Specific hazards arising from the substance or mixture:**
Combustible solid.

**Special protective equipment and precautions for fire-fighters:**
On burning will emit toxic fumes. Fire fighters to wear self-contained breathing apparatus and suitable protective clothing if risk of exposure to vapour or products of combustion.

6. ACCIDENTAL RELEASE MEASURES

**Emergency procedures/Environmental precautions:**
If contamination of sewers or waterways has occurred advise local emergency services.

**Personal precautions/Protective equipment/Methods and materials for containment and cleaning up:**
Wear protective equipment to prevent skin and eye contact and breathing in dust. Work up wind or increase ventilation.
Cover with damp absorbent (inert material, sand or soil). Sweep or vacuum up, but avoid generating dust.
Collect and seal in properly labeled containers or drums for disposal.
7. HANDLING AND STORAGE

Precautions for safe handling:
Avoid skin and eye contact and breathing in dust. In common with many organic chemicals, may form flammable dust clouds in air. For precautions necessary refer to Safety Data Sheet "Dust Explosion Hazards".

Conditions for safe storage, including any incompatibilities: Store in a cool, dry, well ventilated place and out of direct sunlight. Keep containers closed when not in use - check regularly for spills.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Starch: 8hr TWA = 10 mg/m³
As published by World Health Organisation Safe Workplace Exposure Standards for Airborne Contaminants.
TWA - The time-weighted average airborne concentration of a particular substance when calculated over an eight-hour working day, for a five-day working week.

These Workplace Exposure Standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept to as low a level as is workable. These workplace exposure standards should not be used as fine dividing lines between safe and dangerous concentrations of chemicals. They are not a measure of relative toxicity.

Appropriate engineering controls:
Ensure ventilation is adequate to maintain air concentrations below Workplace Exposure Standards. Avoid generating and breathing in dusts. Use with local exhaust ventilation or while wearing dust mask. Keep containers closed when not in use.

Individual protection measures, such as Personal Protective Equipment (PPE):
The selection of PPE is dependent on a detailed risk assessment. The risk assessment should consider the work situation, the physical form of the chemical, the handling methods, and environmental factors.
Psaltry Personal Protection Guide No.1, 2013:- OVERALLS, SAFETY SHOES, SAFETY GLASSES, GLOVES, DUST MASK.

Wear overalls, safety glasses and impervious gloves. Avoid generating and inhaling dusts. If determined by a risk assessment an inhalation risk exists, wear a dust mask/respirator meeting the Industrial requirements. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storage or re-use.
9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state:</td>
<td>Powder</td>
</tr>
<tr>
<td>Colour:</td>
<td>White</td>
</tr>
<tr>
<td>Odour:</td>
<td>Neutral</td>
</tr>
<tr>
<td>Solubility:</td>
<td>Insoluble in water.</td>
</tr>
<tr>
<td>Specific Gravity:</td>
<td>Not available</td>
</tr>
<tr>
<td>Relative Vapour Density (air=1):</td>
<td>Not available</td>
</tr>
<tr>
<td>Vapour Pressure (20 °C):</td>
<td>Not available</td>
</tr>
<tr>
<td>Flash Point (°C):</td>
<td>Not available</td>
</tr>
<tr>
<td>Flammability Limits (%):</td>
<td>As dust. Min. 15 g/m³</td>
</tr>
<tr>
<td>Autoignition Temperature (°C):</td>
<td>Not available</td>
</tr>
<tr>
<td>Melting Point/Range (°C):</td>
<td>Not available</td>
</tr>
<tr>
<td>Decomposition Point (°C):</td>
<td>&gt;150</td>
</tr>
<tr>
<td>pH:</td>
<td>5-7 (30% suspension)</td>
</tr>
</tbody>
</table>

10. STABILITY AND REACTIVITY

- Chemical stability: Stable under normal conditions of use.
- Possibility of hazardous reactions: None known.
- Conditions to avoid: Avoid dust generation.
- Incompatible materials: None known.
- Hazardous decomposition products: Oxides of carbon.

11. TOXICOLOGICAL INFORMATION

No adverse health effects expected if the product is handled in accordance with this Material Safety Data Sheet and the product label. Symptoms or effects that may arise if the product is mishandled and overexposure occurs are:

- **Ingestion:** No adverse effects expected.
- **Eye contact:** May be an eye irritant. Exposure to the dust may cause discomfort due to particulate nature. May cause physical irritation to the eyes.
- **Skin contact:** Contact with skin may result in irritation. Can cause skin to dry out.
- **Inhalation:** Breathing in dust may result in respiratory irritation.
- **Acute toxicity:** No LD50 data available for the product.
- **Chronic effects:** No chronic effects reported.

12. ECOLOGICAL INFORMATION

Ecotoxicity: Avoid contaminating waterways.
13. DISPOSAL CONSIDERATIONS

Disposal methods:
Refer to Waste Management Authority. Dispose of contents/container in accordance with local/regional/national/international regulations.

14. TRANSPORT INFORMATION

Road and Rail Transport:
Road and Rail; NON-DANGEROUS GOODS.

Marine Transport:
Not classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea; NON-DANGEROUS GOODS.

Air Transport:
Not classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air; NON-DANGEROUS GOODS.

15. REGULATORY INFORMATION

Classification:
Based on available information, not classified as hazardous according to Nigerian Industrial Standard (NIS); NON-HAZARDOUS SUBSTANCE.

Poisons Schedule (SUSMP): None allocated.

16. OTHER INFORMATION

Reason(s) for Issue:
First Issue Primary MSDS

This MSDS summarises to our best knowledge at the date of issue, the chemical health and safety hazards of the material and general guidance on how to safely handle the material in the workplace. Since Psaltry Limited cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, assess and control the risks arising from its use of the material. If clarification or further information is needed, the user should contact their Psaltry Representative or Psaltry Limited at the contact details on Page 1.

Psaltry Limited's responsibility for the material as sold is subject to the terms and conditions of sale, a copy of which is available upon request.