

MATERIAL SAFETY DATA SHEET

**VIVANTIS TECHNOLOGIES SDN BHD
REVONGEN CORPORATION CENTER**

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SECTION 1: CHEMICAL IDENTIFICATION

Catalogue Number: PC0903-25g

Product Name: Bovine Serum Albumin (BSA)

Intended Use:

For research use only. Not for use in diagnostic procedures.

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SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

| Chemical Name | CAS No. | EC No. |
|---------------|-----------|-----------|
| Serum albumin | 9048-46-8 | 232-936-2 |

Synonyms: BSA, Bovine albumin

SECTION 3: HAZARDS IDENTIFICATION

GHS Classification

OSHA Classification

The chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.122).

HNOC (Hazard not otherwise classified)

Not regulated.

SECTION 4: FIRST-AID MEASURES

In case of eye contact, rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.

In case of skin contact, wash off immediately with soap and plenty of water removing all contaminated clothes and shoes.

In case of inhalation, move to fresh air. If not breathing, give artificial respiration.

In case of ingestion, never give anything by mouth to an unconscious person. Rinse mouth.

SECTION 5: FIRE FIGHTING MEASURES

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH and full protective gear.

Explosion data – sensitivity to mechanical impact: None.

Explosion data – sensitivity to static discharge: None.

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SECTION 6: ACCIDENTAL RELEASE MEASURES

For personal protection, ensure adequate ventilation, especially in confined areas.
 For environmental precautions, prevent further leakage or spillage if safe to do so for containment.
 For cleaning up, avoid dust formation. Pick up and transfer to properly labeled containers. Ventilate area and wash spill site after material pickup is complete.

SECTION 7: HANDLING AND STORAGE

Handle in accordance with good industrial hygiene and safety practice.
 Keep containers tightly closed in a dry, cool and well-ventilated place.
 Incompatible with strong oxidizing agents.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

| | |
|--------------------------|---|
| Respiratory protection | Where exposure limits are exceeded, wear respiratory protection. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Positive pressure-supplied air respirators may be required for high airborne contamination concentrations. |
| Eye/face protection | Use safety glasses with side-shields. Avoid contact with eyes. |
| Skin and body protection | Impervious clothing. Wear protection gloves/clothing. |

Use engineering measures such as showers, eyewash stations and ventilation systems.
 Handle in accordance with good industrial hygiene and safety practice.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

| | |
|------------------------------|--|
| Appearance: | Off-white to beige |
| Physical state: | Lyophilized powder |
| Odor: | No information available |
| Odor threshold: | No information available |
| pH: | No information available |
| Melting point/freezing point | Boiling Point/Range: No information available |
| Flash Point (High in °C): | No information available |
| Evaporation Rate: | No information available |
| Flammability (solid, gas): | No information available |
| Flammability Limit in Air | Upper flammability limit: No information available |
| | Lower flammability limit: No information available |

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| | |
|----------------------------|--------------------------|
| Vapor pressure: | No information available |
| Vapor Density: | No information available |
| Specific Gravity: | No information available |
| Water Solubility: | Soluble in water |
| Partition coefficient: | No information available |
| Autoignition Temperature: | No information available |
| Decomposition Temperature: | No information available |
| Kinematic viscosity: | No information available |
| Dynamic Viscosity: | No information available |
| Explosive Properties: | No information available |
| Oxidizing Properties: | No information available |

SECTION 10: STABILITY AND REACTIVITY

Stable under recommended storage conditions.

| | |
|----------------------------------|--|
| Materials to avoid: | Strong oxidizing agents |
| Hazardous decomposition product: | None known based on information supplied |
| Hazardous reactions: | None under normal processing |
| Condition to avoid: | Extremes temperature, direct sunlight |

SECTION 11: TOXICOLOGICAL INFORMATION

Acute toxicity

This product contains 100% of mixture of unknown acute toxicity.

To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated.

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity

This product contains 100% of mixture consisting components of unknown hazards to the aquatic environment.

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SECTION 13: DISPOSAL CONSIDERATIONS

Dispose waste material in accordance with all federal, state and local environmental regulation.
 For contaminated packing too dispose of as unused product in accordance with all federal, state and local environmental regulation. Do not reuse empty container.
 For surplus and non-recyclable solution, offer to a licensed disposal company.
 Observe all federal, state and local environmental regulations.

SECTION 14: TRANSPORT INFORMATION

DOT

Not regulated.

IATA

Not regulated.

SECTION 15: REGULATORY INFORMATION

International inventories

| | |
|----------------------|---------------|
| TSCA | Complies |
| DSL/NDSL | Complies |
| EINECS/ELINCS | Complies |
| ENCS | Do not comply |
| IECSC | Complies |
| KECL | Complies |
| PICCS | Complies |
| AICS | Complies |

U.S. Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

| | |
|-----------------------------------|----|
| Acute Health Hazard | No |
| Chronic Health Hazard | No |
| Fire Hazard | No |
| Sudden Release of Pressure Hazard | No |
| Reactive Hazard | No |

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Clean Water Act

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local regional or state level pertaining to releases of this material.

U.S. State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. EPA Label Information

EPA Pesticide Registration Number

Not regulated.

SECTION 16: OTHER INFORMATION

The information contained in this MSDS relates only to the material(s) designed and does not relate to use(s) in combination with any other material, process(es) and /or chemical reaction(s). Vivantis Technologies Sdn. Bhd. provides this information in good faith, from sources believed to be accurate; however, Vivantis assumes no liability for its accuracy or completeness, and thus shall not be held liable for any damage resulting from handling or from contact with the above product.

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