SimPure™ 99900 NGM

SECTION 1: Identification

Product identifier

Brandname	SimPure™ 99900 NGM
Product name	Tapioca starch
REACH status	Exempt
Revision date	20-02-2015

Relevant identified uses of the substance
Binding or texturizing agent in food applications

Company identification
Cargill, Incorporated, Cargill Texturizing Solutions
15407 McGinty Road West
Wayzata, MN 55391-2399
US

Non emergency telephone	+1 877 650 7080

Emergency telephone number

Emergency telephone	+1-800-255-3924 / +1-813-248-0585

SECTION 2: Hazards identification

Physical hazards
Not classified.

Health hazards
Not classified.

OSHA defined hazards
Combustible dust

Label element(s)

Hazard symbol
None.

Signal word	WARNING

Hazard statement
May form combustible dust concentrations in air.

Precautionary statements

Prevention

Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Keep container tightly closed. Ground/bond container and receiving equipment. Prevent dust accumulation to minimize explosion hazard.

Response

Wash hands after handling.

Storage

Store away from incompatible materials.

Disposal

Dispose of waste and residues in accordance with local authority requirements.

Hazard(s) not otherwise classified (HNOC)

None known.

Supplemental information

Not applicable.

SECTION 3: Composition/information on ingredients

Product identifiers substances

Chemical name	CAS No
Starch	9005-25-8

SECTION 4: First aid measures

Inhalation

Move to fresh air. Call a physician if symptoms develop or persist.

Skin contact

Wash off with soap and water. Get medical attention if irritation develops and persists.

Eye contact

Rinse with water. Get medical attention if irritation develops and persists.

Ingestion

Rinse mouth. Get medical attention if symptoms occur.

Most important symptoms and effects, both acute and delayed

Direct contact with eyes may cause temporary irritation.

Information on medical attendance

Provide general supportive measures and treat symptomatically.

General information

Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

SECTION 5: Firefighting measures

Suitable extinguishing media

Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2). Apply extinguishing media carefully to avoid creating airborne dust.

Unsuitable extinguishing media

None known.

Specific hazards arising from the chemical

Dust may form explosive mixture with air. Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.

Special protective equipment and precautions for firefighter

Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire fighting equipment/instructions

In the event of fire, cool tanks with water spray.

Specific methods

Cool containers exposed to flames with water until well after the fire is out.

General fire hazards

No unusual fire or explosion hazards noted.

SECTION 6: Accidental release measures

Personal precautions

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration. Wear appropriate personal protective equipment. Use only non-sparking tools. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained.

Methods for cleaning up

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air). Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Environmental precautions

Avoid discharge into drains, water courses or onto the ground.

SECTION 7: Handling and storage

Precautions for safe handling

Use with adequate ventilation. Eliminate all sources of ignition. Minimize dust generation and accumulation. Combustible dust clouds may be created where operations produce fine material (dust). Avoid significant deposits of material, especially on horizontal surfaces, which may become airborne and form combustible dust clouds and may contribute to secondary explosions. Handling and processing operations should be conducted in accordance with 'best practices' (e.g. NFPA-654). Provide adequate ventilation. Wear appropriate personal protective equipment.
Observe good industrial hygiene practices. Avoid direct contact with eyes.

Conditions for safe storage, including any incompatibilities

Keep away from heat, sparks and open flame. Dry powders can build static electricity charges when subjected to the friction of transfer and mixing operations. Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres. Keep container tightly closed.
Store in a cool, dry place out of direct sunlight. Store in a well-ventilated place. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces.

SECTION 8: Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Material	Type	Value	Form
Tapioca Starch	PEL	5 mg/m3	Respirable fraction.
(CAS Mixture)		15 mg/m3	Total dust.

Components	Type	Value	Form
Tapioca starch	PEL	5 mg/m3	Respirable fraction.
(CAS 9005-25-8)		15 mg/m3	Total dust.

US. ACGIH Threshold Limit Values

Material	Type	Value
Tapioca Starch	TWA	10 mg/m3
(CAS Mixture)		

Components	Type	Value
Tapioca starch	TWA	10 mg/m3
(CAS 9005-25-8)		

US. NIOSH: Pocket Guide to Chemical Hazards

Material	Type	Value	Form
Tapioca Starch	TWA	5 mg/m3	Respirable.
(CAS Mixture)		10 mg/m3	Total

Components	Type	Value	Form
Tapioca starch	TWA	5 mg/m3	Respirable.
(CAS 9005-25-8)		10 mg/m3	Total

Biological limit values

No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. It is recommended that all dust control equipment such as local exhaust ventilation and material transport systems involved in handling of this product contain explosion relief vents or an explosion suppression system or an oxygen-deficient environment. Ensure that dust-handling systems (such as exhaust ducts, dust collectors, vessels, and processing equipment) are designed in a manner to prevent the escape of dust into the work area (i.e., there is no leakage from the equipment). Use only appropriately classified electrical equipment and powered industrial trucks.

Individual protection measures, such as personal protective equipment

Eye/face protection

Not normally needed. If contact is likely, safety glasses with side shields are recommended.

Skin protection

Hand protection

Gloves are not required. Gloves are recommended for prolonged use.

Other

Wear suitable protective clothing.

Respiratory protection

In case of insufficient ventilation, wear suitable respiratory equipment.

Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Appearance	Solid powder.
Color	White to off white.
Odor	Odorless.
Odor threshold	Not available.
pH	Not available.
Melting Point/ freezing point	Not available.
Initial boiling point and boiling range (˚C)	Not available.
Flash Point	Not available.
Evaporation rate	Not available.
Flammability (solid, gas)	Combustible dust.

Flammability limits in air, upper, % by volume	Not available.
Flammability limits in air, lower, % by volume	Not available.
Explosive limit lower	Not available.
Explosive limit upper	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Relative density	Not available.
Solubility in water	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
pH in aqueous solution	4 - 6

SECTION 10: Stability and reactivity

Reactivity

The product is stable and non-reactive under normal conditions of use, storage and transport.

Chemical stability

Material is stable under normal conditions.

Possibility of hazardous reactions

No dangerous reaction known under conditions of normal use.

Conditions to avoid

Keep away from heat, sparks and open flame. Minimize dust generation and accumulation.
Contact with incompatible materials. Humidity.

Incompatible materials

Strong oxidizing agents.

Hazardous decomposition products

Carbon oxides.

SECTION 11: Toxicological information

Information on likely routes of exposure

Inhalation

No adverse effects due to inhalation are expected.

Skin contact

May cause skin irritation.

Eye contact
May cause eye irritation.

Ingestion
Ingestion may cause irritation and malaise.

Symptoms related to the physical, chemical and toxicological
Irritant effects.

Information on toxicological effects

Acute toxicity
Not available.

Skin corrosion/irritation
Prolonged skin contact may cause temporary irritation.

Serious eye damage/eye irritation
Direct contact with eyes may cause temporary irritation.

Respiratory or skin sensitization

Respiratory sensitization
No data available.

Skin sensitization
No data available.

Germ cell mutagenicity
No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity
This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

OSHA Specifically Regulated Substances 29 CFR 1910.1001-1050
Not listed.

Reproductive toxicity
No data available.

Specific target organ toxicity - single exposure
No data available.

Specific target organ toxicity - repeated exposure
No data available.

Aspiration hazard

No data available.

SECTION 12: Ecological information

Ecotoxicity

Not expected to be harmful to aquatic organisms.

Persistence and degradability

No data is available on the degradability of this product.

Bioaccumulative potential

No data available for this product.

Mobility in soil

No data available.

Other adverse effects

No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

SECTION 13: Disposal considerations

Disposal instructions

Disposal should be conducted in accordance with Federal, State, and/or Local regulations.

Hazardous waste code

No data available.

Waste from residues / unused products

Disposal should be conducted in accordance with Federal, State, and/or Local regulations.

Contaminated packaging

Since emptied containers may retain product residue, follow SDS precautions and label warnings even after container is emptied.

SECTION 14: Transport information

Transport hazard class(es)

DOT	Not regulated as dangerous goods.
IATA	Not regulated as dangerous goods.
IMDG	Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not established.

SECTION 15: Regulatory information

US federal regulations
This product is hazardous according to OSHA 29 CFR 1910.1200 due to the potential for dust explosion.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)
Not listed.

CERCLA Hazardous Substance List (40 CFR 302.4)
Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories
Immediate Hazard - No
Delayed Hazard - No
Fire Hazard - Yes
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance
Not listed.

SARA 311/312 Hazardous chemical
Yes

SARA 313 (TRI reporting)
Not regulated.

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List
Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)
Not regulated.

Safe Drinking Water Act (SDWA)
Not regulated.

US state regulations

This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

US. Massachusetts RTK - Substance List
Tapioca starch (CAS 9005-25-8)

US. New Jersey Worker and Community Right-to-Know Act
Not listed.

US. Pennsylvania Worker and Community Right-to-Know Law
Tapioca starch (CAS 9005-25-8)

US. Rhode Island RTK
Not regulated.

US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance
Not listed.

Inventory status

Country(s) or region	Inventory name	On inventory
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

Remark

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

SECTION 16: Other information

Revision information

Date of first issue 20-02-2015

Further information

Refer to NFPA 61, Standard for the Prevention of Fires and Dust Explosions in Agricultural and Food Processing Facilities, for safe handling.

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