

Section 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Brandname STARDESIGN™ POWER
 Product name Blend of starch ester and stabilized crosslinked starch
 REACH status Exempt

Chemical name	CAS No	EC#
Starch sodium octenyl succinate	52906-93-1	
Starch sodium octenyl succinate	66829-29-6	
Hydroxypropylated distarch phosphate	53124-00-8	

Revision date 27-07-2022

1.2 Relevant identified uses of the substance or mixture and uses advised against

1.3. Details of the supplier of the safety data sheet

Company identification

Cargill S.L.U.
 c/. Marie Curie, 6 / Apartado de Correos 54
 E-08760 Martorell (Barcelona)
 Spain

Non emergency telephone

Fax number +34 (0)93 775 59 50

E-mail address

1.4 Emergency telephone number

Emergency telephone +34 (0)93 773 38 00 (24/7)

SECTION 2: Hazards identification

2.1 Classification of the substance/mixture

Classification according to Regulation (EC) No 1272/2008 as amended

Hazard summary

Low hazard for recommended handling by trained personnel.

2.2. Label elements

Label according to Regulation (EC) No. 1272/2008 as amended

Contains:

Starch

Hazard statement

Not assigned.

Precautionary statements

Prevention
Not assigned.

Response
Not assigned.

Storage
Not assigned.

Disposal
Not assigned.

Supplemental label information
None.

2.3 Other hazards
None known.

SECTION 3: Composition/information on ingredients

3.1. Substances / 3.2. Mixtures

Chemical name	CAS No	EC#
Starch sodium octenyl succinate	52906-93-1	
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SECTION 4: First aid measures

General information
Not available.

4.1 Description of first aid measures

Inhalation
If symptomatic, move to fresh air. Get medical attention if symptoms persist.

Skin contact
Wash skin with soap and water. Get medical attention promptly if symptoms occur after washing.

Eye contact
Any material that contacts the eye should be washed out immediately with water. If easy to do, remove contact lenses. Get medical attention promptly if symptoms occur after washing.

Ingestion

Seek medical advice.

4.2. Most important symptoms and effects, both acute and delayed

Dust may irritate the eyes and the respiratory system.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

General fire hazards

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.

5.1 Extinguishing media

Suitable extinguishing media

Water. Water fog. Foam. Dry chemical powder. Carbon dioxide (CO₂).

Unsuitable extinguishing media

None known.

5.2 Special hazards arising from the substance or mixture

Dust may form explosive mixture with air. This product is a dust explosion class St-1 at normal moisture level. Minimum Ignition Energy (MIE): >30 mJ at normal moisture level.

P_{max}: 9.5 bar

K_{st}: 195 bar m/s

5.3 Advice for firefighters

Special protective equipment for firefighters

Self-contained breathing apparatus, operated in positive pressure mode and full protective clothing must be worn in case of fire.

Special firefightings procedures

None known.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedure

For non-emergency personnel

Wear appropriate personal protective equipment.

For emergency responders

Keep unnecessary personnel away.

6.2 Environmental precautions

Prevent runoff from entering drains, sewers, or streams.

6.3 Methods and material for containment and cleaning up

Sweep up spilled substance and remove to safe place. 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. Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air). Nonsparking tools should be used.

6.4 Reference to other sections

For personal protection, see section 8. For waste disposal, see Section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Avoid handling which leads to dust formation. Observe good industrial hygiene practices.

If the product is packed in a big bag of class C, according to IEC / ISO 61340-4-4: 2005, then for the control of static electricity in areas with explosion risk, you must always connect the conductive filament present on the sack to a specific anchor point directly grounded during filling and emptying. The integrity and adequacy of the connector and the connection point to the ground, must always be verified by the user before each operation.

7.2. Conditions for safe storage, including any incompatibilities

Keep container closed. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces. 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. Refer to NFPA 654, Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids, for safe handling.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

For national occupational exposure limits see section 15, National regulations

Recommended monitoring procedures

Not established.

DNEL

Not available.

PNEC

Not available.

8.2 Exposure controls

Appropriate engineering controls

Ensure adequate ventilation, especially in confined areas.

Individual protection measures, such as personal protective equipment

General information

Personal protective equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment.

Eye/face protection

Wear safety glasses with side shields (or goggles).

Skin protection

Hand protection

Chemical resistant gloves are recommended.

Other

Wear chemical-resistant gloves, footwear and protective clothing appropriate for risk of exposure. Contact glove manufacturer for specific information.

Respiratory protection

If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Respirator type: Air-purifying respirator with an appropriate, government approved (where applicable), air-purifying filter, cartridge or canister.

Thermal hazards

Not applicable.

Hygiene measures

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.

Environmental exposure controls

Environmental manager must be informed of all major releases.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	White or slightly yellow powder.
Odour	Not available.
Odour threshold	Not available.
pH	Not applicable.
Melting Point/ freezing point	Not available.
Boiling point, initial boiling point and boiling range	Not available.

Flash Point	Not applicable.
Auto-ignition temperature	≥170 °C (338 °F)
Layer ignition temperature	>400 °C (752 °F)
Flammability (solid, gas)	Not available.
Flammability limit lower	Not available.
Flammability limit upper	Not available.
Oxidising properties	Not applicable.
Explosive properties	MIE: >30 mJ at normal moisture level, Pmax: 9.5 bar, Kst: 195 bar m/s
Explosive limit	Not applicable.
Vapour pressure	Not applicable.
Vapour density	Not applicable.
Evaporation rate	Not applicable.
Relative density	Not available.
Solubility in water	Insoluble/partly soluble
Partition coefficient (Log K octanol/water)	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Percent volatile	Not available.

Other information

No relevant additional information available.

SECTION 10: Stability and reactivity

10.1 Reactivity

None known.

10.2 Chemical stability

Stable under the prescribed storage conditions.

10.3 Possibility of hazardous reactions

Hazardous polymerization does not occur.

10.4 Conditions to avoid

Incompatible materials. Minimize dust generation and accumulation.

10.5 Incompatible materials

Strong oxidizing agents.

10.6 Hazardous decomposition products

No hazardous decomposition products are known.

SECTION 11: Toxicological information

General information

Under normal conditions of intended use, this material does not pose a risk to health.

Information on likely routes of exposure

Ingestion

No harmful effects expected in amounts likely to be ingested by accident.

Inhalation

Under normal conditions of intended use, this material is not expected to be an inhalation hazard.

Skin contact

None known.

Eye contact

Direct contact with eyes may cause temporary irritation.

Symptoms

Dust may irritate the eyes and the respiratory system.

11.1 Information on toxicological effects

Acute toxicity

Dust may irritate the eyes and the respiratory system.

Skin corrosion/irritation

Not assigned.

Serious eye damage/eye irritation

Direct contact with eyes may cause temporary irritation.

Respiratory sensitization

None known.

Skin sensitization

None known.

Germ cell mutagenicity

Not assigned.

Carcinogenicity

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

Reproductive toxicity

None known.

Specific target organ toxicity - single exposure

None known.

Specific target organ toxicity - repeated exposure

None known.

Aspiration hazard

Not applicable.

Mixture versus substance information

Not available.

11.2 Information on other hazards

Not available.

SECTION 12: Ecological information

12.1 Toxicity

No toxicity data noted for the ingredient(s).

12.2 Persistence and degradability

No data available.

12.3 Bioaccumulative potential

No data available.

Mobility

Not available.

Environmental fate - Partition coefficient

Not available.

12.4 Mobility in soil

Not available.

12.5 Results of PBT and vPvB assessment

Not available.

12.6 Other adverse effects

None known.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Residual waste

Dispose of in accordance with local regulations.

Contaminated packaging

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

EU waste code

Waste codes should be assigned by the user based on the application for which the product was used.

SECTION 14: Transport information

14.1 UN number

Not regulated as dangerous goods by international transportation rules.

14.2 UN proper shipping name

Not regulated as dangerous goods by international transportation rules.

14.3 Transport hazard class(es)

ADR Not regulated as dangerous goods by international transportation rules.

RID Not regulated as dangerous goods by international transportation rules.

ADN Not regulated as dangerous goods by international transportation rules.

IATA Not regulated as dangerous goods by international transportation rules.

IMDG Not regulated as dangerous goods by international transportation rules.

14.4 Packing group

Not regulated as dangerous goods by international transportation rules.

14.5 Environmental hazards

Not regulated as dangerous goods by international transportation rules.

14.6 Special precautions for user

Not regulated as dangerous goods by international transportation rules.

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

No information available.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Other regulations

The product is classified and labelled in accordance with EC directives or respective national laws. This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006.

15.2 Chemical safety assessment

A Chemical Safety Assessment is not required for this substance.

Commission Regulation (EU) No. 2015/830
amending Regulation (EC) No. 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

SECTION 16: Other information

List of abbreviations

Not available.

REFERENCES

Not available.

Other information

not available

Revision information

Date of first issue 29-06-2011

Supersedes date 27-07-2022

Information on revision

Reason for changes

Layer ignition temperature data added.

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