

1. Identification

Product identifier:

Product Number: 05065002
Product Name: BENEFORM 2160
modified starch

Other means of identification:

Chemical family: Modified starch

Recommended use of chemical and restrictions on use:

Recommended use: Industrial specialties use
Restrictions on use: Not Available

Supplier's details:

Ingredion Singapore Pte Ltd.
21 Biopolis Road
#05-21/27 Nucleos
Singapore 138567
Tel:+65 6872 6006 (business hours)

Emergency phone number:

CHEMTREC - Emergency Telephone (Medical & Transport Incident With Product- 7Days/24 Hours)
The global (outside US) number: +1 703-741-5970
Australia: +(61)-290372994
China: 4001-204937
India: 000-800-100-7141*
Indonesia: 001-803-017-9114*
Japan: +(81)-3-4520-9637
Malaysia: +(60)-392125794
New Zealand: +(64)-98010034
Philippines: +(63) 2-395-3308, 1-800-1-322-0553*
Singapore: +(65)-31638374, 800-101-2201*
South Korea: +(82) 070-7686-0086, 080-880-0454*
Taiwan: +886-2-7741-4207*, 00801-49-1821*
Thailand: 1800014808*
Vietnam: +(84)-444581938
* Phone numbers for countries marked with an asterisk must be dialed within the country
SDS Requests and general information, please contact Local Customer Service: See phone numbers in Section 16

Classification according to Regulation: SS 586: Part 2: 2014:

Hazard pictograms: No hazard symbols required

GHS Classification of the substance or mixture: Not classified by GHS criteria

Signal Word: No signal word needed.

Hazard Statements: No Hazard Statement needed.

Precautionary Statements: No Precautionary Statement needed.

Other hazards which do not result in classification: None known.

% unknown toxicity (Oral): 100 % of the mixture consists of ingredients of unknown toxicity

% unknown toxicity (Dermal): 100 % of the mixture consists of ingredients of unknown toxicity

3. Composition/information on ingredients

Chemical Name	CAS No.	Concentration (% by weight)
Not classified as hazardous.		

4. First aid measures

Description of necessary measures:

Inhalation: Remove to fresh air. Get medical attention if irritation persists.

Eye contact: Remove particles by irrigating with eye wash solution or clean water, holding the eyelids apart.

Skin Contact: Wash skin with soap and water.

Ingestion: None required.

Description of acute and delayed symptoms/effects:

Possible physical irritant from dust particles. Potential for dust explosion. Contributes to effluent BOD.

Indication of immediate medical attention and special treatment needed, if necessary:

No further first aid information is available.

5. Fire fighting measures

Extinguishing media:

Suitable extinguishing media: Dry Chemical, CO₂, Water Fog, Foam

Unsuitable extinguishing media: None known.

Specific hazards arising from the chemical:

Minimum ignition temperature of dust cloud- approx. 390 C. Minimum explosive concentration- approx. 70 mg/l. Minimum energy to ignite cloud by electrical spark- approx. 0.06 joules.

Hazardous Combustion Products:

This product does not undergo spontaneous decomposition. Typical combustion products are carbon monoxide, carbon dioxide, nitrogen and water.

Special protective equipment for fire-fighters:

Do not enter fire area without proper protection including self- contained breathing apparatus and full protective equipment.

6. Accidental release measures

Personal precautions, protective equipment, emergency procedures:

Use personal protective equipment as required.

Environmental precautions:

No data available

Methods and material for containment and cleaning up:

Normal precautions for "nuisance dust" should be observed. Avoid prolonged inhalation of dust. Sweep up or vacuum up and place in suitable container for disposal.

7. Handling and storage

Precautions for safe handling:

As with all chemicals, good industrial hygiene practices should be followed when handling this material.

Conditions for safe storage, including any incompatibilities:

Conditions for safe storage: Keep container closed when not in use.

Static Sensitivity: Yes

Other precautions: Avoid dispersing the powder in the air. Prevent buildup of powder on surfaces.

Materials to Avoid/Chemical Incompatibility: None known

8. Exposure controls/personal protection

Control parameters/ Occupational exposure limits or biological limit values:

Chemical Name	Singapore - Occupational Exposure Limits - PELs	Singapore - Occupational Exposure Limits - STELs	Singapore - Biological Exposure Limits
No data available			

This product can produce a nuisance dust which should be maintained below a time weighted average of 10 mg/m³.

- Appropriate engineering controls:** General.
- Individual protection measures:**
- Respiratory Protection:** NIOSH approved dust mask. Dust masks should conform to EN 149.
- Eye and face protection:** Chemical safety glasses. Personal eye protection should conform to EN 166.
- Skin protection:** Skin protection may be required depending on product temperature.
- Gloves:** Gloves are recommended due to possible irritation., Gloves should conform to EN 374.
- Other protective equipment:** Not normally required. Uniforms, coveralls, or a lab coat should be worn.
- General hygiene conditions:** Wash before eating, drinking, or using toilet facilities.

9. Physical and chemical properties
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- Appearance (physical state, colour etc.):**
- Pure Substance or Mixture: Pure
- Physical State: Powder
- Colour: White
- Odour:** Starch
- Odour Threshold:** Not available
- pH:** Not available
- pH in (1%) Solution:** Approximately 6
- Melting point/freezing point:**
- Melting Point: Not available
- Freezing point: Not available
- Initial boiling point and boiling range:** Not available
- Flash Point:** Not applicable
- Evaporation Rate:** Not applicable
- Flammability (solid, gas):** No

Upper/lower flammability or explosive limits:

Upper flammability or explosive limits: Not available

Lower flammability or explosive limits: Not available

Vapour pressure: Not available

Vapour density: Not available

Relative density: 1.5

Solubility: Insoluble

Partition coefficient: n-octanol/water: Not available

Auto-ignition temperature: Not available

Decomposition temperature: Not available

Viscosity: Not applicable

Volatiles: None

Volatile Organic Chemicals: Not applicable

10. Stability and reactivity

Reactivity: Not expected to be reactive.

Chemical stability: Stable

Possibility of hazardous reactions: Hazardous polymerization will not occur.

Conditions to avoid: None known

Incompatible materials: None known

Hazardous decomposition products: This product does not undergo spontaneous decomposition. Typical combustion products are carbon monoxide, carbon dioxide, nitrogen and water.

11. Toxicological information

Description of the various toxicological (health) effects and the available data used to identify those effects:

Information on possible routes of exposure: Eye Contact, Skin Contact, Inhalation, Ingestion

Target Organs Potentially Affected By Exposure: Not applicable.

Symptoms related to physical, chemical and toxicological characteristics: No data available

Toxic Effects: This product is considered as being non-toxic. Use of good industrial hygiene practices is recommended.

Exposure levels and health effects:

Acute toxicity:

Ingestion Toxicity: Based on available data, the GHS classification criteria are not met.

Acute toxicity - Dermal: Based on available data, the GHS classification criteria are not met.

Inhalation Toxicity: Based on available data, the GHS classification criteria are not met.

Skin corrosion/irritation:

Wash skin with soap and water. Unlikely to cause harmful effects under recommended conditions of handling and use.

Serious eye damage/irritation:

Based on available data, the GHS classification criteria are not met.

Respiratory sensitisation:

Based on available data, the GHS classification criteria are not met.

Skin sensitisation:

Based on available data, the GHS classification criteria are not met.

Germ cell mutagenicity:

Based on available data, the GHS classification criteria are not met.

Reproductive Toxicity:

Based on available data, the GHS classification criteria are not met.

Carcinogenicity:

No.

Specific Target Organ Toxicity (STOT)-single exposure:

Based on available data, the GHS classification criteria are not met.

Specific Target Organ Toxicity (STOT) -repeated exposure:

Based on available data, the GHS classification criteria are not met.

Aspiration hazard:

Based on available data, the GHS classification criteria are not met.

Numerical measures of toxicity (such as acute toxicity estimates):

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
There is no known toxicity data available for the components or the product.			

12. Ecological information

Eco-toxicity:

Low, but has a BOD contribution.

Ecological Toxicity Data:

Chemical Name	CAS No.	Aquatic LC50 Fish	Aquatic ERC50 Algae	Aquatic EC50 Crustacea
No data available				

Persistence and degradability:

Readily biodegradable.

Bioaccumulative potential:

Low (degrades too rapidly)

Mobility in soil: Unknown
Other adverse effects: None known.

13. Disposal considerations

Description of waste residues and information on their safe handling and methods of disposal: Disposal should be in accordance with local, state or national legislation.

14. Transport information

DOT Classification: Not regulated
UN number: Not applicable
Proper shipping name or technical name: Not applicable
Transport hazard class: Not applicable
Packing group: Not applicable
Toxic Inhalation Hazard Zone: No data available

Environmental hazards for transport purposes: No data available
Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code): No data available
Special precautions for user: Consult IMO regulations before transporting in bulk by ocean.

15. Regulatory information

Safety, health and environmental regulations:

TSCA Status: This product is manufactured in compliance with all provisions of the Toxic Substances Control Act, 15 U.S.C. 2601 et. seq.
FDA 21CFR178.3520.

Montreal Protocol on Substances that Deplete the Ozone Layer

Chemical Name	CAS No.	Montreal Protocol on Substances that Deplete the Ozone Layer
No data available		

Stockholm Convention on Persistent Organic Pollutants

Chemical Name	CAS No.	Stockholm Convention on Persistent Organic Pollutants
No data available		

Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade

Chemical Name	CAS No.	Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade
No data available		

Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal

Chemical Name	CAS No.	Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal
No data available		

Singapore List of Hazardous Substances

Chemical Name	CAS No.	Singapore List of Hazardous Substances
No data available		

Singapore - HAZCHEM Emergency Action Code(Commonwealth)

Chemical Name	CAS No.	Singapore - HAZCHEM Emergency Action Code(Commonwealth)
No data available		

16. Other information

Revision Date: 10-19-2023

Supersedes: 02-24-2023

Revision Number: 7

Reason for revision: New

For Information Contact: Singapore:
 Ingredion Singapore Pte Ltd.
 Customer Service: +65 6872 6006



Safety Data Sheet

BENEFORM 2160

Hazard Statements: No Hazard Statement needed.

Precautionary Statements: No Precautionary Statement needed.

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