

## BENEFORM 2160

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1 Product identifier:

Product Name: BENEFORM 2160  
modified starch

#### Other means of identification:

Chemical family: Modified Starch  
UFI Number:  
REACH Registration Number: This product is exempt from REACH

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

Relevant identified use: Industrial specialties use  
Uses advised against: Not Available

#### 1.3 Details of the supplier of the safety data sheet:

The relevant Ingredion EMEA Company which invoices for the Product – please see Section 16

e-mail address of competent person responsible for the SDS: Regulatory.emea@ingredion.com

1.4 Emergency telephone number: EMERGENCY TELEPHONE: +1 703-741-5970 / 1-800-424-9300

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture:

Classification according to Regulation (EC) No 1272/2008 (CLP): Not classified as hazardous in accordance with CLP

#### 2.2 Label elements:

Hazard pictograms: No hazard symbols required

Signal word: No Signal Word needed.

Hazard statements: No Hazard Statement needed.

Precautionary statements: No Precautionary Statement needed.

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Prepared in accordance with Commission Regulation (EU) 2020/878

Revision Date: 28-06-2023  
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**Supplemental Hazard information (EU):** No Supplemental Hazard Information available

**ADDITIONAL INFORMATION:** Not applicable

**2.3 Other hazards:** This product can produce a nuisance dust which should be maintained below a time weighted average of 10 mg/m<sup>3</sup>.  
 This substance/mixture contains no components considered to be an endocrine-disrupting substance at levels of 0.1% or higher.  
 Not expected to be PBT or vPvB.

**SECTION 3: Composition/information on ingredients**

**3.1 Substances:**  
 Not applicable

**3.2 Mixtures:**

Substance Name	Concentration (% by weight)	CAS No.	EC No. REACH Registration No.	Classification according to Regulation (EC) No 1272/2008 (CLP)	M-factor	SCL	ATE	Nanofor m Material
This product is not classified as hazardous								

For full text of H-statements, see SECTION 16.

**SECTION 4: First aid measures**

**4.1 Description of first aid 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.

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Skin Contact:	Wash skin with soap and water.
Ingestion:	None required.
Self protection of the first aider:	No data available
<b>4.2 Most important symptoms and effects, both acute and delayed:</b>	Nuisance dust with a possibility of dust explosion. Contributes to effluent BOD.
<b>4.3 Indication of any immediate medical attention and special treatment needed:</b>	No further first aid information is available.

### SECTION 5: Firefighting measures

#### 5.1 Extinguishing media:

Suitable extinguishing media:	Dry Chemical., Carbon dioxide (CO <sub>2</sub> )., Water Fog., Foam.
Unsuitable extinguishing media:	None known.

#### 5.2 Special hazards arising from the substance or mixture:

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

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

### SECTION 6: Accidental release measures

#### 6.1 Personal precautions, protective equipment and emergency procedures:

Non-emergency personnel:	Non-emergency personnel should be kept clear of the area.
Emergency responders:	Use personal protective equipment as required.

#### 6.2 Environmental precautions:

Not available

#### 6.3 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.

#### 6.4 Reference to other sections:

See section 8 for appropriate personal protective equipment. See section 2 and 7 for additional information on hazards and precautionary measures.

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### SECTION 7: Handling and storage

- 7.1 Precautions for safe handling:** As with all chemicals, good industrial hygiene practices should be followed when handling this material.
- 7.1.1 Recommendations for safe handling: Prevent handling of incompatible substance or mixtures. Take measures to prevent fire as well as aerosol and dust generation.
- 7.1.2 Advice on general occupational hygiene: Do not eat, drink and smoke in work areas. Wash hands after use. Remove contaminated clothing and protective equipment before entering eating areas.
- 7.2 Conditions for safe storage, including any incompatibilities:**
- Safe storage conditions: Keep container closed when not in use.
- Special Sensitivity: No special sensitivity.
- Static Sensitivity: Yes
- Other precautions: Avoid dispersing the powder in the air. Prevent build-up of powder on surfaces.
- Materials to Avoid/Chemical Incompatibility: None known.
- 7.3 Specific end use(s):** Industrial specialties use

### SECTION 8: Exposure controls/personal protection

#### 8.1 Control parameters:

Substance Name	United Kingdom - Workplace Exposure Limits (WELs) - TWAs	United Kingdom - Workplace Exposure Limits (WELs) - STELs	United Kingdom - Biological Monitoring Guidance Values
Starch (9005-25-8)	10 mg/m <sup>3</sup> TWA (total inhalable) 4 mg/m <sup>3</sup> TWA (respirable)	30 mg/m <sup>3</sup> STEL (calculated, total inhalable); 12 mg/m <sup>3</sup> STEL (calculated, respirable)	No data available

This product can produce a nuisance dust which should be maintained below a time weighted average of 10 mg/m<sup>3</sup>.

**DNEL:** None known

**PNEC:** None known.

#### 8.2 Exposure controls:

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<b>Appropriate engineering controls:</b>	General.
<b>Individual protection measures, such as personal protective equipment:</b>	
<b>Eye/face protection:</b>	Chemical safety glasses. Personal eye protection should conform to EN 166.
<b>Skin protection:</b>	Skin protection may be required depending on product temperature.
<b>Hand protection:</b>	Gloves are recommended due to possible irritation., Gloves should conform to EN 374.
<b>Respiratory protection:</b>	Use approved dust mask. Dust masks should conform to EN 149.
<b>Thermal hazards:</b>	Not available
<b>Environmental exposure controls:</b>	Avoid runoff into storm sewers and ditches that lead to waterways.

### SECTION 9: Physical and chemical properties

#### 9.1 Information on basic physical and chemical properties:

Pure Substance or Mixture:	Substance.
Physical state:	Powder.
Colour:	white
<b>Odour and odour threshold:</b>	Starch odour.
<b>pH:</b>	Not available
<b>pH in (1%) Solution:</b>	Approximately 6
<b>Melting point/freezing point:</b>	
Melting Point:	Not available
Freezing point:	Not available
<b>Boiling point or initial boiling point and boiling range:</b>	Not available
<b>Flash point:</b>	Not applicable
<b>Evaporation Rate:</b>	Not applicable
<b>Flammability:</b>	No
<b>Upper/lower flammability or explosive limits:</b>	
Upper flammability or explosive limits:	Not available
Lower flammability or explosive limits:	Not available
<b>Vapour pressure:</b>	Not available
<b>Vapour density:</b>	Not available
<b>Density and/or relative density:</b>	1.5
<b>Solubility:</b>	Insoluble
<b>Partition coefficient n-octanol/water (log value):</b>	Not available

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<b>Auto-ignition temperature:</b>	Not available
<b>Decomposition temperature:</b>	Not available
<b>Viscosity:</b>	Not applicable
<b>Volatiles:</b>	None
<b>Volatile Organic Chemicals:</b>	Not applicable
<b>Kinematic viscosity:</b>	Not available
<b>Particle characteristics:</b>	Not applicable
<b>9.2 Other information:</b>	
<b>Molecular Weight:</b>	> 10000

### SECTION 10: Stability and Reactivity

<b>10.1 Reactivity:</b>	Not expected to be reactive
<b>10.2 Chemical stability:</b>	Stable
<b>10.3 Possibility of hazardous reactions:</b>	Hazardous polymerization will not occur.
<b>10.4 Conditions to avoid:</b>	None known.
<b>10.5 Incompatible materials:</b>	None known.
<b>10.6 Hazardous decomposition products:</b>	This product does not undergo spontaneous decomposition. Typical combustion products are carbon monoxide, carbon dioxide, nitrogen and water.

### SECTION 11: Toxicological information

#### 11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008:

<b>Information on possible routes of exposure:</b>	Eye Contact, Skin Contact, Inhalation, Ingestion
<b>Target Organs Potentially Affected By Exposure:</b>	Not applicable.
<b>Early onset symptoms related to exposure:</b>	No data available
<b>Toxic Effects:</b>	This product is considered as being non-toxic. Use of good industrial hygiene practices is recommended.
<b>Exposure levels and health effects:</b>	
<b>Acute toxicity:</b>	
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.

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<b>Inhalation Toxicity:</b>	Based on available data, the GHS classification criteria are not met.
<b>Skin corrosion/irritation:</b>	Wash skin with soap and water. Unlikely to cause harmful effects under recommended conditions of handling and use.
<b>Serious eye damage/irritation:</b>	Based on available data, the GHS classification criteria are not met.
<b>Respiratory sensitisation:</b>	Based on available data, the GHS classification criteria are not met.
<b>Skin sensitisation:</b>	Based on available data, the GHS classification criteria are not met.
<b>Germ cell mutagenicity:</b>	Based on available data, the GHS classification criteria are not met.
<b>Reproductive Toxicity:</b>	Based on available data, the GHS classification criteria are not met.
<b>Carcinogenicity:</b>	No.
<b>Specific Target Organ Toxicity (STOT)-single exposure:</b>	Based on available data, the GHS classification criteria are not met.
<b>Specific Target Organ Toxicity (STOT) -repeated exposure:</b>	Based on available data, the GHS classification criteria are not met.
<b>Aspiration hazard:</b>	Based on available data, the GHS classification criteria are not met.
<b>Endocrine disrupting properties:</b>	None of the components have endocrine disrupting properties.

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

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

**SECTION 12: Ecological information**

**12.1 Toxicity:** Low, but has a BOD contribution.

**Ecological Toxicity Data:**

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

**12.2 Persistence and degradability:** Readily biodegradable.  
**12.3 Bioaccumulative potential:** Low (degrades too rapidly)  
**12.4 Mobility in soil:** Unknown  
**12.5 Results of PBT and vPvB assessment:** Not expected to be PBT or vPvB.

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**12.6 Endocrine disrupting properties:** None known.

**12.7 Other adverse effects:** None known.

### SECTION 13: Disposal considerations

**13.1 Waste treatment methods:** Waste disposal should be in accordance with existing Community, National and local regulations.

**Empty container warnings:** Empty containers may contain product residue; follow SDS and label warnings even after they have been emptied.

### SECTION 14: Transport Information

**14.1 UN number:** Not applicable  
**14.2 UN proper shipping name:** Not Applicable  
**14.3 Transport hazard class(es):** Not Applicable  
**14.4 Packing group:** Not Applicable  
**Toxic Inhalation Hazard Zone:** No data available

**14.5. Environmental hazards:** No data available  
**14.7 Maritime transport in bulk according to IMO instruments:** No data available

**14.6 Special precautions for user:** Consult IMO regulations before transporting in bulk by ocean.

### SECTION 15: Regulatory information

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

Substance Name	EINECS	SVHC
No data available		

**15.2 Chemical Safety Assessment:** No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

### SECTION 16: Other information

**Revision Date:** 06-28-2023

**Indication of changes:** None Known

**Abbreviations and acronyms:** CAS = Chemical Abstract Service  
 DNEL= Derivative No Effect Level





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EC= European Community  
EINECS = European Inventory of Existing Chemical Substances  
MSHA = Mine Safety Health Administration  
NIOSH = National Institute of Occupational Safety & Health  
OEL = Occupational Exposure Limit  
PBT= Persistent, Bioaccumulative, Toxic  
PNEC= Predicted No Effect Concentration  
SCOEL= Scientific Committee on Occupational Exposure Limits  
TLV = Threshold Limit Value  
TWA= Time Weighted Average  
vPvB= Very Persistent, Very Bioaccumulative  
Wt.% = Weight Percent

**References and sources of data:**

Classification according to Regulation (EC) 1272/2008 (CLP), as amended and Regulation (EC) 1907/2006 (REACH), as amended

**Hazard statements:**

No Hazard Statement needed.

**Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:**

Classification according to Regulation (EC) Nr. 1272/2008	Classification procedure
Not available	Not available

**Precautionary statements:**

No Precautionary Statement needed.

Products are manufactured in accordance with EU Law, unless expressly agreed to otherwise, in writing, by the relevant Ingredion company referred to below. The information on the safety data sheets is provided for the purposes of a general health and safety assessment by an industrial user (the "User"). Reference should also be made by the User, to any other specific relevant local or national health, safety, environmental or other applicable legislation, including any import or export regulations relevant to the country in which the User operates - the User will need to check this information for itself. The information provided by the relevant Ingredion company referred to below, does not constitute indication of suitability for specific uses, nor is it legal advice given to the User.

This document is issued on behalf of the Ingredion EMEA Company which is the Supplier invoicing for the Product. The respective details of each of the relevant Supplier companies are as follows:

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