

## 1. Identification of the substance/mixture and of the company/undertaking

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**1.1 Product identifier:** N-DULGE(TM) 320  
food starch

**Other means of identification:**

**Chemical family:** Modified Starch

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

**Relevant identified uses:** Food products

**Uses advised against:** Not Available

### 1.3 Details of the Supplier of the Safety Data Sheet:

#### **SUPPLIER**

INGREDION INDIA PVT LTD.  
1605, 16th Floor, Rupa Solitaire,  
Millennium Business Park, Mahape,  
Thane Belapur Road, Navi Mumbai - 400710,  
Maharashtra, India  
Tel: +91 22 6820 0600 (business hours)

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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

Hong Kong: 800-968-793\*

India: 000-800-100-7141\*

Indonesia: 001-803-017-9114\*

Japan: +(81)-3-4520-9637

Malaysia: +(60)-392125794, 1-800-815-308\*

New Zealand: +(64)-98010034

Philippines: +(63) 2-395-3308, 1-800-1-116-1020\*

Singapore: +(65)-31581349, 800-101-2201\*

South Korea: +(82) 070-7686-0086, 00-308-13-2549\*

Taiwan: +886-2-7741-4207\*, 00801-14-8954\*

Thailand: 001-800-13-203-9987\*

Vietnam: +(84)-444581938

\* Phone numbers for countries marked with an asterisk must be dialed within the country



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SDS Requests and general information, please contact Local Customer Service: See phone numbers in Section 16

## 2. Hazards identification

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### 2.1 Classification of the substance or mixture:

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

### 2.2 Label elements:

**Labelling according to Regulation (EC) No 1272/2008 [CLP]:**

**Hazard pictograms:** No hazard symbols required

**Signal Word:** No signal word needed.

**Hazard Statements:** No Hazard Statement needed.

**Precautionary Statements:** No Precautionary Statement needed.

**Supplemental Hazard information (EU):** None known.

### Hazards not otherwise classified:

**DUST:** None known.

**EYE:** Particulates may scratch eye surfaces and cause mechanical irritation.

**SKIN CONTACT:** Low order of toxicity.

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

**INGESTION:** Low oral toxicity.

## 3. Composition/information on ingredients

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### 3.1 Substances:

Not applicable

### 3.2 Mixtures:

Chemical Name	CAS #	%
No hazardous components.		

For full text of H-statements see Section 16

## 4. First aid measures

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### 4.1 Description of first aid measures:

<b>Inhalation:</b>	Remove to fresh air. Get medical attention if irritation persists.
<b>Eye contact:</b>	If symptoms develop, obtain medical attention. Remove particles by irrigating with eye wash solution or clean water, holding the eyelids apart.
<b>Skin Contact:</b>	Wash skin with soap and water.
<b>Ingestion:</b>	None required.
<b>Self protection of the first aider:</b>	No data available

**4.2 Most important symptoms and effects, both acute and delayed:** Possible physical irritant from dust particles. Potential for dust explosion.

**4.3 Indication of any immediate medical attention and special treatment needed:** None known.

## 5. Firefighting measures

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### 5.1 Extinguishing media:

<b>Suitable extinguishing media:</b>	Dry Chemical, CO2, Water Fog, Foam
<b>Unsuitable extinguishing media:</b>	None known.

**5.2 Special hazards arising from the substance or mixture:** Minimum ignition temperature of dust cloud- approx. 390 C. Minimum explosive concentration- approx. 80 mg/l. Minimum energy to ignite cloud by electrical spark- approx. 0.10 joules.

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

**5.3 Advice for firefighters:** No special procedures are required.

## 6. Accidental release measures

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

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

**6.2 Environmental precautions:** No data available

### 6.3 Methods and material for containment and cleaning up:

<b>Small spills:</b>	Refer to information provided for large spills
<b>Large spills:</b>	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.



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**6.4 Reference to other sections:** See Section 8 for appropriate personal protective equipment. See Sections 2 and 7 for additional information on hazards and precautionary measures.

## 7. Handling and storage

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**7.1 Precautions for safe handling:** Normal precautions for handling chemicals are applicable.

**7.2 Conditions for safe storage, including any incompatibilities:**

**Conditions for safe storage:**

**Special Sensitivity:** Not available

**Sensitivity to Static Electricity:** Yes

**Other precautions:** Use care to minimize dust generation in normal use conditions.

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

**Materials to Avoid/Chemical Incompatibility:** No data available

**7.3 Specific end use(s):** Food products

## 8. Exposure controls/personal protection

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**8.1 Control parameters:**

**Occupational Exposure limit values:**

Chemical Name	INDIA - Occupational Exposure Limits - TWAs	INDIA - Occupational Exposure Limits - STELs	INDIA - Occupational Exposure Limits - Ceilings	INDIA - Biological Exposure Limits
Not listed.				

**DNEL:** None known.

**PNEC:** None known.

**8.2 Exposure controls:**

**Appropriate engineering controls:** No data available

**Individual protection measures, such as personal protective equipment:**

**Eye and face protection:** Safety glasses recommended.

**Skin Protection:**

**Hand protection:** The use of chemically resistant gloves is recommended.

**Other skin protection:** Not applicable. Uniforms, coveralls, or a lab coat should be worn.

<b>Respiratory Protection:</b>	No data available
<b>Respirator Type(s):</b>	NIOSH approved dust mask.
<b>Other Protective Equipment:</b>	Wash before eating, drinking, or using toilet facilities.
<b>General Hygiene Conditions:</b>	Not normally required.
<b>Thermal Hazards:</b>	Not available
<b>Environmental exposure controls:</b>	Avoid runoff into storm sewers and ditches that lead to waterways.

## 9. Physical and chemical properties

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

<b>Appearance:</b>	Powder.
<b>Colour:</b>	White
<b>Odour:</b>	Starch
<b>Odour threshold:</b>	Not available
<b>pH:</b>	Not available
<b>pH in (1%) Solution:</b>	Approximately 6
<b>Melting point / freezing point:</b>	
<b>Melting point:</b>	Not available
<b>Freezing point (°C):</b>	No data available
<b>Initial boiling point and boiling range (°C):</b>	No data available
<b>Flash point (°C):</b>	No data available
<b>Flash point method:</b>	Not available
<b>Evaporation Rate (water = 1):</b>	Not applicable
<b>Flammability (solid, gas):</b>	Not available
<b>Upper/lower flammability or explosive limits:</b>	
<b>Upper flammable or explosive limit, % in air:</b>	Not available
<b>Lower flammable or explosive limit, % in air:</b>	Not available
<b>Vapour pressure:</b>	Not available
<b>Vapor Density (Air=1):</b>	Not available
<b>Relative density:</b>	1.5000000
<b>Solubility(ies):</b>	Insoluble
<b>Partition coefficient: n-octanol/water:</b>	Not available
<b>Auto-ignition temperature (°C):</b>	No data available
<b>Decomposition temperature (°C):</b>	Not available
<b>Viscosity:</b>	Not available

**Explosive properties:** Not available

**Oxidizing properties:** Not available

**9.2 Other information:**

**Heat of decomposition:** Not available

**Volatiles by weight:** Not available

**Volatile Organic Chemicals:** Not available

**Molecular formula:** Not available

**Molecular weight:** > 10000

**Liquid density:** Not available

**VOC (as applied\*- 2% by wt hardener-less exempts and water):** NAP or

**Bulk density:** Not available

**10. Stability and reactivity**

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**10.1 Reactivity:** Not expected to be reactive

**10.2 Chemical stability:** Stable

**10.3 Possibility of hazardous reactions:** Hazardous polymerization will not occur.

**10.4 Conditions to avoid:** None known.

**10.5 Incompatible materials:** No data available

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

**11. Toxicological information**

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**11.1 Information on toxicological effects:**

**Acute toxicity:**

Chemical Name	ORAL LD50 (rat)	DERMAL LD50 (rabbit)	INHALATION LC50 (rat)
No data available			

**Skin corrosion/irritation:**

Based on available data, the GHS classification criteria are not met. Unlikely to cause harmful effects under recommended conditions of handling and use. Low order of toxicity.

**Serious eye damage/irritation:**

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



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**Respiratory or 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.

**Carcinogenicity:**

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

**Reproductive toxicity:**

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

**STOT-single exposure:**

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

**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.

## 12. Ecological information

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**12.1 Toxicity:**

Low toxicity to aquatic organisms.

**Ecological Toxicity Data:**

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

**12.2 Persistence and degradability:**

No data available

**12.3 Bioaccumulative potential:**

No data available

**12.4 Mobility in soil:**

Unknown

**12.5 Results of PBT and vPvB  
assessment:**

Not applicable

**12.6 Other adverse effects:**

None known.

**12.7 Additional information:**

No data available

## 13. Disposal considerations

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**13.1 Waste treatment methods:**

**Disposal methods:**

Disposal should be in accordance with local, state or national legislation.

**Empty Container Warnings:**

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

## 14. Transport information

### International carriage of dangerous goods by road (ADR), rail or inland waterways:

- 14.1. UN number: No data available  
 14.2. UN proper shipping name: Not applicable  
 14.3. Transport hazard class(es): Not Applicable  
 14.4. Packing group: Not applicable

### International carriage of dangerous goods by sea (IMDG/IMO):

- 14.1. UN number: No data available  
 14.2. UN proper shipping name: Not applicable  
 14.3. Transport hazard class(es): Not applicable  
 14.4. Packing group: Not applicable

### International carriage of dangerous goods by air (IATA):

- 14.1. UN number: No data available  
 14.2. UN proper shipping name: Not Applicable  
 14.3. Transport hazard class(es): Not applicable  
 14.4. Packing group: Not applicable  
 14.5. Environmental hazards: Not available  
 14.6. Special precautions for user: Consult IMO regulations before transporting in bulk by ocean.  
 14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code: Not available

## 15. Regulatory information

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

- TSCA** This product is manufactured in compliance with all provisions of the Toxic Substances Control Act, 15 U.S.C. 2601 et. seq.
- FDA** 21CFR172.892.

Chemical Name	Ozone Depleting Substances Schedule	Hazardous Chemical Rules List of Hazardous and Toxic Chemicals
None of the components are listed on this regulatory list		



**16. Other information**

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Revision Date: 12-04-2021  
 Supercedes: 26-05-2020  
 Revision Number: 5  
 Reason for revision: New

**FOR INFORMATION CONTACT:** India:  
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**Abbreviations and acronyms:** CAS = Chemical Abstract Service  
 DNEL= Derivative No Effect Level  
 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

**Hazard phrase(s) referenced in section 3:** No data available

**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	

**Disclaimer of Liability:** The attached data has been compiled from sources which Ingredion Incorporated and the Ingredion group of companies, believe to be dependable and, to our knowledge and belief is accurate. However,



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