



SAFETY DATA SHEET

N-DULGE(R) 2900

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

1.1 Product identifier: **N-DULGE(R) 2900**
modified 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 Incorporated
5 Westbrook Corporate Center
Westchester, Il. 60154
USA

EMERGENCY PHONES:

MEDICAL: 866-374-2659 (Health & Safety Call
Center-24 hours)

Corporate Emergency Phone: 708-551-2600
(24 hours)

SDS Requests/Customer Service: See phone
numbers in Section 16

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*



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

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

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 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. Low order of toxicity.

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

INHALATION: Low oral toxicity.

3. Composition/information on ingredients

3.1 Substances:

Not applicable

3.2 Mixtures:

Chemical Name	CAS #	%

No hazardous components.		
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For full text of H-statements see Section 16

4. First aid measures

4.1 Description of first aid measures:

Inhalation:	Remove to fresh air. Get medical attention if irritation persists.
Eye contact:	If symptoms develop, obtain medical attention. 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.
Self protection of the first aider:	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

5.1 Extinguishing media:

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

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: No data available

6.3 Methods and material for containment and cleaning up:

Small spills: Refer to information provided for large spills

Large spills: 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 Sections 2 and 7 for additional information on hazards and precautionary measures.

7. Handling and storage

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

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: No data available

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

Respiratory Protection: No data available

Respirator Type(s): NIOSH approved dust mask.

Other Protective Equipment: Wash before eating, drinking, or using toilet facilities.

General Hygiene Conditions: Not normally required.

Thermal Hazards: Not available

Environmental exposure controls: Avoid runoff into storm sewers and ditches that lead to waterways.

9. Physical and chemical properties

9.1 Information on basic physical and chemical properties:

Appearance: Powder.

Colour: Off-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 (°C): No data available

Initial boiling point and boiling range (°C): No data available

Flash point (°C): No data available

Flash point method: Not available

Evaporation Rate (water = 1): Not applicable

Flammability (solid, gas): Not available

Upper/lower flammability or explosive limits:

Upper flammable or explosive limit, % in air: Not available

Lower flammable or explosive limit, % in air: Not available

Vapour pressure: Not available

Vapor Density (Air=1): Not available

Relative density: 1.5000000

Solubility(ies): Slightly Soluble

Partition coefficient: n-octanol/water: Not available

Auto-ignition temperature (°C): No data available
Decomposition temperature (°C): Not available
Viscosity: 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

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

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.

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

12.1 Toxicity: No data available

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

13.1 Waste treatment methods:

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



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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
None of the components are listed on this regulatory list		

16. Other information

Revision Date: 30-07-2021
Supercedes: 30-07-2019
Revision Number: 4
Reason for revision: New

FOR INFORMATION CONTACT: For product information, contact:
National Starch LLC
National Starch Food Innovation
Customer Service: 1-800-859-8569
Technical Service Support: 1-800-743-6343

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	



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