

SAFETY DATA SHEET STARCH N-A 200

SECTION 1 : Identification

1.1 Product identifier:

Product name: STARCH N-A 200

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

| Identified uses: | Uses advised against: |
|-------------------------------|-----------------------|
| Industrial.; Pharmaceuticals. | No data available. |

1.3 Details of the supplier of the safety data sheet:

Supplier:

ROQUETTE FRERES
1 Rue de la Haute Loge
62136 LESTREM - France

Telephone: +33 3 21 63 36 00

Fax: +33 3 21 63 38 50

E-mail: sds@roquette.com

1.4 Emergency telephone number:

World directory of poisons centres : http://www.who.int/gho/phe/chemical_safety/poisons_centres/en/

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture:

The product has not been classified as dangerous according to GHS.

2.2 Label elements: Not applicable

2.3 Other hazards: May form explosible dust-air mixture if dispersed in the air

SECTION 3: Composition/information on ingredients

3.1 Mixture:

| Chemical name | Concentration | CAS-No. |
|---------------|---------------|-----------|
| Starch | >=89% | 9005-25-8 |

SECTION 4: First aid measures

4.1 Description of first aid measures:

Inhalation: Move the exposed person to fresh air at once. Get medical attention if any discomfort continues.

Eye contact: Flush thoroughly with water. If irritation occurs, get medical assistance.

Skin contact: Wash with soap and water.

Ingestion: Get medical attention if symptoms occur.

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:

Treatment: Treat symptomatically.

SECTION 5: Firefighting measures

5.1 Extinguishing media:

Suitable extinguishing media: Water spray.

Unsuitable extinguishing media: Dry chemicals or foams. Straight Streams of Water

5.2 Special hazards arising from the substance or mixture: Fire or excessive heat may produce hazardous decomposition products. See Section 10. Combustible dusts : may form an explosible mixture in the air.

5.3 Advice for firefighters:

Special Fire Fighting Procedures: Prevent dust cloud. Do not use water jet as an extinguisher, as this will spread the fire.

Special protective equipment for fire-fighters: Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures: See Section 8 of the SDS for Personal Protective Equipment.

6.2 Environmental precautions: Avoid discharge to the aquatic environment.

6.3 Methods and material for containment and cleaning up: Remove material, as much as possible, using mechanical equipment. Prevent dust cloud. Collect and dispose of spillage as indicated in section 13 of the SDS.

SECTION 7: Handling and storage

7.1 Precautions for safe handling: Avoid generation and spreading of dust.

7.2 Conditions for safe storage, including any incompatibilities: Keep containers tightly closed. Store in original container.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters:

Occupational exposure limits:

This product does not contain any components >1% with specific occupational exposure limits.

8.2 Appropriate engineering controls:

Ventilate as needed to control airborne dust. Use explosion-proof ventilation equipment if airborne dust levels are high. Comply with occupational exposure limits and minimize inhalation of dust.

8.3 Individual protection measures, such as personal protective equipment:

Eye/face protection: Wear dust-proof safety goggles where there is a risk of eyes contact. (EN 166)

Skin protection:

Hand Protection: No special precautions.

Other: No special precautions.

Respiratory Protection: Use respiratory equipment with particle filter, type P3.

Hygiene measures: Handle the product in accordance with the good hygiene practices and safety instructions.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties:

| | |
|---|--|
| Physical State: | solid |
| Form: | Powder |
| Color: | White |
| Odor: | Odorless |
| pH: | ~ 6,2 at 20 % |
| Melting Point: | Not applicable No data available. |
| Boiling Point: | Not Applicable |
| Flash Point: | Not Applicable |
| Vapor pressure: | Not Applicable |
| Vapor density (air=1): | Not Applicable |
| Partition coefficient (n-octanol/water): | < -2 - ECHA Database - Similar substance |
| Decomposition Temperature: | No data available. |

Explosive properties: - INERIS -Data from similar product.

| | |
|--|--|
| Ignition Temperature: | ~ 480 °C (Godbert-Greenwald) MIT in Cloud. |
| MIE (Minimum Ignition Energy): | ~ 225 mJ (EN 13821 / ASTM E2019, Without Inductance) Sensitive to the risk of inflammation by an electrostatic discharge. |
| dP/dtmax (Maximum Rate of explosion Pressure rise): | ~ 460 bar/s (EN 14034-2 / ASTM E1226) |
| Pmax (Maximum Explosion OverPressure) ±10%: | ~ 8,5 bar (EN 14034-1 / ASTM E1226) |
| Kst value (±20%): | ~ 124 barm/s (EN 14034-2 / ASTM E1226) |
| Dust Explosion Class: | st 1 (VDI 3673) |
| Volume resistivity: | 7,5x10 ¹³ Ω.cm (IEC 61241-2-2 / Group IIIB non-conductive dust.) |
| Moisture: | ~ 12,38 % (ISO 589) |
| Mv (Median value): | ~ 18 µm (ISO 13320) |
| Other Data: | 30-60 g/m ³ (EN 14034-3 / ASTM E1515) BZ (Combustion class) : 3 (VDI 2263-1) |

Oxidizing properties: NC: Not Classified

9.2 Other information:

The data reported in this section does not take the place of specifications.

SECTION 10: Stability and reactivity

| | |
|---|--|
| 10.1 Reactivity: | Oxidizing agents. |
| 10.2 Chemical stability: | Material is stable under normal conditions. |
| 10.3 Possibility of hazardous reactions: | No hazardous reactions under ordinary conditions of use and storage. |
| 10.4 Conditions to avoid: | Prevent dust cloud. Dust clouds may be explosive under certain conditions. Avoid dust close to ignition sources. |
| 10.5 Incompatible materials: | Strong oxidizing substances. |
| 10.6 Hazardous decomposition products: | Carbon Dioxide. Carbon Monoxide. |

SECTION 11: Toxicological information

11.1 Information on toxicological effects:

Acute toxicity :

| Test / Substance | Species | Type / Result | Exposure | Remarks |
|-------------------------------|---------|-----------------------|----------|--------------------------|
| Test not published. Starch | Rat | LD50 - > 50 000 mg/kg | | - Literature Reference - |

Skin irritation. : No data available.

Serious eye irritation : No data available.

Sensitization : No data available.

Repeated dose toxicity :

| Test / Substance | Species | Result | Exposure | Remarks |
|------------------|---------|----------------------|----------|--------------------------|
| Starch | Rat | NOAEL - > 5000 mg/kg | | - Literature Reference - |

Mutagenesis: No data available.

Carcinogenicity: No data available.

Reproductive toxicity: No data available.

Remarks: The ingredients of this product are not classified as carcinogenic by the ACGIH, the CIRC, the OSHA or the NTP.

SECTION 12: Ecological information

12.1 Toxicity:

Acute toxicity:

| Test / Substance | Species | Type/Result | Exposure | Remarks |
|---|---------------------------------|-------------------------------------|----------|--|
| OECD 203 Glucose syrups wheat hydrolysed | Common Carp | LC50 : > 100 mg/l Not classified | 96 h | - REACH data - Data from similar product. |
| OECD 202 Glucose syrups wheat hydrolysed | Daphnia magna | LC50 : > 100 mg/l Not classified | 48 h | - REACH data - Data from similar product. |
| OECD 201 Glucose syrups wheat hydrolysed | Pseudokirchneriella subcapitata | LC50 : > 100 mg/l Not classified | 72 h | - REACH data - Data from similar product. |

Chronic Toxicity: No data available.

12.2 Persistence and degradability:

| Test / Substance | Result | Remarks |
|--|--|--|
| OECD 301b Glucose syrups wheat hydrolysed | > 73 % / 28 d The product is readily biodegradable. | - REACH data - Data from similar product. |

12.3 Bioaccumulative potential:

| Test / Substance | Log Pow (n-Octanol/Water Partition Coefficient) | Bioconcentration Factor (BCF) / Bioaccumulation | Remarks |
|------------------|---|---|---|
| Starch | < -2 | 3,16 | Potential to bioaccumulate is low. - ECHA Database - |

12.4 Mobility in soil: This material is readily biodegraded and is not likely to bioconcentrate.

12.5 Other adverse effects: http://ec.europa.eu/environment/chemicals/reach/pdf/6b_appendix_2.pdf (P26 / Starch)

SECTION 13: Disposal considerations

13.1 Disposal methods:

Product: Dispose of waste in an appropriate authorized treatment facility in accordance with regulations in force and product characteristics at time of disposal. (for example, energy recovery).

Packaging material: Single use packaging. Collect for salvage or disposal.

SECTION 14: Transport information

14.1 - 14.4 This material is not subject to transport regulations (IMDG, ICAO/IATA, ADR/RID, ADN).

14.5 Environmental hazards: Not regulated.

14.6 Special precautions for user: No special precautions.

14.7 Maritime transport in bulk according to IMO instruments: Not applicable.

SECTION 15: Regulatory information

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

This Safety Data Sheet is in conformity with appendix 4 of the GHS (Globally Harmonised System of Classification and Labelling of Chemicals).

SECTION 16: Other information

Revision Information: Not relevant.

Key literature references and sources for data: http://ec.europa.eu/environment/chemicals/reach/pdf/6b_appendix_2.pdf (P26 / Starch)
Suppliers's SDS.

Other information: Updated version of this document is available at :<https://www.roquette.com/site-search#documents>

Abbreviations and acronyms used in the SDS.:

CAS: Chemical Abstracts Service (division of the American Chemical Society)
GHS: Globally Harmonized System of Classification and Labelling of Chemicals

Disclaimer:

The information provided in this Safety Data Sheet (SDS) relates only to the specific product designated and may not be applicable when such product is used in combination with other materials or in any process. It is the responsibility of the user to be aware of and to follow the regulations applying to our product for its possession, handling and use.
The information given is designed only as a guidance and is not to be considered a warranty or quality specification.
All information and instructions provided in this SDS are based on the current state of our knowledge at the latest revision date indicated.