



SAFETY DATA SHEET

STARCH

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

1.1. Product identifier

Product name	STARCH
Product number	20453
Synonyms; trade names	<p>UNI-PURE, REXODAN SHEEN, MAIZE, RICE, WHEAT, MODIFIED STARCH, PERFECTAMYL AC, NOVATION 9230, ELASTIGEL 1000J, GEL N MELT, NOVATION, SIR N SET, N-DULGE C1 FG, NOVELOSE., NADEX., PURITY 87, ULTRA TEX SR, MERITANE 100, STARKELSE, ULTRASPERSE HV, N CREAMER 46, CAPSUL., PREJEL STARCH, NATIONAL P37.,, PRECISA PULP 02, PRECISA PULP 01, STÄRKINA 20000.,, COLFLO 67 FG PDR, DRY-TACK 250E, NATIVE WHEAT STARCH, FARINA, PERFECTAMYL D6, NOVATION INDULGE 3920, UNI-PURE F, A38, NOVATION INDULGE 2550, NOVATION INDULGE 2450, PERFECTAMYL D 12, MERITENA 400, NATIONAL B 37, CRYSTAL TEX 626, CRYSTAL TEX 648, FIRM TEX, FRIGEX, INST CLEARJEL COARSE, INST CLEARJEL E, INST TEXTAID A, PURITY GUM, INST TEXTRA, HYLON, ULTRATEX, NOVATION 2560, N TACK, SOLVITOSE C 5H, AMIDGEL, N-DULGE 316, N-HANCE 59, NOVATION ENDURA, PURITY HPC, REMY FG-KA, THERMTX, NOVATION 3600, NOVATION 3300, THERMFLO, NATIONAL B37, NOVATION 2300, ULTRATEX 2, QUICKSPERSE, NATIONAL 912, N-CREAMER 46, N- LOK, BAKA-SNAK E, N ZORBIT M, BATTERBIND SC, N-DULGE C2 FG, INSTANT PUREFLO F, ULTRASPERSE M, NOVATION 9330, FLOGEL 60 FG, HI-CAP 100, ULTRATEX 3, N-LITE LP, NOVATION INDULGE 2740, CRYSTAL TEX 644, NOVATION 6600, NOVATION 1600, NOVATION 1900, HYLON 7, ULTRATEX 4, NOVATION 4300 FG PDR, NOVATION 6260 FG PDR, NOVATION 4600 FG PDR, NOVATION PRIMA 600 FG, NOVATION 2700 FG PDR, UNI-PURE WG220, NOVATION INDULGE 2740, NOVATION INDULGE 3920 FG, NOVATION 3600 FG, NOVATION 5600, HI-MAIZE 1043, INST PUREFLO E FG, PRECISA GEL 04, NOVATION 2600 FG, HI-FLO, N HANCE 59 FG, PURITY 690, NOVATION 9260 ORGANIC, NOVATION PRIMA 300 FG, N-DULGE SA1 FG, NOVATION INDULGE 1720, ULTRASPERSE 2000, PURITY W, NOVATION PRIMA 340, UNIPURE F, CLEARJEL A, CRISPIOCA FG, UNI-PURE DW-L, UNI-PURE IMF 8561, NATIONAL 3700, NATIONAL 5300, ULTRA TEX 2131, COLFLO 67, ULTRA-CRISP CS, ULTRATEX 2131 FG, PRECISA BAKE, NOVATION UNO 260 FG, NOVATION 9330 ORGANIC FG, ULTRASPERSE IMF, REMY DR KA, NATIONAL B38, PRECISA 655 S, REMYGEL 663, N-CREAMER 2230, NATIONAL 78-1551, ELIANE BIND 12, NATIONAL FRIGEX FG, AMIDGEL 72, CRISPFILM, ULTRA CRISP, UNI-PURE IMF 2332, FLO-MAX 2110, NOVATION 8300, NOVATION 8600, PERFECTABIND C, LAB 3971, TEXTAID A FG PDR, NOVATION PRIMA 650 FG PDR, NOVATION 2700, NOVATION 5300 FG, NATIONAL FRIGEX HV FG, NATIONAL FRIGEX, ULTRA-CRISP CS FG, UNI-PURE GA, PURITY SCS A, N CREAMER 110, PURITY D FG, PRECISA CRISP 38, NOVATION UNO 190 FG PDR, K4484 FG, ELASTITEX 1, N ZORBIT 2144 DG, NOVATION PRIMA 303 FG, PERFECTAGEL 928 FG, PRECISA 680 FG, CRYSTAL TEX LTF FG PDR, N-CREAMER 2111 FG, INSTANT TEXTRA FG</p>
REACH registration notes	This product is not classified as hazardous, the information in this datasheet is given for guidance only. Exempt -Food / Pharma. application exempt by Article 2(5)
CAS number	9005-25-8
EC number	232-697-6

STARCH

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

Identified uses Food starch Industrial application Food / Feed additive

1.3. Details of the supplier of the safety data sheet

Supplier

Univar
Aquarius House
6 Mid Point Business Park
Bradford
BD3 7AY
+44 1274 267300
sds@univar.com
+44 1274 267306

1.4. Emergency telephone number

Emergency telephone SGS - +32 (0)3 575 55 55 (24h)

Sds No. 20453

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards Not Classified

Health hazards Not Classified

Environmental hazards Not Classified

Classification (67/548/EEC or 1999/45/EC) -

Environmental The product is not expected to be hazardous to the environment.

2.2. Label elements

EC number 232-697-6

Hazard statements NC Not Classified

2.3. Other hazards

This substance is not classified as PBT or vPvB according to current EU criteria. Dust may form explosive mixture with air.

SECTION 3: Composition/information on ingredients

3.1. Substances

Product name STARCH

REACH registration notes This product is not classified as hazardous, the information in this datasheet is given for guidance only. Exempt -Food / Pharma. application exempt by Article 2(5)

CAS number 9005-25-8

EC number 232-697-6

Composition comments No classified ingredients, or those having occupational exposure limits, present above the levels of disclosure.

SECTION 4: First aid measures

STARCH

4.1. Description of first aid measures

Inhalation	Remove affected person from source of contamination. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Rinse nose and mouth with water. Get medical attention if any discomfort continues.
Ingestion	Do not induce vomiting. Rinse mouth thoroughly with water. Give plenty of water to drink. Get medical attention if any discomfort continues.
Skin contact	Remove affected person from source of contamination. Remove contaminated clothing. Wash skin thoroughly with soap and water. Get medical attention promptly if symptoms occur after washing.
Eye contact	Rinse immediately with plenty of water. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. Get medical attention promptly if symptoms occur after washing.

4.2. Most important symptoms and effects, both acute and delayed

Inhalation	Dust may irritate the respiratory system.
Eye contact	May cause temporary eye irritation.

4.3. Indication of any immediate medical attention and special treatment needed

Notes for the doctor	No specific recommendations. If in doubt, get medical attention promptly.
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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	Extinguish with the following media: Water spray.
Unsuitable extinguishing media	Dry chemicals. Foam. Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture

Specific hazards	Fire or high temperatures create: Carbon monoxide (CO). Carbon dioxide (CO ₂).
Hazardous combustion products	Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours.

5.3. Advice for firefighters

Protective actions during firefighting	Contain and collect extinguishing water.
Special protective equipment for firefighters	Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions	Wear protective clothing as described in Section 8 of this safety data sheet. Avoid inhalation of dust. Provide adequate ventilation. No smoking, sparks, flames or other sources of ignition near spillage.
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6.2. Environmental precautions

Environmental precautions	Avoid discharge into water courses or onto the ground. Spillages or uncontrolled discharges into watercourses must be reported immediately to the Environmental Agency or other appropriate regulatory body.
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6.3. Methods and material for containment and cleaning up

STARCH

Methods for cleaning up Avoid generation and spreading of dust. Collect and place in suitable waste disposal containers and seal securely. Label the containers containing waste and contaminated materials and remove from the area as soon as possible. Flush contaminated area with plenty of water. For waste disposal, see Section 13.

6.4. Reference to other sections

Reference to other sections For personal protection, see Section 8.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Avoid handling which leads to dust formation. Avoid inhalation of dust and contact with skin and eyes. Eliminate all sources of ignition. Static electricity and formation of sparks must be prevented.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Store in tightly-closed, original container. Store in a cool and well-ventilated place. Keep container dry.

7.3. Specific end use(s)

Specific end use(s) The identified uses for this product are detailed in Section 1.2.

SECTION 8: Exposure Controls/personal protection

8.1. Control parameters

Occupational exposure limits

Long-term exposure limit (8-hour TWA): WEL 4 mg/m³ respirable dust
Long-term exposure limit (8-hour TWA): WEL 10 mg/m³ inhalable dust

WEL = Workplace Exposure Limit

8.2. Exposure controls

Protective equipment



Appropriate engineering controls

Provide adequate ventilation.

Eye/face protection

Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. The following protection should be worn: Chemical splash goggles. Personal protective equipment for eye and face protection should comply with European Standard EN166.

Hand protection

The most suitable glove should be chosen in consultation with the glove supplier/manufacture, who can provide information about the breakthrough time of the glove material. For exposure up to 8 hours, wear gloves made of the following material: Nitrile rubber. (min 0.11 mm) To protect hands from chemicals, gloves should comply with European Standard EN374.

Other skin and body protection

Appropriate footwear and additional protective clothing complying with an approved standard should be worn if a risk assessment indicates skin contamination is possible. Wear appropriate clothing to prevent any possibility of skin contact.

Hygiene measures

Wash at the end of each work shift and before eating, smoking and using the toilet. When using do not eat, drink or smoke. Eye wash facilities and emergency shower must be available when handling this product.

STARCH

Respiratory protection	No specific recommendations. Protection against nuisance dust must be used when the airborne concentration exceeds 10 mg/m ³ . Wear a respirator fitted with the following cartridge: Particulate filter, type P1. Particulate filter, type P2. EN 136/140/145/143/149
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SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance	Dusty powder. Granules. Crystalline powder. Solid
Colour	Cream. or White/off-white.
Odour	Characteristic.
Odour threshold	No information available.
pH	pH (diluted solution): ~7 @ 50%
Melting point	No information available.
Initial boiling point and range	No information available.
Flash point	No information available.
Evaporation rate	No information available.
Evaporation factor	No information available.
Flammability (solid, gas)	No information available.
Upper/lower flammability or explosive limits	No information available.
Other flammability	No information available.
Vapour pressure	No information available.
Vapour density	No information available.
Relative density	No information available.
Bulk density	0.5 - 0.7 kg/l
Solubility(ies)	Slightly soluble in water.
Partition coefficient	No information available.
Auto-ignition temperature	390°C
Decomposition Temperature	No information available.
Viscosity	No information available.
Explosive properties	No information available.
Explosive under the influence of a flame	Not considered to be explosive.
Oxidising properties	No information available.

9.2. Other information

Other information	Not determined.
Refractive index	No information available.
Particle size	No information available.
Molecular weight	No information available.

STARCH

Volatility	No information available.
Saturation concentration	No information available.
Critical temperature	No information available.
Volatile organic compound	No information available.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity	There are no known reactivity hazards associated with this product.
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10.2. Chemical stability

Stability	Stable at normal ambient temperatures.
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10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	Under normal conditions of storage and use, no hazardous reactions will occur.
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10.4. Conditions to avoid

Conditions to avoid	Avoid excessive heat for prolonged periods of time.
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10.5. Incompatible materials

Materials to avoid	Strong oxidising agents.
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10.6. Hazardous decomposition products

Hazardous decomposition products	Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours. Carbon monoxide (CO). Carbon dioxide (CO ₂).
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SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - oral

Notes (oral LD ₅₀)	Based on available data the classification criteria are not met.
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Acute toxicity - dermal

Notes (dermal LD ₅₀)	Based on available data the classification criteria are not met.
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Acute toxicity - inhalation

Notes (inhalation LC ₅₀)	Based on available data the classification criteria are not met.
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Skin corrosion/irritation

Animal data	Based on available data the classification criteria are not met.
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Serious eye damage/irritation

Serious eye damage/irritation	Based on available data the classification criteria are not met.
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Respiratory sensitisation

Respiratory sensitisation	Based on available data the classification criteria are not met.
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Skin sensitisation

Skin sensitisation	No information available.
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Germ cell mutagenicity

Genotoxicity - in vitro	Based on available data the classification criteria are not met.
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Carcinogenicity

STARCH

Carcinogenicity Based on available data the classification criteria are not met.

Reproductive toxicity

Reproductive toxicity - fertility Based on available data the classification criteria are not met.

Specific target organ toxicity - single exposure

STOT - single exposure Based on available data the classification criteria are not met.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure Based on available data the classification criteria are not met.

Aspiration hazard

Aspiration hazard Based on available data the classification criteria are not met.

Inhalation Dust in high concentrations may irritate the respiratory system.

Ingestion No harmful effects expected from quantities likely to be ingested by accident.

Skin contact Skin irritation should not occur when used as recommended.

Eye contact Particles in the eyes may cause irritation and smarting.

SECTION 12: Ecological Information

Ecotoxicity The product components are not classified as environmentally hazardous. However, large or frequent spills may have hazardous effects on the environment.

12.1. Toxicity

Toxicity Not considered toxic to fish.

12.2. Persistence and degradability

Persistence and degradability The product is readily biodegradable.

12.3. Bioaccumulative potential

Bioaccumulative potential No data available on bioaccumulation.

Partition coefficient No information available.

12.4. Mobility in soil

Mobility The product has poor water-solubility.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment This substance is not classified as PBT or vPvB according to current EU criteria.

12.6. Other adverse effects

Cod 1200 mg/g

Other adverse effects Not determined.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information Waste should be treated as controlled waste.

Disposal methods Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

STARCH

SECTION 14: Transport information

General The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, ADR/RID).

14.1. UN number

No information required.

14.2. UN proper shipping name

No information required.

14.3. Transport hazard class(es)

No information required.

14.4. Packing group

No information required.

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant

No.

14.6. Special precautions for user

No information required.

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

Transport in bulk according to No information required.

Annex II of MARPOL 73/78

and the IBC Code

SECTION 15: Regulatory information

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

EU legislation

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended).

Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended).

Commission Regulation (EU) No 2015/830 of 28 May 2015.

15.2. Chemical safety assessment

Not applicable.

SECTION 16: Other information

STARCH

Abbreviations and acronyms used in the safety data sheet

ATE: Acute Toxicity Estimate.
 ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.
 ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways.
 CAS: Chemical Abstracts Service.
 DNEL: Derived No Effect Level.
 IATA: International Air Transport Association.
 IMDG: International Maritime Dangerous Goods.
 Kow: Octanol-water partition coefficient.
 LC₅₀: Lethal Concentration to 50 % of a test population.
 LD₅₀: Lethal Dose to 50% of a test population (Median Lethal Dose).
 PBT: Persistent, Bioaccumulative and Toxic substance.
 PNEC: Predicted No Effect Concentration.
 REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006.
 RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail.
 vPvB: Very Persistent and Very Bioaccumulative.
 IARC: International Agency for Research on Cancer.
 MARPOL 73/78: International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978.
 cATpE: Converted Acute Toxicity Point Estimate.
 BCF: Bioconcentration Factor.
 BOD: Biochemical Oxygen Demand.
 EC₅₀: 50% of maximal Effective Concentration.
 LOAEC: Lowest Observed Adverse Effect Concentration.
 LOAEL: Lowest Observed Adverse Effect Level.
 NOAEC: No Observed Adverse Effect Concentration.
 NOAEL: No Observed Adverse Effect Level.
 NOEC: No Observed Effect Concentration.
 LOEC: Lowest Observed Effect Concentration.
 DMEL: Derived Minimal Effect Level.
 EL50: Exposure Limit 50
 hPa: Hectopascal
 LL50: Lethal Loading fifty
 OECD: Organisation for Economic Co-operation and Development
 POW: Octanol-water partition coefficient
 SCBA: self-contained breathing apparatus
 STP: Sewage Treatment Plant
 VOC: Volatile Organic Compounds

Classification abbreviations and acronyms

Acute Tox. = Acute toxicity
 Aquatic Acute = Hazardous to the aquatic environment (acute)
 Aquatic Chronic = Hazardous to the aquatic environment (chronic)

Key literature references and sources for data

Supplier's information.

Revision comments

NOTE: Lines within the margin indicate significant changes from the previous revision.

Revision date

24/07/2017

Revision

27

Supersedes date

12/07/2017

SDS number

20453

STARCH

Version number	2.003
SDS status	Approved.
Signature	Lisa Bland
Risk phrases in full	Not classified.