

**Section 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING****1.1. Product identifier**

Product Name Syncra SWI 201  
Product Code A67400  
Pure substance/mixture Mixture

**1.2. Relevant identified uses of the substance or mixture and uses advised against**  
Recommended Use Animal feed**1.3. Details of the supplier of the safety data sheet**

Genencor International, B.V.  
Archimedesweg 30  
2333 CN Leiden  
The Netherlands  
Tel.: +31 71 5686 168  
Fax: +31 71 5686 169

**E-mail address**

SDS.Genencor@DuPont.com

**1.4. Emergency telephone number**

+32 (0) 50 44 91 73

**Section 2: HAZARDS IDENTIFICATION****2.1. Classification of the substance or mixture**

Regulation (EC) No 1272/2008

Serious eye damage/eye irritation	Category 1 - (H318)
Respiratory sensitisation	Category 1 - (H334)
Chronic aquatic toxicity	Category 3 - (H412)

**2.2. Label elements**

Contains: Subtilisin



Signal word  
DANGER!

**Hazard statements**

H318 - Causes serious eye damage  
H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled  
H412 - Harmful to aquatic life with long lasting effects

**Precautionary Statements**

P280 - Wear eye protection/ face protection  
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
P310 - Immediately call a POISON CENTER or doctor/physician

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P261 - Avoid breathing dust/fume/gas/mist/vapours/spray  
P284 - In case of inadequate ventilation wear respiratory protection  
P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing  
P342 + P311 - If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician  
P273 - Avoid release to the environment

**2.3. Other hazards**  
None known

## Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

Description Preparation.

Chemical Name	CAS No.	Weight-%	EINECS	IUB-ECCode	REACH Reg. No.	CLP Classification
Calcium carbonate	471-34-1	20-25	-		No data available	-
Talc	14807-96-6	1-5	238-877-9	-	No data available	-
Starch	9005-25-8	1-5	232-679-6		No data available	-
Subtilisin	9014-01-1	1-5	232-752-2	3.4.21.62	01-2119480434-38	Acute Oral 4 (H302) Skin Irrit. 2 (H315) Eye Dam. 1 (H318) Resp. Sens. 1 (H334) STOT SE 3 (H335) Acute Aquatic 1 (H400) Chronic Aquatic 2 (H411)
Bacillus subtilis	NA	<1	Na		No data available	-
Mineral Oil	8042-47-5	<1	232-455-8		No data available	-

## Section 4: FIRST AID MEASURES

### 4.1. Description of first aid measures

**Inhalation** IF INHALED: Remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.

**Skin Contact:** IF ON SKIN: Wash with plenty of water and soap. If skin irritation occurs: Get medical advice/ attention.

**Eye Contact** IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

**Ingestion** Rinse mouth thoroughly with water. IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.

**4.2. Most important symptoms and effects, both acute and delayed**  
May cause allergy or asthma symptoms or breathing difficulties if inhaled.

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

## Section 5: FIRE FIGHTING MEASURES

### 5.1. Extinguishing media

Extinguish with alcohol-resistant foam, fire extinguishing powder or water spray.

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

None known

### 5.3. Advice for firefighters

Positive pressure self-contained breathing apparatus (SCBA) and structural firefighters' protective clothing will provide adequate protection.

## Section 6: ACCIDENTAL RELEASE MEASURES

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

Avoid generation of dust and aerosols. Avoid contact with eyes, skin and clothing. Avoid breathing dust or spray mist.

#### Advice for Emergency Responders

Use personal protection recommended in Section 8.

### 6.2. Environmental precautions

Contain spill. Keep out of waterways.

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

**Methods for Containment** Cover with absorbent or contain. Collect and dispose.

#### Methods for Cleaning Up

Use appropriate personal protective equipment (PPE). Contain and/or absorb spill with inert material, then place in suitable container. Prevent runoff from entering drains, sewers or waterways.

### 6.4. Reference to other sections

Use personal protection recommended in Section 8.

## Section 7: HANDLING AND STORAGE

### 7.1. Precautions for safe handling

Avoid generation of dust and aerosols. Avoid contact with eyes, skin and clothing. Avoid breathing dust or spray mist. Ensure adequate ventilation.

#### Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice. Regular cleaning of equipment, work area and clothing is recommended. Avoid contact with eyes, skin and clothing. Wear suitable gloves and eye/face protection.

### 7.2. Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place. Protect from light. Keep/store only in original container.

### 7.3. Specific end use(s)

See section 1 for more information.

## Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1. Control parameters

**Exposure Limits** Based on data available for ingredients.

Chemical Name	EU	UK WEL	France	Spain	German MAK:
Calcium carbonate	None known	None known	TWA: 10 mg/m <sup>3</sup>	None known	None known
Talc	None known	3 mg/m <sup>3</sup> STEL	None known	TWA: 2 mg/m <sup>3</sup>	Category 3B

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		(calculated, respirable dust) 1 mg/m <sup>3</sup> respirable dust			
Starch	None known	30 mg/m <sup>3</sup> STEL (calculated, total inhalable); 12 mg/m <sup>3</sup> STEL (calculated, respirable) 10 mg/m <sup>3</sup> total inhalable 4 mg/m <sup>3</sup> respirable	None known	TWA: 10 mg/m <sup>3</sup>	None known
Subtilisin	None known	TWA= 0.00004 mg/m <sup>3</sup>	None known	STEL: 0.00006 mg/m <sup>3</sup>	None known
Mineral Oil	None known	None known	None known	None known	Peak: 20 mg/m <sup>3</sup>

Chemical Name	Italy	Portugal	The Netherlands	Finland	Denmark
Calcium carbonate	None known	TWA: 10 mg/m <sup>3</sup>	None known	None known	None known
Talc	None known	TWA: 2 mg/m <sup>3</sup>	TWA: 0.25 mg/m <sup>3</sup>	TWA: 0.5 fiber/cm <sup>3</sup> STEL: 2 ppm STEL: 1 ppm	TWA: 0.3 fiber/cm <sup>3</sup>
Starch	None known	TWA: 10 mg/m <sup>3</sup>	None known	None known	None known
Subtilisin	None known	Ceiling= 0.00006 mg/m <sup>3</sup>	None known	None known	Ceiling= 0.00006 mg/m <sup>3</sup>
Mineral Oil	None known	None known	None known	None known	None known

Chemical Name	Austria	Switzerland	Poland	Norway	Ireland
Calcium carbonate	None known	TWA: 3 mg/m <sup>3</sup>	TWA: 10 mg/m <sup>3</sup>	None known	None known
Talc	TWA: 2 mg/m <sup>3</sup>	TWA: 2 mg/m <sup>3</sup>	TWA: 4.0 mg/m <sup>3</sup> TWA: 1.0 mg/m <sup>3</sup>	TWA: 6 mg/m <sup>3</sup> TWA: 2 mg/m <sup>3</sup>	TWA: 10 mg/m <sup>3</sup> TWA: 0.8 mg/m <sup>3</sup> STEL: 30 mg/m <sup>3</sup> STEL: 2.4 mg/m <sup>3</sup>
Starch	None known	TWA: 3 mg/m <sup>3</sup>	None known	None known	TWA: 10 mg/m <sup>3</sup> TWA: 4 mg/m <sup>3</sup> STEL: 30 mg/m <sup>3</sup> STEL: 12 mg/m <sup>3</sup>
Subtilisin	None known	STEL= 0.00006 mg/m <sup>3</sup>	None known	None known	TWA= 0.00006 mg/m <sup>3</sup> mg/m <sup>3</sup> = 0.00006 mg/m <sup>3</sup>
Mineral Oil	None known	TWA: 5 mg/m <sup>3</sup>	None known	None known	None known

**DNEL/DMEL - Workers**

Derived minimal effect level (DMEL) of 60 ng/m<sup>3</sup> for workers and 15 ng/m<sup>3</sup> for consumers has been derived for enzyme proteins

**DNEL/DMEL - General population**

Derived minimal effect level (DMEL) of 60 ng/m<sup>3</sup> for workers and 15 ng/m<sup>3</sup> for consumers has been derived for enzyme proteins

**8.2. Exposure controls  
Engineering Measures**

Transfer via enclosed lines. Formulate in enclosed or ventilated mixing vessels. Carefully handle the substance to minimise releases. Avoid generation of dust and aerosols.

**Personal protective equipment  
Eye/Face Protection  
Hand Protection**

Wear safety glasses with side shields (or goggles).  
Use any protective gloves that meet the minimum requirements of EN420 when handling solid product. Gloves meeting the additional requirements of EN374-2 should be worn when handling liquid products. Practical experience has shown that gloves of nitrile rubber, butyl rubber, latex, and polyvinyl chloride (PVC) offer sufficient protection. There are no additional material, thickness and breakthrough time requirements. Chemical resistant gloves, as defined by EN374-3 are not required.

**Skin and Body Protection**

Wear protective gloves and protective clothing.

**Respiratory Protection**

Ensure adequate ventilation. If exposure limits are exceeded or irritation is experienced, approved respiratory protection should be worn. Respirators with a particle filter (EN143) or P3 filters are recommended.

## Section 9: PHYSICAL AND CHEMICAL PROPERTIES

**Appearance**

Physical State	Granules
Colour	Off-white
Odour	Typical odor of fermented product
Odour Threshold	No data available
pH	No data available
Melting point / freezing point	No data available
Boiling point / boiling range	No data available
Evaporation rate	No data available
Flammability (solid, gas)	No data available
Upper Flammability Limit	No data available
Upper explosive limits	No data available
Lower Flammability Limit	No data available
Lower explosive limits	No data available
Vapour Pressure	No data available
Vapour Density	No data available
Relative density	No data available
Specific Gravity	No data available
Water Solubility	Soluble
Partition Coefficient (n-octanol/water)	No data available
Autoignition Temperature	No data available
Decomposition Temperature	No data available
Dynamic viscosity	No data available
Oxidising Properties	No data available

## Section 10: STABILITY AND REACTIVITY

**10.1. Reactivity**

Not expected.

**10.2. Chemical stability**

Stable under normal conditions.

**10.3. Possibility of hazardous reactions**

None under normal processing.

**10.4. Conditions to avoid**

Avoid dust formation.

**10.5. Incompatible materials**

None known.

**10.6. Hazardous decomposition products**

None known.

## Section 11: TOXICOLOGICAL INFORMATION

## 11.1. Information on toxicological effects

### Product Information

#### **Acute Toxicity**

Inhalation	No data available.
Eye Contact	Causes serious eye damage.
Skin Contact:	Not expected to cause irritation.
Ingestion	Toxicity: Not expected

#### **Sensitisation**

May cause sensitisation in susceptible persons. Repeated inhalation of enzyme containing aerosol (dust or mist) can cause a respiratory allergy in some individuals.

Germ cell mutagenicity  
Carcinogenic effects  
Reproductive effects  
STOT - single exposure  
STOT - repeated exposure  
Aspiration hazard

No data available.  
No data available.  
No data available.  
No data available.  
No data available.  
Not expected.

### Component Information

Classification based on data available for ingredients.

#### *Calcium carbonate*

Oral	Oral LD50 (rat) 6450 mg/kg
Eye irritation	Non-irritant
Skin irritation	Not expected
Respiratory irritation	Irritating to respiratory system

#### *Talc*

Eye irritation	May cause slight irritation
Skin irritation	May cause slight irritation
Respiratory irritation	May cause slight irritation
Sensitisation	Not a skin sensitiser
Reproductive effects	No Developmental toxicity In rats
Mutagenic effects	Negative in the chromosomal aberration assay. Negative in dominant lethal assay in rat up to 5000 mg/kg . Negative in DNA Damage and Repair Assay. Negative in Ames assay with and without metabolic activation up to 20 mg/plate.

#### *Starch*

Eye irritation	Mild eye irritation
Skin irritation	Mild skin irritation
Respiratory irritation	May cause slight irritation

#### *Subtilisin*

Oral	Oral LD50 (rat) =1800 mg/kg
Eye irritation	Causes severe eye irritation
Skin irritation	May cause skin irritation
Respiratory irritation	May cause irritation of respiratory tract
Sensitisation	Patch test on human volunteers did not demonstrate sensitisation properties. May cause sensitisation in susceptible persons. Repeated inhalation of enzyme containing aerosol (dust or mist) can cause a respiratory allergy in some individuals.
Reproductive effects	This product does not contain any known or suspected reproductive hazards
Mutagenic effects	Negative in chromosomal aberration using human lymphocytes. Negative in Ames assay with and without metabolic activation up to 5000 µg/plate.
Systemic Toxicity	In a 90-day feeding study with rats, no evidence of toxicity attributed to treatment was seen at levels up to 50000 ppm/d. A NOAEL was established at > 50000 ppm/d

#### *Bacillus subtilis*

Eye irritation	Non-irritant
Skin irritation	Non-irritant
Sensitisation	Not expected

#### *Mineral Oil*

Oral	LD50/oral/rat >5000 mg/kg
Dermal	LD50/dermal/rabbit > 2000 mg/kg.

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Inhalation	LC50 > 5000 mg/m <sup>3</sup> .
Skin irritation	Non-irritant
Systemic Toxicity	A NOAEL was established at 100 mg/kg bw/day

The following values are calculated based on chapter 3.1 of the GHS document (ATE)

ATEmix (oral) 16,627.00

## Section 12: ECOLOGICAL INFORMATION

### 12.1. Toxicity

Classification based on data available for ingredients.

Contains 0% of components with unknown hazards to the aquatic environment

Chemical Name	Toxicity to Algae	Toxicity to Fish	Toxicity to daphnia
Calcium carbonate 471-34-1	No data	LC50/96hr/Gambusia affinis: 56000 mg/L.	No data
Talc 14807-96-6	No data	Brachydanio rerio LC50 = 100000 mg/L.	No data
Subtilisin 9014-01-1	NOEC = 0.041 mg protein/l (72 h). (Pseudokirchneriella subcapitata).	LC50: 8.2 mg/L (96 h) Rainbow trout.	EC0/48hr/daphnia 0.17 mg/L.

### 12.2. Persistence and degradability

Based on data available for ingredients.

Chemical Name	Biodegradation
Calcium carbonate 471-34-1	No data
Talc 14807-96-6	No data
Subtilisin 9014-01-1	Readily biodegradable (102 % after 29 days).

### 12.3. Bioaccumulative potential

No bioaccumulation potential.

### 12.4. Mobility in soil

Soluble in water.

### 12.5. Results of PBT and vPvB assessment

The components in this formulation do not meet the criteria for classification as PBT or vPvB.

### 12.6. Other adverse effects

None known.

## Section 13: DISPOSAL CONSIDERATIONS

### 13.1. Waste treatment methods

#### Disposal Methods

Dispose of wastes in an approved waste disposal facility. Dispose of contents/containers in accordance with local regulations.

**Contaminated Packaging**

Dispose of empty containers and wastes safely. Dispose of waste product or used containers according to local regulations.

**Section 14: TRANSPORT INFORMATION**

**IMDG/IMO**

14.1 UN-No.	Not regulated
14.2 Proper Shipping Name	Not regulated
14.3. Hazard Class	Not regulated
14.4. Packing Group	Not regulated
14.5. Marine Pollutant	None
14.6. Special Provisions	None
14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	None

**RID**

14.1 UN-No.	Not regulated
14.2 Proper Shipping Name	Not regulated
14.3. Hazard Class	Not regulated
14.4. Packing Group	Not regulated
14.5. Environmental hazard	None
14.6. Special Provisions	None

**ADR:**

14.1 UN-No.	Not regulated
14.2 Proper Shipping Name	Not regulated
14.3. Hazard Class	Not regulated
14.4. Packing Group	Not regulated
14.5. Environmental hazard	None
14.6. Special Provisions	None

**ICAO**

14.1 UN-No.	Not regulated
14.2 Proper Shipping Name	Not regulated
14.3. Hazard Class	Not regulated
14.4. Packing Group	Not regulated
14.5. Environmental hazard	None
14.6. Special Provisions	None

**IATA:**

14.1 UN-No.	Not regulated
14.2 Proper Shipping Name	Not regulated
14.3. Hazard Class	Not regulated
14.4. Packing Group	Not regulated
14.5. Environmental hazard	None
14.6. Special Provisions	None

**Section 15: REGULATORY INFORMATION**

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

Chemical Name	Water hazard class (WGK)
Starch	1

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Subtilisin	1
Mineral Oil	1

Chemical Name	TA Luft (German Air Pollution Control Regulation)	Occupational Illnesses (R-463-3, France)
Talc		RG 25
Subtilisin		RG63

## 15.2. Chemical safety assessment

No information available.

## Section 16: OTHER INFORMATION

### Full text of H-Statements referred to under section 3

H302 - Harmful if swallowed  
H315 - Causes skin irritation  
H318 - Causes serious eye damage  
H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled  
H335 - May cause respiratory irritation  
H400 - Very toxic to aquatic life  
H411 - Toxic to aquatic life with long lasting effects

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**SDS sections updated** None.

**Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)**

### Disclaimer

The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet