1. PRODUCT AND COMPANY IDENTIFICATION

Product Name  Starch, soluble
Cat No.  AC424490000; AC424490020; AC424490025; AC424491000; AC424495000
Synonyms  amylodextrin; starch; α-Amylodextrin
Recommended Use  Laboratory chemicals

Company  Fisher Scientific
           One Reagent Lane
           Fair Lawn, NJ 07410
           Tel: (201) 796-7100
Entity / Business Name  Acros Organics
           One Reagent Lane
           Fair Lawn, NJ 07410
Emergency Telephone Number  For information in the US, call: 001-800-ACROS-01
                       For information in Europe, call: +32 14 57 52 11
                       Emergency Number, Europe: +32 14 57 52 99
                       Emergency Number, US: 001-201-796-7100
                       CHEMTREC Phone Number, US: 001-800-424-9300
                       CHEMTREC Phone Number, Europe: 001-703-527-3887

2. HAZARDS IDENTIFICATION

Emergency Overview  The product contains no substances which at their given concentration are considered to be hazardous to health

Appearance  White
Physical State  Powder Solid
Odor  odorless

Target Organs  No information available.

Potential Health Effects

Acute Effects

Principle Routes of Exposure

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Eyes</td>
<td>May cause irritation</td>
</tr>
<tr>
<td>Skin</td>
<td>May cause irritation</td>
</tr>
<tr>
<td>Inhalation</td>
<td>May cause irritation of respiratory tract</td>
</tr>
<tr>
<td>Ingestion</td>
<td>Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea</td>
</tr>
</tbody>
</table>
Chronic Effects
None known
See Section 11 for additional Toxicological information.

Aggravated Medical Conditions
No information available.

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soluble Starch</td>
<td>9005-84-9</td>
<td>100</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

Eye Contact
Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Obtain medical attention.

Skin Contact
Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Obtain medical attention.

Inhalation
Remove from exposure, lie down. Move to fresh air.

Ingestion
Clean mouth with water. Get medical attention.

Notes to Physician
Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Flash Point
No information available.
Method - No information available.

Autoignition Temperature
No information available.

Explosion Limits
Upper No data available
Lower No data available

Suitable Extinguishing Media
Water spray. Carbon dioxide (CO₂). Dry chemical. chemical foam.

Unsuitable Extinguishing Media
No information available.

Hazardous Combustion Products
No information available.
Sensitivity to mechanical impact No information available.
Sensitivity to static discharge No information available.

Specific Hazards Arising from the Chemical
Keep product and empty container away from heat and sources of ignition

Protective Equipment and Precautions for Firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

NFPA
Health 0 Flammability 0 Instability 0 Physical hazards N/A

6. ACCIDENTAL RELEASE MEASURES
6. ACCIDENTAL RELEASE MEASURES

Personal Precautions
Ensure adequate ventilation

Environmental Precautions
Should not be released into the environment

Methods for Containment and Clean Up
Sweep up or vacuum up spillage and collect in suitable container for disposal.

7. HANDLING AND STORAGE

Handling
Avoid contact with skin and eyes. Do not breathe dust. Do not breathe vapors or spray mist.

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

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Measures
Ensure adequate ventilation, especially in confined areas.

Exposure Guidelines
This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

NIOSH IDLH: Immediately Dangerous to Life or Health

Personal Protective Equipment

Eye/face Protection
Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA’s eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166

Skin and body protection
Wear appropriate protective gloves and clothing to prevent skin exposure.

Respiratory Protection
Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State
Powder Solid

Appearance
White

Odor
odorless

Odor Threshold
No information available.

pH
5.0-7.0 2% aq. solution.

Vapor Pressure
No information available.

Vapor Density
No information available.

Viscosity
No information available.

Boiling Point/Range
No information available.

Melting Point/Range
256 - 258°C / 492.8 - 496.4°F

Decomposition temperature
No information available.

Flash Point
No information available.

Evaporation Rate
No information available.

Specific Gravity
1.0384

Solubility
No information available.

log Pow
No data available

Molecular Weight
162.067

Molecular Formula
(C6 H10 O5)n

10. STABILITY AND REACTIVITY

Stability
Stable under normal conditions.
Conditions to Avoid

- Incompatible products.

Incompatible Materials

- Strong oxidizing agents

Hazardous Decomposition Products

- Carbon monoxide (CO), Carbon dioxide (CO₂)

Hazardous Polymerization

- Hazardous polymerization does not occur.

Hazardous Reactions

- None under normal processing.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Product Information

- No acute toxicity information is available for this product

Component Information

Irritation

- No information available.

Toxicologically Synergistic Products

- No information available.

Chronic Toxicity

Carcinogenicity

- There are no known carcinogenic chemicals in this product

Sensitization

- No information available.

Mutagenic Effects

- No information available.

Reproductive Effects

- No information available.

Developmental Effects

- No information available.

Teratogenicity

- No information available.

Other Adverse Effects

- The toxicological properties have not been fully investigated.

Endocrine Disruptor Information

- No information available

12. ECOLOGICAL INFORMATION

Ecotoxicity

- Do not empty into drains

Persistence and Degradability

- No information available

Bioaccumulation/ Accumulation

- No information available

Mobility

- No information available

13. DISPOSAL CONSIDERATIONS
13. DISPOSAL CONSIDERATIONS

Waste Disposal Methods

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

14. TRANSPORT INFORMATION

DOT

Not regulated

TDG

Not regulated

IATA

Not regulated

IMDG/IMO

Not regulated

15. REGULATORY INFORMATION

International Inventories

<table>
<thead>
<tr>
<th>Component</th>
<th>TSCA</th>
<th>DSL</th>
<th>NDSL</th>
<th>EINECS</th>
<th>ELINCS</th>
<th>NLP</th>
<th>PICCS</th>
<th>ENCS</th>
<th>AICS</th>
<th>CHINA</th>
<th>KECL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soluble Starch</td>
<td>XU</td>
<td>X</td>
<td>-</td>
<td>232-686-4</td>
<td>-</td>
<td>X</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Legend:
X - Listed
E - Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA.
F - Indicates a substance that is the subject of a Section 5(f) Rule under TSCA.
N - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.
P - Indicates a commenced PMN substance
R - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.
S - Indicates a substance that is identified in a proposed or final Significant New Use Rule
T - Indicates a substance that is the subject of a Section 4 test rule under TSCA.
XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B).
Y1 - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.
Y2 - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

U.S. Federal Regulations

TSCA 12(b)  Not applicable

SARA 313  Not applicable

SARA 311/312 Hazardous Categorization

<table>
<thead>
<tr>
<th>Hazard Category</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Health Hazard</td>
<td>No</td>
</tr>
<tr>
<td>Chronic Health Hazard</td>
<td>No</td>
</tr>
<tr>
<td>Fire Hazard</td>
<td>No</td>
</tr>
<tr>
<td>Sudden Release of Pressure Hazard</td>
<td>No</td>
</tr>
<tr>
<td>Reactive Hazard</td>
<td>No</td>
</tr>
</tbody>
</table>
Clean Water Act
Not applicable

Clean Air Act
Not applicable

OSHA
Not applicable

CERCLA
Not Applicable

California Proposition 65
This product does not contain any Proposition 65 chemicals.

State Right-to-Know
Not applicable

U.S. Department of Transportation
Reportable Quantity (RQ): N
DOT Marine Pollutant N
DOT Severe Marine Pollutant N

U.S. Department of Homeland Security
This product does not contain any DHS chemicals.

Other International Regulations

Mexico - Grade
No information available

Canada

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

WHMIS Hazard Class
Non-controlled

16. OTHER INFORMATION

Prepared By
Regulatory Affairs
Thermo Fisher Scientific
Email: EMSDS.RA@thermofisher.com

Print Date
07-May-2013

Revision Summary
“***”, and red text indicates revision
Disclaimer
The information provided on this 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 guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as 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 material or in any process, unless specified in the text.

End of MSDS