1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier
Product Name VSTEARIN™ SA29 Stearic Acid

Other means of identification
Product Code SA29

Recommended use of the chemical and restrictions on use
Recommended Use Commercial product.
Uses advised against None identified

Details of the supplier of the safety data sheet
Manufacturer Address
Vantage Oleochemicals, Inc.
4650 South Racine Avenue
Chicago, IL 60609 USA

Emergency Telephone Number
Company Phone Number +1-773-376-9000
Emergency Telephone Number
CHEMTREC International +1-703-527-3887
CHEMTREC USA: 1-800-424-9300

2. HAZARDS IDENTIFICATION

Classification
This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard.
This is not a dangerous substance or mixture according to the United Nations Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

Label Elements

EMERGENCY OVERVIEW

Not Hazardous

Appearance Opaque Physical State Solid Odor Faint

Hazards not otherwise classified (HNOC)
May form explosive dust clouds in air
Particles in air may cause eye irritation
Inhalation or ingestion may cause mucous membrane irritation

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS-No.</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stearic acid</td>
<td>57-11-4</td>
<td>60-100</td>
</tr>
</tbody>
</table>
4. FIRST AID MEASURES

FIRST AID MEASURES

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, consult a specialist.

Skin contact

IF ON SKIN: Wash with soap and water.

Inhalation

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

Ingestion

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Call a doctor/physician if exposed or you feel unwell.

Most important symptoms and effects, both acute and delayed

Symptoms

None identified.

Indication of any immediate medical attention and special treatment needed

Notes to Physician

Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

Class ABC/BC fire extinguisher. Dry powder, Foam, Carbon dioxide, Water fog.

Unsuitable extinguishing media

None identified.

Specific hazards arising from the chemical

Smoldering can occur in contact with fibrous insulation material. May form explosive dust clouds in air.

Hazardous combustion products

Carbon oxides. Irritating gases and vapors.

Explosion Data

Sensitivity to Mechanical Impact

Not sensitive.

Sensitivity to Static Discharge

None.

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.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions

Refer to Section 8.

Environmental precautions

Environmental precautions

Do not flush into surface water or sanitary sewer system.

Methods and material for containment and cleaning up

Methods for Containment

Cover with plastic sheet to prevent spreading.

Methods for Cleaning Up

Sweep up and recover or mix material with a moist absorbent and shovel into a chemical waste container. Then wash residue from spill area with water containing detergent and flush to a sewer serviced by a permitted wastewater treatment facility.

7. HANDLING AND STORAGE
Precautions for safe handling

Handling
Handle in accordance with good industrial hygiene and safety practice. Avoid dust formation. Avoid contact with eyes.

Conditions for safe storage, including any incompatibilities

Storage
Store in original container.

Incompatible materials
Strong oxidizing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

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

Other Exposure Guidelines
Particulates: OSHA PEL 5 mg/m3.

Appropriate engineering controls

Engineering Measures
Ensure adequate ventilation, especially in confined areas. Eyewash stations.

Individual protection measures, such as personal protective equipment

Eye/face Protection
Safety glasses with side-shields.

Skin and Body Protection
Impervious gloves. Wear personal protective equipment as required.

Respiratory Protection
Not required under normal use conditions.

Hygiene Measures
Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
<th>Remarks</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical State</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Appearance</td>
<td>Solid</td>
<td>Odor threshold</td>
<td>Faint</td>
</tr>
<tr>
<td>Color</td>
<td>Opaque</td>
<td>Odor</td>
<td>None</td>
</tr>
<tr>
<td>pH</td>
<td>Not Applicable</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>55 °C / 131 °F</td>
<td>@10 hPa</td>
<td></td>
</tr>
<tr>
<td>Boiling point/boiling range</td>
<td>205-225 °C / 401-437 °F</td>
<td>Open cup</td>
<td></td>
</tr>
<tr>
<td>Flash Point</td>
<td>180 °C / 356 °F</td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td></td>
<td>May burn if exposed to open flame.</td>
<td></td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td></td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>Flammability Limits in Air</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upper flammability limits</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lower Flammability Limit</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vapor pressure</td>
<td></td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>Vapor Density</td>
<td></td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>-</td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>Water Solubility</td>
<td></td>
<td>Insoluble</td>
<td></td>
</tr>
<tr>
<td>Solubility in other solvents</td>
<td></td>
<td>Soluble in many organic solvents</td>
<td></td>
</tr>
<tr>
<td>Partition coefficient</td>
<td>&gt;3</td>
<td>Estimated</td>
<td></td>
</tr>
<tr>
<td>Autoignition Temperature</td>
<td>350 °C / 662 °F</td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td></td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>Kinematic viscosity</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dynamic viscosity</td>
<td>10@ 65°C mPa s</td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>Oxidizing Properties</td>
<td>None</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Other Information

Density 0.85 g/ml @ 75°C

10. STABILITY AND REACTIVITY

Reactivity
Not reactive

Chemical stability
Stable under recommended storage conditions.

Possibility of Hazardous Reactions
None under normal processing.

Hazardous Polymerization
Hazardous polymerization does not occur.

Conditions to Avoid
Avoid dust formation.

Incompatible materials
Strong oxidizing agents.

Hazardous Decomposition Products
Combustion can lead to release of irritating vapors.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Inhalation  No known hazard.
Eye contact  Not irritating to eyes.
Skin contact  Not irritating to skin.
Ingestion  No known hazard.

Component Information

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>LD50 Oral</th>
<th>LD50 Dermal</th>
<th>LC50 Inhalation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stearic acid 57-11-4</td>
<td>&gt; 2 g/kg (rat)</td>
<td>n/a</td>
<td>-</td>
</tr>
</tbody>
</table>

Information on toxicological effects

Symptoms  None identified.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Mutagenic Effects  No known hazard.
Carcinogenicity  This substance is not classified as a carcinogen by IARC, OSHA, ACGIH, or NTP.

Reproductive Toxicity  No known hazard.
STOT - single exposure  No known hazard.
STOT - repeated exposure  No known hazard.
Aspiration hazard  No known hazard.
12. ECOLOGICAL INFORMATION

Ecotoxicity
Not toxic to aquatic organisms at maximum water solubility.

Persistence and degradability
Readily biodegradable: (OECD 301B) (28 days) > 70%.

Mobility
This substance is not likely mobile in the environment due low water solubility.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste Disposal Method
Dispose of in accordance with applicable regulations.

Contaminated Packaging
Dispose of in accordance with applicable regulations.

14. TRANSPORT INFORMATION

DOT
Not regulated

TDG
Not regulated

MEX
Not regulated

IATA
Not regulated

IMDG / IMO
Not regulated

15. REGULATORY INFORMATION

International Inventories

<table>
<thead>
<tr>
<th>Inventory</th>
<th>Compliance</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSCA</td>
<td>Complies</td>
</tr>
<tr>
<td>DSL</td>
<td>Complies</td>
</tr>
<tr>
<td>EINECS</td>
<td>Complies</td>
</tr>
<tr>
<td>ENCS</td>
<td>Complies</td>
</tr>
<tr>
<td>IECSC</td>
<td>Complies</td>
</tr>
<tr>
<td>KECL</td>
<td>Complies</td>
</tr>
<tr>
<td>PICCS</td>
<td>Complies</td>
</tr>
<tr>
<td>AICS</td>
<td>Complies</td>
</tr>
</tbody>
</table>

Legend
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances
U.S. Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories

<table>
<thead>
<tr>
<th>Hazard Category</th>
<th>Yes/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
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA
This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

U.S. State Regulations

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

U.S. State Right-to-Know Regulations
This product does not contain any substances regulated by state right-to-know regulations

16. OTHER INFORMATION

<table>
<thead>
<tr>
<th>NFPA</th>
<th>Health Hazard</th>
<th>Flammability</th>
<th>Instability</th>
<th>Physical and Chemical Hazards</th>
</tr>
</thead>
<tbody>
<tr>
<td>HMIS</td>
<td>Health Hazard</td>
<td>Flammability</td>
<td>Physical hazards</td>
<td>Personal Precautions</td>
</tr>
</tbody>
</table>

Prepared by: Product Steward
Issuing Date: 13-Jan-2015
Revision Date: 13-Jan-2015
Revision Note: Update to GHS format

Disclaimer
The information in this safety data sheet (SDS) is believed to be accurate and is given in good faith but no representation or warranty as to its completeness or accuracy is made. Suggestions for uses or applications are only opinions. Users are responsible for determining the suitability of these products for their own particular purpose. No representation or warranty, express or implied, is made with respect to information or products including without limitation warranties of merchantability or fitness for a particular purpose or non-infringement of any third party patent or other intellectual property rights including without limit copyright, trademark and designs. Any trademarks identified herein are trademarks of Vantage Oleochemicals, Inc.

End of MSDS