This safety data sheet complies with the requirements of:

**Section 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**

1.1. Product identifier

<table>
<thead>
<tr>
<th>Product Code</th>
<th>H044</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product Name</td>
<td>SolaStay® S1</td>
</tr>
<tr>
<td>Chemical Name</td>
<td>2-Propenoic acid, 2-cyano-3-(4-methoxyphenyl)-3-phenyl- , 2-ethylhexyl ester</td>
</tr>
</tbody>
</table>

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

**Recommended Use**

No information available

1.3. Details of the supplier of the safety data sheet

**Manufacturer**
The HallStar Company  
120 S. Riverside Plaza, Suite 1620  
Chicago, IL 60606 USA  
PH: 877-427-4255

For further information, please contact

1.4. Emergency telephone number

**Emergency Telephone**

<table>
<thead>
<tr>
<th>Chemtrec</th>
<th>1-800-424-9300</th>
</tr>
</thead>
<tbody>
<tr>
<td>Europe</td>
<td>+1 (703) 527 3887</td>
</tr>
</tbody>
</table>

**Section 2: HAZARDS IDENTIFICATION**

2.1. Classification of the substance or mixture

**Regulation (EC) No 1272/2008**

This substance is classified as not hazardous according to Regulation (EC) No 1272/2008 [CLP]

2.2. Label elements

**Product identifier**

This substance is classified as not hazardous according to Regulation (EC) No 1272/2008 [CLP]

2.3. Other hazards

No information available

**Section 3: COMPOSITION/INFORMATION ON INGREDIENTS**

Substances

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>EC No</th>
<th>CAS No</th>
<th>Weight-%</th>
<th>Classification according to Regulation (EC)</th>
<th>REACH Registration No</th>
</tr>
</thead>
</table>

Page 1 / 7
Section 4: FIRST AID MEASURES

4.1. Description of first aid measures

Inhalation
Remove to fresh air.

Skin contact
Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.

Eye contact
Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.

Ingestion
Clean mouth with water and drink afterwards plenty of water.

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

Section 5: FIRE FIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media
Dry chemical, CO2 or water spray.

5.2. Special hazards arising from the substance or mixture

No information available

5.3. Advice for firefighters

Wear self-contained breathing apparatus and protective suit.

Section 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions
Ensure adequate ventilation, especially in confined areas.

For emergency responders
Use personal protection recommended in Section 8.

6.2. Environmental precautions

Collect spillage.

6.3. Methods and material for containment and cleaning up

Methods for containment
Steps to be Taken in Case Material is Released or Spilled: Dike and contain the spill with inert material (ie: sand, earth, sawdust) and transfer liquid and solid diking material to separate containers for recovery or disposal. Wash floor area with hotwater solution. Remove contaminated clothing and wash before reuse. Wash affected skin areas with soap and water. Keepspills out of all sewers and bodies of water.
Methods for cleaning up
Take up mechanically, placing in appropriate containers for disposal.

6.4. Reference to other sections
See section 8 for more information. See section 13 for more information.

Section 7: HANDLING AND STORAGE

7.1. Precautions for safe handling
Advice on safe handling
Ensure adequate ventilation, especially in confined areas.

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

7.2. Conditions for safe storage, including any incompatibilities
Storage Conditions
Keep container tightly closed in a dry and well-ventilated place.

Incompatible materials
None known based on information supplied.

7.3. Specific end use(s)
Risk Management Methods (RMM)
The information required is contained in this Material Safety Data Sheet.

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters
Derived No Effect Level (DNEL) No information available.
Predicted No Effect Concentration (PNEC) No information available.

8.2. Exposure controls
Engineering Controls
Ensure adequate ventilation, especially in confined areas.

Personal protective equipment
Eye/face protection Tight sealing safety goggles.
Skin and body protection Suitable protective clothing.

Environmental exposure controls
No information available.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
<th>Remarks • Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>liquid</td>
<td></td>
</tr>
<tr>
<td>Appearance</td>
<td>light amber</td>
<td></td>
</tr>
<tr>
<td>Color</td>
<td>light amber</td>
<td></td>
</tr>
<tr>
<td>Odor</td>
<td>mild characteristic odor</td>
<td></td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Melting point / freezing point</td>
<td>646-694 K</td>
<td>No information available</td>
</tr>
<tr>
<td>Boiling point / boiling range</td>
<td>646-694 K</td>
<td>No information available</td>
</tr>
<tr>
<td>Flash point</td>
<td>251 °C</td>
<td>No information available</td>
</tr>
</tbody>
</table>
Section 10: STABILITY AND REACTIVITY

10.1. Reactivity

No data available.

10.2. Chemical stability

Stable under normal conditions.

- **Explosion data**
  - Sensitivity to Mechanical Impact: None.
  - Sensitivity to Static Discharge: None.

10.3. Possibility of hazardous reactions

Possibility of Hazardous Reactions
None under normal processing.

10.4. Conditions to avoid

None known.

10.5. Incompatible materials

No information available.

10.6. Hazardous decomposition products

None under normal use conditions.

Section 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Acute toxicity

**Product Information**
Product does not present an acute toxicity hazard based on known or supplied information.

- **Inhalation**: No data available.
- **Eye contact**: No data available.
- **Skin contact**: LD50 (rat): >2000 mg/kg. The test material did not induce a response indicative of a phototoxic reaction in humans.
- **Ingestion**: LD50 (rat) was estimated to be greater than 2000 mg/kg bodyweight (Globally Harmonised...
Classification System - Unclassified).

**Unknown acute toxicity**

**Skin corrosion/irritation**
The test material did not indicate a potential for dermal irritation or allergic contact sensitization under the conditions of the test.

**Serious eye damage/eye irritation**
The test material produced a maximum group mean score of 11.0 and was classified as a minimal irritant (Class 3 on a 1 to 8 scale) to the rabbit eye according to the Kay and Calandra classification system.

**Sensitization**
The test material was considered to be a non-sensitizer under the conditions of the test.

**Germ cell mutagenicity**
The test material was non-mutagenic under the conditions of the test.

**Carcinogenicity**
No information available.

**Reproductive toxicity**
No treatment-related effects were detected on mating performance or fertility in parental animals and no significant effects were detected in the F1 offspring. NOEL: 1000 mg/kg/day.

**STOT - repeated exposure**
The oral administration of undecenyl methoxycrylene to rats by gavage at a maximum dose level of 1000 mg/kg/day did not result in any toxicologically significant effects of treatment. The minor effects detected in this study were not considered to represent an adverse effect of treatment. NOAEL: 1000 mg/kg/day for systemic toxicity.

### Section 12: ECOLOGICAL INFORMATION

12.1. **Toxicity**

**Ecotoxicity**
Not readily biodegradable; Algal Growth Inhibition Test (Desmodesmus subspicatus) EC50 >= 0.013 mg/l, NOEC = 0.013 mg/l. Acute Toxicity (Daphnia magna) 21 day EC50 >= 0.016 mg/l, NOEC = 0.0048 mg/l, LOEC = 0.016 mg/l

12.2. **Persistence and degradability**
PHOTOTRANSFORMATION IN AIREPIWIN AOP Program indicates that the test substance will undergo hydroxyl radical induced photodegradation in the atmosphere with a half-life estimated at 0.268 days or 3.212 hours. BIODEGRADATION IN WATER: The test material attained 4% degradation after 28 days and therefore cannot be considered to be readily biodegradable under the conditions of the OECD Guideline No. 301B.

12.3. **Bioaccumulative potential**
No information available.

12.4. **Mobility in soil**

**Mobility in soil**
No information available.

12.5. **Results of PBT and vPvB assessment**
No information available.
12.6. Other adverse effects

No information available

---

### Section 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

<table>
<thead>
<tr>
<th>Waste from residues/unused products</th>
<th>Disposal should be in accordance with applicable regional, national and local laws and regulations.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contaminated packaging</td>
<td>Improper disposal or reuse of this container may be dangerous and illegal.</td>
</tr>
</tbody>
</table>

---

### Section 14: TRANSPORT INFORMATION

**IMDG**

<table>
<thead>
<tr>
<th>14.1 UN/ID No.</th>
<th>Not regulated</th>
</tr>
</thead>
<tbody>
<tr>
<td>14.2 Proper shipping name</td>
<td>Not regulated</td>
</tr>
<tr>
<td>14.3 Hazard Class</td>
<td>Not regulated</td>
</tr>
<tr>
<td>14.4 Packing Group</td>
<td>Not regulated</td>
</tr>
<tr>
<td>14.5 Marine pollutant</td>
<td>Not applicable</td>
</tr>
<tr>
<td>14.6 Special Provisions</td>
<td>None</td>
</tr>
</tbody>
</table>

| 14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code | No information available |

**RID**

<table>
<thead>
<tr>
<th>14.1 UN/ID No.</th>
<th>Not regulated</th>
</tr>
</thead>
<tbody>
<tr>
<td>14.2 Proper shipping name</td>
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</tr>
<tr>
<td>14.3 Hazard Class</td>
<td>Not regulated</td>
</tr>
<tr>
<td>14.4 Packing Group</td>
<td>Not regulated</td>
</tr>
<tr>
<td>14.5 Environmental hazard</td>
<td>Not applicable</td>
</tr>
<tr>
<td>14.6 Special Provisions</td>
<td>None</td>
</tr>
</tbody>
</table>

**ADR**

<table>
<thead>
<tr>
<th>14.1 UN/ID No.</th>
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</thead>
<tbody>
<tr>
<td>14.2 Proper shipping name</td>
<td>Not regulated</td>
</tr>
<tr>
<td>14.3 Hazard Class</td>
<td>Not regulated</td>
</tr>
<tr>
<td>14.4 Packing Group</td>
<td>Not regulated</td>
</tr>
<tr>
<td>14.5 Environmental hazard</td>
<td>Not applicable</td>
</tr>
<tr>
<td>14.6 Special Provisions</td>
<td>None</td>
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</tbody>
</table>

**IATA**

<table>
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<th>14.1 UN/ID No.</th>
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<tbody>
<tr>
<td>14.2 Proper shipping name</td>
<td>Not regulated</td>
</tr>
<tr>
<td>14.3 Hazard Class</td>
<td>Not regulated</td>
</tr>
<tr>
<td>14.4 Packing Group</td>
<td>Not regulated</td>
</tr>
<tr>
<td>14.5 Environmental hazard</td>
<td>Not applicable</td>
</tr>
<tr>
<td>14.6 Special Provisions</td>
<td>None</td>
</tr>
</tbody>
</table>

---

### Section 15: REGULATORY INFORMATION

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

European Union
Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

**Authorizations and/or restrictions on use:**
This product does not contain substances subject to authorization (Regulation (EC) No. 1907/2006 (REACH), Annex XIV) This product does not contain substances subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

**Persistent Organic Pollutants**
Not applicable

**Ozone-depleting substances (ODS) regulation (EC) 1005/2009** Not applicable

**International Inventories**

<table>
<thead>
<tr>
<th>Inventory</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSCA</td>
<td>Complies</td>
</tr>
<tr>
<td>DSL/NDSL</td>
<td>-</td>
</tr>
<tr>
<td>EINECS/ELINCS</td>
<td>Complies</td>
</tr>
<tr>
<td>ENCS</td>
<td>-</td>
</tr>
<tr>
<td>IECSC</td>
<td>Complies</td>
</tr>
<tr>
<td>KECL</td>
<td>-</td>
</tr>
<tr>
<td>PICCS</td>
<td>-</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 Chemical Substances/European 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

**15.2. Chemical safety assessment**
No information available

---

**Section 16: OTHER INFORMATION**

**Key or legend to abbreviations and acronyms used in the safety data sheet**

**Legend**
- SVHC: Substances of Very High Concern for Authorization

**Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

<table>
<thead>
<tr>
<th>Legend</th>
<th>Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>TWA</td>
<td>TWA (time-weighted average)</td>
</tr>
<tr>
<td>Ceiling</td>
<td>Maximum limit value</td>
</tr>
<tr>
<td>STEL</td>
<td>STEL (Short Term Exposure Limit)</td>
</tr>
<tr>
<td>Skin designation</td>
<td>Skin designation</td>
</tr>
</tbody>
</table>

**Issue Date**
06-Apr-2017

**Revision Date**
09-Jul-2018

**Revision Note**
Not applicable.

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

End of Safety Data Sheet