# MATERIAL SAFETY DATA SHEET

<table>
<thead>
<tr>
<th>NFPA</th>
<th>HMIS</th>
<th>Personal Protective Equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="NFPA 1, 0" /></td>
<td><img src="image" alt="HMIS 1, 1, 0" /></td>
<td><img src="image" alt="Eye Protection" /> <img src="image" alt="Gloves" /> <img src="image" alt="Face Protection" /></td>
</tr>
</tbody>
</table>

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

| Product code: | S1176 |
| Product Name: | Solvent Yellow 16 |
| Chemical Name: | Sudan Yellow 3G |
| Synonyms: | No information available |
| Recommended use: | No information available |
| CAS #: | 4314-14-1 |
| Formula: | C16-H14-N4-O |
| RTECS #: | Not available |
| CI#: | Not available |

**Supplier:** Spectrum Chemicals and Laboratory Products, Inc.
14422 South San Pedro St.
Gardena, CA 90248
(310) 516-8000

**Emergency Telephone Number:** CHEMTREC: 1-800-424-9300

**Contact Person:** Martin LaBenz (West Coast)

**Contact Person:** Chris Terpak (East Coast)

## 2. HAZARDS IDENTIFICATION

**EMERGENCY OVERVIEW**
May cause skin and eye irritation. May cause irritation of respiratory tract.

| Odor: | No information available |
| Physical state: | Solid. |
| Appearance: | Powder. |
| Color: | Yellow. |

**OSHA Regulatory Status**
This material is not considered hazardous by the OSHA Hazard Communication Standard (29 1910.1200)
2. HAZARDS IDENTIFICATION

PrincipaL Routes of Exposure:
Ingestion. Inhalation.

Acute Potential Health Effects:

Skin Contact:
May cause skin irritation.

Eye Contact:
Contact with eyes may cause irritation.

Inhalation:
May cause irritation of respiratory tract.

Ingestion:
No information available.

Chronic Potential Health Effects:

Target Organs: No information available
Carcinogen Status: No information available
Mutagenic Effects: No information available
Teratogenic Effects: No information available
Aggravated Medical Conditions: No information available

See Section 11 for additional Toxicological Information

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solvent Yellow 16</td>
<td>4314-14-1</td>
<td>100</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

General Advice: Poison information centres in each State capital city can provide additional assistance for scheduled poisons (13 1126)

Skin Contact: Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. Get medical attention if irritation develops. Consult a physician if necessary.

Eye Contact: Flush eye with water for 15 minutes. Get medical attention if irritation occurs. If symptoms persist, call a physician.

Inhalation: Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Product code: S1176  Product name: Solvent Yellow 16
Ingestion: Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Consult a physician if necessary.

Notes to Physician: Treat symptomatically

5. FIRE-FIGHTING MEASURES

Flammable Properties

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Flashpoint (°C/°F):</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Lower Explosion Limit (%):</td>
<td>No information available</td>
</tr>
<tr>
<td>Upper Explosion Limit (%):</td>
<td>No information available</td>
</tr>
<tr>
<td>Autoignition Temperature (°C/°F):</td>
<td>No information available</td>
</tr>
</tbody>
</table>

Suitable Extinguishing Media: Not applicable.

Unsuitable Extinguishing Media: No information available.

Hazardous Combustion Products: Carbon monoxide; Carbon dioxide; Nitrogen oxides

Specific hazards: May be combustible at high temperatures.

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

Specific Methods: No information available.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Ensure adequate ventilation. Use personal protective equipment. Avoid contact with skin, eyes and clothing. Avoid dust formation. Remove all sources of ignition.

Environmental Precautions: No information available.

Methods for Cleaning Up: Sweep up and shovel into suitable containers for disposal. Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE

Handling

**Technical Measures/Precautions:**
Provide sufficient air exchange and/or exhaust in work rooms. Avoid dust formation. Keep away from incompatible materials.

**Safe Handling Advice:**
Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Keep away from heat and sources of ignition. Avoid dust formation. Do not ingest. Do not breathe vapours/dust. Handle in accordance with good industrial hygiene and safety practice.

Storage

Product code: S1176  Product name: Solvent Yellow 16
Technical Measures/Storage Conditions:
Keep container tightly closed in a dry and well-ventilated place. Store at room temperature in the original container. Store away from incompatible materials.

Incompatible Products:
Oxidizing agents. Reducing agents.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering measures to reduce exposure:
Ensure adequate ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protective Equipment

Eye protection: Safety glasses. Safety glasses with side-shields.
Skin and body protection: Long sleeved clothing. Chemical resistant apron. Gloves.
Respiratory protection: Effective dust mask. Wear respirator with dust filter.
Hygiene measures: Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product. When using, do not eat, drink or smoke.

National occupational exposure limits

United States
U.S Occupational Exposure Limits: Not determined

Canada
Canada Occupational Exposure Limits: Not determined

Australia and Mexico
Occupational Exposure Limits for Australia and Mexico: Not determined

9. PHYSICAL AND CHEMICAL PROPERTIES

Product code: S1176  Product name: Solvent Yellow 16
9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Solid</td>
</tr>
<tr>
<td>Appearance</td>
<td>Powder</td>
</tr>
<tr>
<td>Color</td>
<td>Yellow</td>
</tr>
<tr>
<td>Odor</td>
<td>No information available</td>
</tr>
<tr>
<td>Taste</td>
<td>No information available</td>
</tr>
<tr>
<td>Molecular weight</td>
<td>278.32</td>
</tr>
<tr>
<td>Flash point (°C)</td>
<td>Not determined</td>
</tr>
<tr>
<td>Lower Explosion Limit (%)</td>
<td>No information available</td>
</tr>
<tr>
<td>Upper Explosion Limit (%)</td>
<td>No information available</td>
</tr>
<tr>
<td>Autoignition Temperature (°C/°F)</td>
<td>No information available</td>
</tr>
<tr>
<td>pH</td>
<td>No information available</td>
</tr>
<tr>
<td>Boiling point range(°C/°F)</td>
<td>No information available</td>
</tr>
<tr>
<td>Melting point range(°C/°F)</td>
<td>No information available</td>
</tr>
<tr>
<td>Decomposition temperature (°C/°F)</td>
<td>No information available</td>
</tr>
<tr>
<td>Specific gravity</td>
<td>No information available</td>
</tr>
<tr>
<td>Density (g/cm3)</td>
<td>No information available</td>
</tr>
<tr>
<td>Bulk density</td>
<td>No information available</td>
</tr>
<tr>
<td>Vapor density</td>
<td>No information available</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No information available</td>
</tr>
<tr>
<td>Odor threshold (ppm)</td>
<td>No information available</td>
</tr>
<tr>
<td>Partition coefficient (n-octanol/water)</td>
<td>No information available</td>
</tr>
<tr>
<td>Miscibility</td>
<td>No information available</td>
</tr>
<tr>
<td>Solubility</td>
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</table>

10. STABILITY AND REACTIVITY

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stability</td>
<td>Stable at normal conditions</td>
</tr>
<tr>
<td>Conditions to avoid</td>
<td>Heat. Avoid dust formation. Dust may form explosive mixture in air. Fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.</td>
</tr>
<tr>
<td>Materials to avoid</td>
<td>Oxidising agents (strong). Reducing agents.</td>
</tr>
<tr>
<td>Possibility of Hazardous Reactions:</td>
<td>No information available</td>
</tr>
<tr>
<td>Polymerization</td>
<td>Hazardous polymerisation does not occur</td>
</tr>
<tr>
<td>Corrosivity</td>
<td>No information available</td>
</tr>
<tr>
<td>Special Remarks on Corrosivity:</td>
<td>No information available</td>
</tr>
</tbody>
</table>

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Component Information

Solvent Yellow 16 - 4314-14-1
LD50/oral/rat = No information available
LD50/oral/mouse = No information available
LC50/inhalation/rat = No information available
LC50/inhalation/mouse = No information available
LC50/dermal/rabbit = No information available
LD50/dermal/rat = Not determined
LD50/dermal/rabbit = No information available
LD50/oral/rat = No information available
LD50/oral/mouse = No information available

Product Information

Local Effects
Skin irritation: May cause skin irritation.
Eye irritation: Contact with eyes may cause irritation.
Inhalation: May cause irritation of respiratory tract.
Ingestion: Health injuries are not known or expected under normal use.
Sensitization: No information available

Chronic Toxicity
Chronic Toxicity No information available.
Carcinogenic effects: No information available.
Mutagenic Effects: No information available
Reproductive Effects: No information available
Teratogenic Effects: No information available
Target Organs: No information available

12. ECOLOGICAL INFORMATION

ECOTOXICITY

Toxicity to terrestrial and aquatic plants and animals: No information available

Ecotoxicity effects:

Aquatic toxicity:

Solvent Yellow 16 - 4314-14-1
Freshwater Algae Data: No information available
Freshwater Fish Species Data: Not information available
Water Flea Data: No information available

Mobility: No information available
Persistence and degradability: No information available
13. DISPOSAL CONSIDERATIONS

Waste from residues / unused products:
Waste must be disposed of in accordance with Federal, State and Local regulation.

Contaminated packaging:
Empty containers should be taken for local recycling, recovery or waste disposal

<table>
<thead>
<tr>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Solvent Yellow 16</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

14. TRANSPORT INFORMATION

DOT
- UN-No: Not regulated
- Proper Shipping Name: No information available
- Hazard Class: No information available
- Packing Group: None
- Subsidiary Risk: Not applicable
- Marine Pollutant: No data available
- ERG No: No information available
- DOT RQ (lbs): No information available

TDG (Canada)
- Proper Shipping Name: No information available
- UN-No: Not regulated
- Hazard Class: No information available
- Packing Group: No information available
- Subsidiary Risk: No information available
- Description: No information available

ADR
- Proper Shipping Name: No information available
- UN-No: Not regulated
- Hazard Class: No information available
- Packing Group: No information available
- Subsidiary Risk: No information available
- Classification Code: No information available
- Description: No information available
- CEFIC Tremcard No: No information available

IMO / IMDG
- Proper Shipping Name: No information available
- UN-No: Not regulated
- Hazard Class: No information available
- Subsidiary Risk: No information available
- Packing Group: No information available
- Description: No information available
- IMDG Page: No information available
- Marine Pollutant: No information available
- MFAG: No information available
- Maximum Quantity: No information available

RID
- Proper Shipping Name: No information available

Product code: S1176 Product name: Solvent Yellow 16
UN-No: Not regulated
Hazard Class: No information available
Packing Group: No information available
Subsidiary Risk: No information available
Classification Code: No information available
Description: No information available

ICAO
UN-No: Not regulated
Hazard Class: No information available
Proper Shipping Name: No information available
Packing Group: No information available
Subsidiary Risk: No information available
Description: No information available

IATA
Proper Shipping Name: No information available
UN-No: Not regulated
Hazard Class: No information available
Packing Group: No information available
Subsidiary Risk: No information available
Description: No information available

15. REGULATORY INFORMATION

International Inventories

<table>
<thead>
<tr>
<th>Components</th>
<th>U.S. TSCA</th>
<th>Philippines (PICCS)</th>
<th>KOREA KECL</th>
<th>Japan ENCS</th>
<th>CHINA</th>
<th>Australia (AICS)</th>
<th>EINECS-No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solvent Yellow 16</td>
<td>Present</td>
<td>Present</td>
<td>KE-08652</td>
<td>5-3043</td>
<td>Present</td>
<td>Not present</td>
<td>224-330-1</td>
</tr>
</tbody>
</table>

U.S. Regulations


Chemicals Known to the State of California to Cause Cancer:
WARNING: This product contains a chemical known to the State of California to cause cancer. (See table below)

Chemicals Known to the State of California to Cause Reproductive Toxicity:
This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

<table>
<thead>
<tr>
<th>Components</th>
<th>Carcinogen</th>
<th>Developmental Toxicity</th>
<th>Male Reproductive Toxicity</th>
<th>Female Reproductive Toxicity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solvent Yellow 16</td>
<td>Not Listed</td>
<td>Not Listed</td>
<td>Not Listed</td>
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</tr>
</tbody>
</table>

CERCLA/SARA

<table>
<thead>
<tr>
<th>Components</th>
<th>CERCLA - Hazardous Substances and their Reportable Quantities</th>
<th>Section 302 Extremely Hazardous Substances and TPGS</th>
<th>Section 302 Extremely Hazardous Substances and RQs</th>
<th>Section 313 - Chemical Category</th>
<th>Section 313 - Reporting de minimis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solvent Yellow 16</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

U.S. TSCA

<table>
<thead>
<tr>
<th>Components</th>
<th>TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS)</th>
<th>TSCA 8(d) - Health and Safety Reporting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solvent Yellow 16</td>
<td>Not Applicable</td>
<td>Not Applicable</td>
</tr>
</tbody>
</table>
Canada

WHMIS hazard class:
Non-controlled

Inventory

<table>
<thead>
<tr>
<th>Components</th>
<th>Canada (DSL)</th>
<th>Canada (NDSL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solvent Yellow 16</td>
<td>Present</td>
<td>Not Listed</td>
</tr>
</tbody>
</table>

EU Classification

R -phrase(s)
not determined

S -phrase(s)
none

The product is classified in accordance with Annex VI to Directive 67/548/EEC

Indication of danger:
None.
Not dangerous

16. OTHER INFORMATION

The MSDS format complies with ANSI Z400.1-2004 standards.

Revision date: 08-Mar-2010
Reason for revision: Not applicable
Additional advice: Consult your supplier if the material is to be used for special applications such as in the food industry or for hygiene, medical or surgical end-use.
Prepared by: Health & Safety
Literature reference: No information available
All chemicals may pose unknown hazards and should be used with caution. This Material Safety Data Sheet (MSDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this MSDS. The physical properties reported in this MSDS are obtained from the literature and do not constitute product specifications. Information contained herein does not constitute a warranty, whether expressed or implied, as to the safety, merchantability or fitness of the goods for a particular purpose. Spectrum Chemicals & Laboratory Products, Inc. assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this MSDS is based on technical data judged to be reliable, Spectrum assumes no responsibility for the completeness or accuracy of the information contained herein.