1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product code: K1226
Product Name: Kola Nut Extract, Caffeine 10%
Chemical Name: No information available
Synonyms: No information available
Recommended use: No information available.
CAS #: Mixture
Formula: No information available
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: Light brown. Brown

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

POTENTIAL HEALTH EFFECTS

Principal Routes of Exposure:
Ingestion. Inhalation.

Acute Potential Health Effects:

Skin Contact:
May cause skin irritation.

Eye Contact:
May cause eye irritation.

Inhalation:
May cause irritation of respiratory tract.

Ingestion:
Expected to be a low hazard. Ingestion may cause gastrointestinal irritation, nausea, vomiting, and diarrhoea. May cause central nervous system effects. It may affect the brain. May affect the cardiovascular system. May affect respiration. It may affect the urinary system. May affect the blood. It may affect metabolism. May affect electrolyte balance. May affect the liver.

Chronic Potential Health Effects:


Carcinogen Status:
Kola Nut Extract NCAS (90)
No information available

Caffeine 58-08-2 (10)
Group 3- Not classifiable as to its carcinogenicity to humans by IARC

Mutagenic Effects:
For Caffeine:
May affect genetic material
Mutagenic effects in mammalian somatic cells
Experiments with bacteria and/or yeast have shown mutagenic effects
Mutations in microorganisms

Teratogenic Effects:
For Caffeine:
May cause birth defects (teratogenic effects) based on animal test data
Caffeine intake in humans does not appear to increase the risk of congenital abnormalities

Aggravated Medical Conditions: No information available

See Section 11 for additional Toxicological Information

POTENTIAL ENVIRONMENTAL EFFECTS

No information available

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Weight %</th>
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<tbody>
<tr>
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<td>90</td>
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Product code: K1226
Product name: Kola Nut Extract, Caffeine 10%
3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>CAS Number</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Caffeine</td>
<td>58-08-2</td>
<td>10%</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.

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 breathing is difficult, give oxygen. In case of shortness of breath, give oxygen. Get medical attention.

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

Flashpoint (°C/°F): No information available.

Tested according to: Not available

Lower Explosion Limit (%): No information available

Upper Explosion Limit (%): No information available

Autoignition Temperature (°C/°F): Not applicable.

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

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

Product code: K1226  
Product name: Kola Nut Extract, Caffeine 10%
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. Avoid dust formation. 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. All equipment used when handling the product must be grounded. Keep away from incompatible materials.

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

Storage
Technical Measures/Storage Conditions:
Hygroscopic. 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:
No information available.

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: 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

Product code: K1226 Product name: Kola Nut Extract, Caffeine 10%
<table>
<thead>
<tr>
<th>Components</th>
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<th>NIOSH</th>
<th>ACGIH</th>
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<td>Caffeine - 58-08-2</td>
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**Canada**

Canada Occupational Exposure Limits: Not determined

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<tr>
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**Australia and Mexico**

Occupational Exposure Limits for Australia and Mexico: Not determined

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<tr>
<td>Caffeine 58-08-2</td>
<td>None</td>
<td>None</td>
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</tbody>
</table>

### 9. PHYSICAL AND CHEMICAL PROPERTIES

- **Physical state:** Solid.
- **Appearance:** Powder.
- **Color:** Light brown. Brown.

- **Odor:** No information available
- **Taste:** No information available
- **Molecular/Formula weight:** No information available

- **Flash point (°C):** Not applicable
- **Lower Explosion Limit (%):** Not applicable
- **Upper Explosion Limit (%):** Not applicable

- **Autoignition Temperature (°C/°F):** No information available
- **pH:** No information available
- **Boiling point/range(°C/°F):** No information available

- **Melting point/range (°C/°F):** No information available
- **Decomposition temperature(°C/°F):** No information available
- **Specific gravity:** No information available

- **Density (g/cm3):** No information available
- **Bulk density:** No information available
- **Vapor pressure @ 20°C (kPa):** No information available

- **Vapor density:** No information available
- **Evaporation rate:** No information available
- **VOC content (g/L):** No information available

- **Odor threshold (ppm):** No information available
- **Partition coefficient (n-octanol/water):** No information available
- **Miscibility:** No information available

- **Solubility:** No information available

### 10. STABILITY AND REACTIVITY

- **Stability:** Stable at normal conditions

- **Conditions to avoid:** 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. Incompatible materials.

**Product code:** K1226  
**Product name:** Kola Nut Extract, Caffeine 10%
Materials to avoid: No information available


Possibility of Hazardous Reactions: No information available

Polymerization: Hazardous polymerisation does not occur

Corrosivity: No information available

Special Remarks on Corrosivity: No information available

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Component Information

Kola Nut Extract - NCAS
- LD50/oral/rat = No information available
- LD50/oral/mouse = No information available
- LD50/dermal/rabbit = No information available
- LD50/dermal/rat = No information available
- LC50/inhalation/rat = No information available
- LC50/inhalation/mouse = No information available
- Other LD50 information = No information available

Caffeine - 58-08-2
- LD50/oral/rat = 192 mg/kg Oral LD50 Rat
- LD50/oral/mouse = No information available
- LD50/dermal/rabbit = No information available
- LD50/dermal/rat = No information available
- LC50/inhalation/rat = No information available
- LC50/inhalation/mouse = No information available
- Other LD50 information = No information available

Product Information

- LC50/inhalation/rat = No information available
- LC50/inhalation/mouse = No information available
- LD50/dermal/rabbit = No information available
- LD50/dermal/rat = No information available
- LD50/oral/rat = No information available
- LD50/oral/mouse = No information available

Local Effects

Skin irritation: May cause skin irritation.

Eye irritation: Contact with eyes may cause irritation.

Inhalation: May cause irritation of respiratory tract

Product code: K1226  Product name: Kola Nut Extract, Caffeine 10%
Ingestion: Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea. May cause stomach cramping. May cause flushing and sweating. May cause anorexia. May affect the cardiovascular system (hypotension or hypertension, tachycardia, dysrhythmias). May affect the cardiovascular system (palpitations). It may affect the brain. May affect behavior/central nervous system (headache, excitability, tremor, restlessness, twitching, anxiety, insomnia, tremors, nervousness, ataxia, dizziness, hallucinations, agitation, convulsions). May affect liver. May affect urinary system (kidneys). Caffeine is mild diuretic in low and moderate doses and causes a mild increase in urinary volume (diuresis) and urinary sodium excretion. Ingestion of large amounts of caffeine may cause acute renal failure. May cause painful or difficult urination. May cause metabolic acidosis. May affect electrolytes. May cause hypokalemia. May cause hyperglycemia. May affect respiration (rapid breathing (tachypnea), hyperventilation, respiratory depression, respiratory arrest). It may affect the blood (leukocytosis). Please note that the previously mentioned health effects were extrapolated from Caffeine.

Sensitization: No information available

Chronic Toxicity

Chronic Toxicity Prolonged or repeated ingestion may affect the thymus gland. Prolonged or repeated ingestion may affect the adrenal gland. Prolonged or repeated ingestion may affect behavior/central nervous system. Prolonged or repeated ingestion may affect metabolism (cause anorexia, weight loss). Prolonged or repeated ingestion may affect the blood. Prolonged or repeated ingestion may affect the liver. Prolonged or repeated ingestion may affect the cardiovascular system. Prolonged or repeated ingestion may affect the brain.

Carcinogenic effects: Not classifiable as to its carcinogenicity to humans. May cause cancer based on animal test data. Tumorigenic agent by RTECS criteria.

<table>
<thead>
<tr>
<th>Components</th>
<th>NTP</th>
<th>IARC</th>
<th>OSHA HCS - Carcinogens</th>
<th>ACGIH - Carcinogens</th>
<th>Australia - Prohibited Carcinogenic Substances</th>
<th>Australia - Notifiable Carcinogenic Substances</th>
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<tbody>
<tr>
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</tbody>
</table>

Mutagenic Effects: For Caffeine: May affect genetic material. Mutagenic effects in mammalian somatic cells. Experiments with bacteria and/or yeast have shown mutagenic effects. Mutatations in microorganisms.

Reproductive Effects: For Caffeine: May cause adverse reproductive effects. An increase in miscarriage, stillbirths and low birth weight infants have been associated with caffeine, but not confirmed. There are conflicting data. Caffeine is classified as FDA pregnancy category B. Animal reproduction studies failed to demonstrate a risk to the fetus and there are no adequate and well-controlled studies in pregnant women.

Teratogenic Effects: For Caffeine: May cause birth defects (teratogenic effects) based on animal test data. Caffeine intake in humans does not appear to increase the risk of congenital abnormalities.


12. ECOLOGICAL INFORMATION

ECOTOXICITY

Product code: K1226 Product name: Kola Nut Extract, Caffeine 10%
Toxicity to terrestrial and aquatic plants and animals: Information given is based on data on the components and the ecotoxicology of similar products.

Ecotoxicity effects: Aquatic environment.

Aquatic toxicity:

Caffeine - 58-08-2

**Freshwater Fish Species Data:** 151 mg/L LC50 Pimephales promelas 96 h flow-through 1
**Water Flea Data:** 182.12 mg/L EC50 Daphnia species 4 h

Mobility: No information available

Persistence and degradability: No information available

Bioaccumulative potential: 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>
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</thead>
<tbody>
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<td>Caffeine</td>
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</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

Product code: K1226  
Product name: Kola Nut Extract, Caffeine 10%
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>
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</thead>
<tbody>
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<td>Present</td>
<td>200-362-1</td>
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</tbody>
</table>

U.S. Regulations

Caffeine

FDA - Food Additives Generally Recognized as Safe (GRAS): 21CFR part 182.1180


Chemicals Known to the State of California to Cause Cancer:
This product does not contain a chemical requiring a warning under California Prop. 65. (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>
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</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 TPQs</th>
<th>Section 302 Extremely Hazardous Substances and RQs</th>
<th>Section 313 - Chemical Category</th>
<th>Section 313 - Reporting de minimis</th>
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<tbody>
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<td>Kola Nut Extract</td>
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U.S. TSCA

<table>
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<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>
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</tr>
<tr>
<td>Caffeine</td>
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Canada

WHMIS hazard class:
Non-controlled

Canada Controlled Products Regulation:
This product has been classified according to the hazard criteria of the CPR (Controlled Products Regulation) and the MSDS contains all of the information required by the CPR.

Inventory

<table>
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<th>Components</th>
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<th>CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting</th>
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EU Classification

not determined

S-phrase(s)
none

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

Product code: K1226  Product name: Kola Nut Extract, Caffeine 10%
Indication of danger: Not dangerous

16. OTHER INFORMATION

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

Preparation Date: 02-May-2011

Reason for revision: Not applicable

Prepared by: Sonia Owen

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.

Product code: K1226  
Product name: Kola Nut Extract, Caffeine 10%