# MATERIAL SAFETY DATA SHEET

**PRODUCT NAME:** STENKOLOLIN GREEN

**MANUFACTURER:** R-GOT CO., LTD

1-3. EBISUNISI 2-CHOME SHIBUYA-KU TOKYO 150-0021 JAPAN

**TEL:** 03-5459-1121

**FAX:** 03-5459-1120

---

## COMPOSITION/COMPONENTS INFORMATION ON MATERIAL

<table>
<thead>
<tr>
<th>MATERIAL</th>
<th>CAS No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vegetable Oil</td>
<td>—</td>
<td>40~70</td>
</tr>
<tr>
<td>Additive (sulfur type) in Fatty acid esters</td>
<td>—</td>
<td>10~30</td>
</tr>
<tr>
<td>N-BUTANE</td>
<td>106-97-8</td>
<td>10~20</td>
</tr>
<tr>
<td>ISOBUTANE</td>
<td>75-28-5</td>
<td>1~10</td>
</tr>
<tr>
<td>PROPANE</td>
<td>74-98-6</td>
<td>1~10</td>
</tr>
</tbody>
</table>

---

## HAZARDS IDENTIFICATION

- High-pressure liquefied gas inside. High temperatures and impact shock may lead to explosion.
- Flammable liquefied gas inside. Gas vapor-air mixtures may be explosive.
- Liquefied gas is very mildly narcotic. Overexposure may cause mild discomfort.
- If liquefied gas or escaping vapor contacts the skin, frostbite may occur.
- Flammable liquid inside. Liquid vapor-air mixtures may be explosive.
FIRST AID MEASURES

EYE CONTACT
In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Flush backside of the eyelid completely. Call a physician immediately.

SKIN CONTACT
In case of contact, immediately flush skin with plenty of water and soap. Do not flush skin with solvent or thinner. Remove contaminated clothing and shoes. Call a physician, if necessary. Wash contaminated clothing before reuse. Treat for frostbite if necessary by gently warming affected area.

INHALATION
If high concentrations of the mist or gas are inhaled, immediately remove to fresh air. Keep person calm. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician, if necessary.

INGESTION
Keep person calm, and call a physician immediately. Do not induce vomiting.

FIRE FIGHTING MEASURES

Fire Extinguishing Agent
Carbon Dioxide, Foam, Dry Chemical, Dry Sand

Fire Fighting Instructions:
• Use full protective equipment when fighting fire.
• Remove flammable material immediately from fire.
• Use specified fire extinguishing agent.
• Use water spray to cool nearby containers exposed to fire.
• Battle the fires having the wind at one’s back.
• Aerosols can be bursting. Stay clear, while battling the fires.
• Do not use water when fighting fire.

SPILL OR LEAK PROCEDURES
• Leaking cans should be placed in plastic bag or open pail until pressure has dissipated.
• Do not shake leaking cans. The contents may spurt.
• Disperse gas with floor–level forced–air ventilation. Exhaust vapors outdoors.
• Remove all flames, heating elements and gas engines.
• Remove or extinguish ignition or combustion sources.
• Use appropriate protective equipments(protective gloves, protective mask, protective goggles etc.).
• Collect leakage in other container and move it to a place in safety. Do not use tools which may cause sparks.
• Prepare for specified fire extinguishing agent in case of ignition.
• Prevent from discharging the leakage into waters, lakes, streams, tidal marshes, or estuaries.
• Dispose of waste in accordance with regulations.

HANDLING AND STORAGE

[Handling]
• Use only with adequate ventilation.
• Cap the container after use.
• Do not use heat, fire, flame, or sparks around.
• Use only non–sparking and explosion–proof equipment.
• Bond/ground all lines and equipment.
• Do not warm container above 40°C.
• Do not use above 40°C.
• Do not use for 30 seconds in a row.
• In enclosed spaces, use with sufficient ventilation to keep employee exposure below recommended limits.
• Do not spray in direction of flame.
• Avoid causing and inhaling high concentrations of vapor.

[Storage]
• Keep away from direct sunlight, heat and sources of ignition.
• Keep in a cool, well ventilated place.
• Keep at temperature not exceeding 40 °C.
• Keep containers dry.
• Avoid area where salt or other corrosive materials are present.
• Contact with halogens, strong acids, alkalis or other strong oxidizing agents should be avoided.
• Keep away from children.
**PRODUCT NAME:** STENKOLOLIN GREEN  
**DATE:** 2016/9/17

**EXPOSURE CONTROLS/PERSONAL PROTECTION**
- Ventilation must be adequate to maintain vapors at low levels, particularly at floor level as vapors are heavier than air.
- Local exhaust should be used when large amounts are used.
- Install emergency eyewash fountain and deluge shower in/near work area.
- Eye protection: Chemical safety goggles.
- Skin protection: Solvent-resistance rubber type gloves. In case of long operation, wear long sleeves and oil proof clothing.
- Respiratory protection: In enclosed spaces, wear an approved organic vapor respirator.

- **ACGIH**
  - Formulated Concentrate
    - TWA: 5mg/㎥

  - Propellant
    - PROPANE: 2500ppm
    - N-BUTANE: 800ppm
    - ISOBUTANE: no data found

- Minimize exposure in accordance with good hygiene practice.

**PHYSICAL AND CHEMICAL PROPERTIES**
- **[Formulated Concentrate]**
  - Appearance: Light green & transparent liquid
  - Specific Gravity: 0.935 at 15 ℃
  - Viscosity: 62mm²/s at 40℃ (approx)
  - Solubility in Water: Insoluble
  - Solubility in Organic Solvent: Soluble

- **[Propellant]**
  - Boiling Point: -42.1~0.5 ℃
  - Vapor Pressure: 1.275~0.278 MPa at 40 ℃
  - Liquid Density: 0.565 g/cm³ at 20 ℃

**STABILITY AND REACTIVITY**
- **[Formulated Concentrate]**
  - Flash point: 240℃
  - Stability: Stable
  - Burning quality: Flammable

- **[Propellant]**
  - Flash point: -104~−73℃
  - Ignition point: 405~462℃
  - Explosion limit: 1.8~9.5%
  - Stability: Stable
  - Reactivity: None
  - Burning quality: Extremely flammable. Vapor–air mixtures may be explosive.

- **Conditions to Avoid**
  - Avoid open flames and high temperatures above 40℃.

- **Incompatibility with Other Materials**
  - Incompatible with halogens, strong acids, alkalis or other strong oxidizing agents.

- **Generation of Hazardous Gas**
  - Incomplete combustion may produce carbon monoxide.
TOXICOLOGICAL INFORMATION

- **Acute Toxicity**
  [Formulated Concentrate]
  
  **LD50 (rat; peroral administration)**
  Vegetable Oil, Additive(sulfur type) in Fatty acid esters: no data found

- **Propellant**
  
  **LC50 (rat; inhalation)**
  PROPANE, N–BUTANE, ISOBUTANE: no data found

ECOLOGICAL INFORMATION

- **Fish**
  Expected to be not toxic at limit of water solubility

- **Persistence/degradability**
  Expected to be not inherently biodegradable
  
  Oxidizes rapidly by photo–chemical reactions in air

- **Bioaccumulation**
  Has the potential to bioaccumulate

- **Prevent from discharging the content or washing solvent into waters, lakes, streams, tidal marshes, or estuaries.**

  In case of leakage or disposal, be careful to handle the product. It may influence the environment.

DISPOSAL CONSIDERATIONS

- **Disposal method**
  Consult state and local authorities for proper disposal procedures.

- **Container Disposal**
  Dispose of the product in accordance with state and local regulations.
  
  Make sure to remove or extinguish fire or ignition sources around.
  
  Push the button to remove pressure in the container out of doors.
  
  Be careful not to inhale the mist. Do not puncture or incinerate.

TRANSPORTATION INFORMATION

- **Shipping Information**
  UN No.: 1950

- **Proper Shipping Name**
  Aerosols, flammable

- **Class**
  2. 1 (Flammable gases)

- **Packing Group**
  — (not applicable)

  In case of transportation, pay attention to the instructions in “HANDLING AND STORAGE”.

  Make sure that there is no leakage from or damage to the containers.

  Take containers on board without collapse of cargo piles.

  Transport in accordance with state and local regulations.

REGULATORY INFORMATION

- **High Pressure Gas Safety Law:** Exclusion of application

- **Fire Defense Law:** Fourth Class Petroleums

- **Industrial Safety and Health Law:** Hazardous material (flammable gas)

OTHER INFORMATION

The information herein is given in good faith, but no warranty, expressed or implied, is made.

The data in this Material Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process. This information is based upon technical information believed to be reliable. It is subject to revision as additional knowledge and experience is gained.

End of MSDS