

SPROUT TORCH™
MATERIAL SAFETY DATA SHEET
Revised April 27, 2005

EMERGENCY TELEPHONE NUMBER: PERS-1-800-633-8253

SECTION 1: MANUFACTURER'S INFORMATION

1,4 GROUP, Inc.
2307 E. Commercial Street
Meridian, ID 83642
Telephone: 208-887-9766

SECTION 2: PRODUCT IDENTITY/COMPOSITION
SPROUT TORCH™

<u>Composition</u>	<u>Percent</u>
Clove Oil (EUGENIA SPP.)	100
CAS Number	8000-34-8

SECTION 3: HAZARD IDENTIFICATION

Harmful. Keep out of reach of children.
Topical exposure may result in moderate irritation to the eyes and skin.
Inhalation exposure may result in severe irritation to the respiratory system.

SECTION 4: PHYSICAL DATA

COLOR: Pale yellow to brownish @ 20°C
PHYSICAL STATE: Liquid @ 20 °C
ODOR: Cloves
BOILING POINT: 251°C @ 760.00 mmHg
SPECIFIC GRAVITY 1.03800-1.0600 @ 25 °C
pH: Not determined
VISCOSITY Not determined
SOLUBILITY: Insoluble in water
VAPOR PRESSURE: Not determined; 100% volatile by volume
FLASH POINT: 87.78°C (190 °F) TCC

SECTION 5: FIRE AND EXPLOSION HAZARD DATA

FLAMMABILITY: Will support combustion and decompose under fire conditions to form toxic organic materials and toxic/corrosive oxides of carbon and nitrogen.

FLASH POINT: Clove oil, 87.78°C (190 °F) TCC

EXPLODABILITY: Not explosive @ 25°C

EXTINGUISHING MEDIA: CO₂, foam or dry chemical; water to cool exposed containers but unusable for use on burning material.

SPECIAL FIRE FIGHTING PROCEDURES: As in any fire, prevent exposure to smoke, fumes, and products of combustion. Evacuate non-essential personnel. Fire fighters should wear NIOSH/MSHA-approved full-face, self-contained breathing apparatus and impervious clothing. Spray extinguishing media directly into base of flames. Cool containers exposed to flame with water. Do not release runoff from fire control methods to sewers or waterways.

SECTION 6: TOXICOLOGY/HEALTH HAZARD DATA

ACUTE LD₅₀ ORAL: About 1,370 mg/kg (rats)

ACUTE LD₅₀ DERMAL: About 1,200 mg/kg (rabbits)

ACUTE LC₅₀ INHALATION: Not determined.

SKIN IRRITATION: Can cause moderate irritation

EYE IRRITATION: Can cause moderate irritation.

HYPERSENSITIVITY: Did not cause hypersensitivity reaction (guinea pigs)

HYPERSENSITIVITY INCIDENTS: Not known

MUTAGENICITY - Gene Mutation: Non-mutagenic

CARCINOGENICITY: Not listed as a carcinogen by IARC, NTP, ACGIH or OSHA

SECTION 7: ENVIRONMENTAL HAZARDS

AVIAN ACUTE ORAL TOXICITY: Not known

FRESHWATER FISH TOXICITY: THFA LC₅₀ = 3400 mg/L (Harlequin fish)

FRESHWATER INVERTEBRATE TOXICITY: Not known

SECTION 8: EFFECTS OF OVEREXPOSURE/FIRST AID MEASURES

ROUTES OF EXPOSURE: The primary routes of exposure are inhalation and skin contact. Utilize general ventilation and local exhaust to minimize exposure to mists and vapors. Do not breathe vapors. Mechanical exhaust required. In confined or poorly ventilated areas, the use of an appropriate respiratory protection may be required.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: There are no medical conditions that are known to be aggravated by exposure to this product.

EXPOSURE GUIDELINE: Can cause substantial but temporary eye and skin injury. Do not get in eyes, on skin, or on clothing. Wear goggles, face shield or safety glasses. Wash thoroughly

with soap and water after handling and before eating, drinking or using tobacco. Remove and wash contaminated clothing before reuse.

EMERGENCY AND FIRST AID PROCEDURES

If in eyes	<ul style="list-style-type: none">• Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Then seek medical attention.
If swallowed	<ul style="list-style-type: none">• Call a poison control center or doctor immediately for treatment advice.• Have person sip a glass of water if able to swallow.• Do not induce vomiting unless told to do so by a poison control center or doctor.• Do not give anything by mouth to an unconscious person.
If on skin or clothing	<ul style="list-style-type: none">• Take off contaminated clothing.• Rinse skin immediately with plenty of water for 15-20 minutes.• Call a poison control center or doctor for treatment advice.

SECTION 9: REACTIVITY DATA

STABILITY: Stable under normal temperatures and pressures.

HAZARDOUS POLYMERIZATION: Will not occur.

INCOMPATIBILITY (MATERIALS TO AVOID): Strong oxidizing agents, ignition sources, heat.

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide, carbon dioxide and irritating fumes may form during combustion.

SECTION 10: SPILL OR LEAK PROCEDURES

For spill, leak, fire, exposure, or accident call 1-800-633-8253.

STEPS TO BE TAKEN IF MATERIAL IS SPILLED OR RELEASED: Immediately evacuate the area and provide maximum ventilation. Remove all ignition sources. Unprotected personnel should move upwind of spill. Only personnel equipped with proper respiratory and skin/eye protection should be permitted in area. Dike area to contain spill. Take precautions as necessary to prevent contamination of ground and surface waters. Recover or absorb spilled material on sawdust or vermiculite and place in closed containers for disposal. After all visible traces have been removed, thoroughly wet vacuum the area.

WASTE DISPOSAL METHOD: Dispose of contaminated sawdust and vermiculite in a permitted hazardous waste management facility. It is your duty to dispose of this product and the containers in accordance with the Clean Air Act, Clean Water Act, the Resource Conservation and Recovery Act, as well as any other relevant federal, state, or local laws or regulations regarding disposal.

SECTION 11: SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION: A full-face respirator with an organic vapor-removing cartridge with a pre-filter approved for pesticides (MSHA/NIOSH approval number prefix TC-23C) or a canister approved for pesticides (MSHA/NIOSH approval number prefix TC-14G) or a NIOSH approved respirator with an organic vapor (OV) cartridge or canister with any R, P or HE pre-filter, should be worn when applying this product, or when entering the treated area containing a mist or vapor of the product.

VENTILATION: General or local exhaust sufficient to minimize employee exposure.

EYE/SKIN PROTECTION: Since the product can adversely affect the eyes and skin, a face shield should be used during handling procedures.

OTHER PROTECTIVE EQUIPMENT: To avoid irritating or strong odors and fumes, applicators and other handlers are recommended to wear long-sleeved shirt, long pants, shoes plus socks, and chemical resistant gloves (such as Nitrile or Butyl). For reentry into treated areas during application and prior to ventilation or settling of aerosol fog, workers may additionally wear coveralls.

SECTION 12: SPECIAL PRECAUTIONS

GENERAL

- Keep out of reach of children.
- **SPROUT TORCH™** is used as an aerosol to temporarily eliminate sprouts on potatoes.
- **SPROUT TORCH™** must not be applied to potatoes in the field.
- Do not allow vapors to come in contact with storage areas used within 60 days for storing seed potatoes.

STORAGE

- X Keep container closed. Do not contaminate water, food, or feed by storage or disposal. This product kills sprouts and temporarily inhibits germination of seed potatoes.

PESTICIDE DISPOSAL

- X Waste resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

CONTAINER DISPOSAL

- X Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities. Do not reuse empty container.

DISCLAIMER

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