Champion’s Fourth Generation ENIGMA line of ecobalming chemicals are predicated on synergistic mixes of essential, plant-based oils and their purified or synthesized/derived active aldehyde or phenolic components in a near-anhydrous carrier to deliver maximum tissue action. The undiluted use of ENIGMA chemicals, without any water whatsoever, delivers acceptable temporary preservation, good cosmetic appearance and induces temporary sanitizing effects. The Modern Tenets of Embalming are therefore completely fulfilled. A fully-disclosed, clean-sheet SDS accompanies all ENIGMA chemical products confirming their nontoxic, nonhazardous nature and environmental impact. The result is an extremely safe and practical substitute for dangerous and toxic traditionalist formaldehyde embalming. Chemostasis effects, retarding/slowing of decomposition, are immediately noted after injection/infusion/application and are sufficient for effective holding of 3-5 days, and in some instances, possibly, a week or more. This allows adequate time for holding/transport and planning of the end-of-life celebration. The intent of ecobalming chemicals is to temporarily delay but not stop or inhibit natural decay processes and the natural and inevitable return to the elements of human remains. Champion’s ENIGMA Ecobalming chemicals offer the modern embalmer a non-hazardous, nontoxic, eco-safe alternative for temporary preservation prior to final disposition.

**DIRECTIONS FOR USE**

After thorough aspiration, inject at least 2 bottles into cavity. If necessary, re-aspirate and re-inject 1-2 bottles for additional ecobalming action. In addition, may be hypo-injected or applied as a surface pack for maximum localized action. ENIGMA CAVITY is also an excellent power-additive to ENIGMA ARTERIAL where body condition is poor or the embalming difficult. Add 1 bottle of ENIGMA CAVITY to each gallon of ENIGMA ARTERIAL for improved embalming results in compromised bodies. For extreme/severe cases, 2-3 bottles of ENIGMA CAVITY per each gallon of ENIGMA ARTERIAL should be used.

**Notes:**

The use of ENIGMA Ecobalming chemicals will not dehydrate or firm a body in its action. If dehydration (as in the case of edema) is required, Champion’s Third Generation Millenium New Era chemicals (for example: Xeros, Omega, Cavity 48, Plasma, and Alpha Factor) should be used to effect these results with the accompanying drastic reduction/use of toxic formaldehyde and the significant overall reduction in exposure to all chemicals in a traditional style embalming.

**FOR PROFESSIONAL USE ONLY.**
**BEFORE USING, READ SAFETY DATA SHEET.**
SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier
Trade name: ENIGMA CAVITY

1.2. Relevant identified uses of the substance or mixture and uses advised against
Use of the substance/mixture: Cavity Ecobalming Fluid
Use of the substance/mixture: For professional use only

1.3. Details of the supplier of the safety data sheet
THE CHAMPION COMPANY
400 Harrison Street
Springfield, Ohio 45505

Telephone No. (937) 324-5681

1.4. Emergency telephone number
Emergency number: CHEMTREC (800) 424-9300 (Spill, Leak, Fire, Exposure or Accident)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture
GHS-US classification
Flam. Liq. 4 H227
Acute Tox. 4 (Oral) H302
Skin Irrit. 2 H315
Eye Irrit. 2A H319
Skin Sens. 1 H317

2.2. Label elements
GHS-US labelling
Hazard pictograms (GHS-US):

Signal word (GHS-US): Warning
Hazard statements (GHS-US):
H227 - Combustible liquid
H302 - Harmful if swallowed
H315 - Causes skin irritation
H317 - May cause an allergic skin reaction
H319 - Causes serious eye irritation

Precautionary statements (GHS-US):
P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P210 - Keep away from heat, sparks, open flames, hot surfaces. - No smoking
P261 - Avoid breathing dust, fume, mist, spray, vapors
P264 - Wash hands thoroughly after handling
P270 - Do not eat, drink or smoke when using this product
P272 - Contaminated work clothing must not be allowed out of the workplace
P280 - Wear protective clothing, protective gloves, eye protection, face protection
P301+P312 - If swallowed: Call a POISON CENTER
P302+P352 - If on skin: Wash with plenty of water
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P330 - Rinse mouth
P332+P337 - If skin irritation occurs: Get medical attention
P333+P337 - If skin irritation or rash occurs: Get medical attention
P337+P313 - If eye irritation persists: get medical attention
P362 - Take off contaminated clothing and wash before reuse
P370+P378 - In case of fire: Use alcohol resistant foam, dry powder, carbon dioxide (CO2) to extinguish
P403+P235 - Store in a well-ventilated place. Keep cool
2.3. Other hazards

Other hazards which do not result in classification: Spills of this product present a serious slipping hazard.

2.4. Unknown acute toxicity (GHS-US)

No data available

SECTION 3: Composition/information on ingredients

3.1. Substance

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>GHS-US classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guaiacol</td>
<td>(CAS No) 90-05-1</td>
<td>&lt;34</td>
<td>Flam. Liq. 4, H227 Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Irrit. 2A, H319</td>
</tr>
<tr>
<td>Vanillic Aldehyde</td>
<td>(CAS No) 121-33-5</td>
<td>&lt;17</td>
<td>Acute Tox. 4 (Oral), H302 Eye Irrit. 2A, H319</td>
</tr>
<tr>
<td>Eugenol</td>
<td>(CAS No) 97-53-0</td>
<td>&lt;9</td>
<td>Acute Tox. 4 (Oral), H302 Eye Irrit. 2A, H319 Skin Sens. 1, H317</td>
</tr>
<tr>
<td>Propylene Glycol</td>
<td>(CAS No) 57-55-6</td>
<td>&lt;42</td>
<td>N/A</td>
</tr>
</tbody>
</table>

3.2. Mixture

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

First-aid measures after inhalation: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately get medical attention.

First-aid measures after skin contact: Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse. If skin irritation occurs: Get medical attention.

First-aid measures after eye contact: Immediately flush eyes thoroughly with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention if pain, blinking or redness persist.

First-aid measures after ingestion: If swallowed, rinse mouth with water (only if the person is conscious). Do NOT induce vomiting. Obtain emergency medical attention. Call a POISON CENTER. Never give anything by mouth to a person who is not fully conscious.

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

Symptoms/injuries after skin contact: May cause an allergic skin reaction. Causes skin irritation.

Symptoms/injuries after eye contact: Producing fumes/mist. Causes serious eye irritation.

Symptoms/injuries after ingestion: Harmful if swallowed. Ingestion may cause nausea and vomiting. Irritation of the stomach possible.

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media


Unsuitable extinguishing media: Do not use a solid water stream as it may scatter and spread fire.

5.2. Special hazards arising from the substance or mixture

Fire hazard: Combustible liquid.

Explosion hazard: Vapor heavier than air may travel considerable distance to a source of ignition and flash back. May form flammable/explosive vapor-air mixture. Heating will cause pressure rise with risk of bursting and subsequent explosion.

5.3. Advice for firefighters

Firefighting instructions: Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment. Use water spray to cool unopened containers.
Protective equipment for firefighters: Do not enter fire area without proper protective equipment, including respiratory protection. Wear a self contained breathing apparatus.

Other information: Combustible liquid. Explosive vapor/air mixtures may be formed. Vapors are heavier than air and may travel considerable distance to an ignition source and flash back to source of vapors. Thermal combustion may release carbon monoxide and dioxide. Special danger of slipping by leaking/spilling product.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures: Avoid breathing dust, fume, mist, spray, vapors. Eliminate all ignition sources if safe to do so. Take precautionary measures against static discharge. Avoid contact with skin, eyes and clothes.

6.1.1. For non-emergency personnel

Emergency procedures: Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment: Equip cleanup crew with proper protection.
Emergency procedures: Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up: Approach from upwind. Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Spills may be picked up with a mop and followed by a water rinse. Collect spillage. Store away from other materials. Collect all waste in suitable and labelled containers and dispose according to local legislation. Incinerate, dispose in sanitary landfill - if permitted. Thoroughly wash the area with water after a spill or leak clean-up. Wash contaminated areas with large quantities of water to a sanitary sewer, if in accordance with local, state or national legislation. Consult the appropriate authorities about waste disposal.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling: Obtain special instructions before use. Avoid contact with skin and eyes. Work in a well-ventilated area. When not in use, keep containers tightly closed. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Empty container retains product residue. Handle uncleaned empty containers as full ones. Residue can burn if heated. Keep away from heat and direct sunlight. Take precautionary measures against static discharge.

Hygiene measures: Do not eat, drink or smoke when using this product. Use good personal hygiene practices.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures: Provide local exhaust or general room ventilation. A washing facility for eye and skin cleaning purposes should be present.

Storage conditions: Keep out of reach of children. Keep only in the original container in a cool, well-ventilated place away from highly flammable substances. Keep container tightly closed and dry. Store away from direct sunlight or other heat sources. Keep away from ignition sources (including static discharges).

Incompatible materials: Strong acids, bases. Oxidizing agents.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Exposure controls

Appropriate engineering controls: Provide local exhaust or general room ventilation. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

Personal protective equipment: Avoid all unnecessary exposure. Gloves. Protective goggles. Protective clothing. For certain operations, additional Personal Protection Equipment (PPE) may be required.

Hand protection: Wear protective gloves. Protective gloves made of Nitrile.
### Eye protection
- Chemical goggles and/or face shields are required to prevent potential eye contact, irritation or injury.

### Respiratory protection
- The need for respiratory protection is not anticipated under normal use conditions and with adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment.

### Other information
- Do not eat, drink or smoke during use.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Liquid</td>
</tr>
<tr>
<td>Color</td>
<td>Slightly yellow</td>
</tr>
<tr>
<td>Odor</td>
<td>Clove-like odor</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative evaporation rate (butyl acetate=1)</td>
<td>&lt; 1</td>
</tr>
<tr>
<td>Melting point</td>
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</tr>
<tr>
<td>Freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling point</td>
<td>86.6 °C (188 °F)</td>
</tr>
<tr>
<td>Flash point</td>
<td>87.7 °C (&gt;190 °F TCC)</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative vapor density at 20 °C</td>
<td>&gt; 1</td>
</tr>
<tr>
<td>Relative density</td>
<td>No data available</td>
</tr>
<tr>
<td>Density</td>
<td>&gt; 1 Specific Gravity</td>
</tr>
<tr>
<td>Solubility</td>
<td>Water: Slight</td>
</tr>
<tr>
<td>Log Pow</td>
<td>No data available</td>
</tr>
<tr>
<td>Log Kow</td>
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<tr>
<td>Viscosity, kinematic</td>
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</tr>
<tr>
<td>Viscosity, dynamic</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Oxidising properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive limits</td>
<td>No data available</td>
</tr>
</tbody>
</table>

### 9.2. Other information
- No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity
- No additional information available

### 10.2. Chemical stability
- Stable at normal conditions. Unstable on exposure to heat. Combustible liquid. May form flammable/explosive vapor-air mixture.

### 10.3. Possibility of hazardous reactions
- Hazardous polymerization will not occur.

### 10.4. Conditions to avoid
- Direct sunlight. Extremely high or low temperatures.

### 10.5. Incompatible materials

### 10.6. Hazardous decomposition products

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects
**Acute toxicity**: Harmful if swallowed.

**Eugenol (97-53-0)**
- LD50 oral rat: 1930 mg/kg
- ATE US (oral): 1930.00000000 mg/kg bodyweight

**Vanillic Aldehyde (121-33-5)**
- LD50 oral rat: 1580 mg/kg
- LD50 dermal rabbit: > 5010 mg/kg
- ATE US (oral): 1580.00000000 mg/kg bodyweight

**Guaiacol (90-05-1)**
- LD50 oral rat: 520 mg/kg
- LD50 dermal rabbit: 4600 mg/kg
- ATE US (oral): 500.00000000 mg/kg bodyweight
- ATE US (dermal): 4600.00000000 mg/kg bodyweight

**Skin corrosion/irritation**: Causes skin irritation.

**Serious eye damage/irritation**: Causes serious eye irritation.

**Respiratory or skin sensitisation**: May cause an allergic skin reaction.

**Germ cell mutagenicity**: Not classified (Based on available data, the classification criteria are not met)

**Carcinogenicity**: Not classified (Based on available data, the classification criteria are not met)

**Reproductive toxicity**: Not classified (Based on available data, the classification criteria are not met)

**Specific target organ toxicity (single exposure)**: Not classified (Based on available data, the classification criteria are not met)

**Specific target organ toxicity (repeated exposure)**: Not classified (Based on available data, the classification criteria are not met)

**Aspiration hazard**: Not classified (Based on available data, the classification criteria are not met)

**Potential Adverse human health effects and symptoms**: Based on available data, the classification criteria are not met.

**Symptoms/injuries after skin contact**: May cause an allergic skin reaction. Causes skin irritation.

**Symptoms/injuries after eye contact**: Producing fumes/mist. Causes serious eye irritation.

**Symptoms/injuries after ingestion**: Harmful if swallowed. Ingestion may cause nausea and vomiting. Irritation of the stomach possible.

**SECTION 12: Ecological information**

**Toxicity**

**Vanillic Aldehyde (121-33-5)**
- LC50 fishes 1: 53 - 61.3 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
- LC50 fish 2: 88 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])
- NOEC (acute): 10000 mg/kg (Exposure time: 42 Days - Species: Eisenia foetida [soil dry weight])

**Guaiacol (90-05-1)**
- EC50 Daphnia 1: 25.9 mg/l (Exposure time: 48 h - Species: Daphnia magna)

**Persistence and degradability**

**ENIGMA CAVITY**
- Persistence and degradability: Not established.

**Bioaccumulative potential**

**ENIGMA CAVITY**
- Bioaccumulative potential: Not established.
### Vanillic Aldehyde (121-33-5)
- **Log Pow**: 1.23 (at 22 °C)

### Guaiacol (90-05-1)
- **Log Pow**: 1.32

### 12.4. Mobility in soil
No additional information available

### 12.5. Other adverse effects
- **Effect on ozone layer**: No additional information available
- **Effect on the global warming**: No additional information available
- **Other information**: Avoid release to the environment.

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods
- **Waste disposal recommendations**: Dispose in a safe manner in accordance with local and national regulations.
- **Additional information**: Do not re-use empty containers. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose containers to flames, sparks, heat, or other potential ignition sources.
- **Ecology - waste materials**: Avoid release to the environment.

### SECTION 14: Transport information
In accordance with DOT
Not regulated for transport

#### Additional information
- **Other information**: No supplementary information available.

#### Transport by sea
Not regulated for transport

#### Air transport
Not regulated for transport

### SECTION 15: Regulatory information

#### 15.1. US Federal regulations
No additional information available

#### 15.2. International regulations

##### CANADA
- **Guaiacol (90-05-1)**
  - Listed on the Canadian DSL (Domestic Substances List)
  - WHMIS Classification: Uncontrolled product according to WHMIS classification criteria

##### EU-Regulations
No additional information available

#### Classification according to Regulation (EC) No. 1272/2008 [CLP]
No additional information available

#### Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]
No additional information available

#### 15.2. National regulations
No additional information available

#### 15.3. US State regulations
No additional information available
**SECTION 16: Other information**

| Other information |  
|-------------------|---|
| : None. |

Full text of H-phrases: see section 16:

| Acute Tox. 4 (Oral) | Acute toxicity (oral), Category 4 |
| Eye Irrit. 2A | Serious eye damage/eye irritation, Category 2A |
| Flam. Liq. 4 | Flammable liquids Category 4 |
| Skin Irrit. 2 | Skin corrosion/irritation Category 2 |
| Skin Sens. 1 | Sensitisation — Skin, category 1 |
| H227 | Combustible liquid |
| H302 | Harmful if swallowed |
| H315 | Causes skin irritation |
| H317 | May cause an allergic skin reaction |
| H319 | Causes serious eye irritation |

**HMIS III Rating**

| Health | 1 Slight Hazard - Irritation or minor reversible injury possible |
| Flammability | 1 Slight Hazard |
| Physical | 0 Minimal Hazard |

**SDS US (GHS HazCom 2012)**

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