SAFETY DATA SHEET

1. Identification

Product identifier: THYMOL

Other means of identification
Product No.: 8528, 4128

Recommended use and restriction on use
   Recommended use: Not available.
   Restrictions on use: Not known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer
   Company Name: Avantor Performance Materials, Inc.
   Address: 3477 Corporate Parkway, Suite 200
             Center Valley, PA 18034
   Telephone: Customer Service: 855-282-6867
   Fax: Contact Person: Environmental Health & Safety
   e-mail: info@avantormaterials.com

Emergency telephone number:
   24 Hour Emergency: 908-859-2151
   Chemtrec: 800-424-9300

2. Hazard(s) identification

Hazard classification

   Health hazards
      Acute toxicity (Oral) Category 4
      Skin corrosion/irritation Category 1B
      Serious eye damage/eye irritation Category 1

   OSHA hazard(s)
      Combustible dust

   Environmental hazards
      Acute hazards to the aquatic environment Category 2
      Chronic hazards to the aquatic environment Category 2

Label elements

   Hazard symbol:

      "Signal word: Danger"
Hazard statement: Harmful if swallowed. Causes severe skin burns and eye damage. Toxic to aquatic life with long lasting effects.

Precautionary statement

Prevention: Do not eat, drink or smoke when using this product. Do not breathe dust. Wear protective gloves/protective clothing/eye protection/face protection. Wash thoroughly after handling. Avoid release to the environment.

Response: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor. Specific treatment (see this label). Collect spillage.

Storage: Store locked up.

Disposal: Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Other hazards which do not result in GHS classification: None.

3. Composition/information on ingredients

<table>
<thead>
<tr>
<th>Chemical identity</th>
<th>Common name and synonyms</th>
<th>CAS number</th>
<th>Content in percent (%)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>THYMOL</td>
<td></td>
<td>89-83-8</td>
<td>90 - 100%</td>
</tr>
</tbody>
</table>

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First-aid measures

General information: Get medical advice/attention if you feel unwell. Show this safety data sheet to the doctor in attendance.

Ingestion: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor/physician.

Inhalation: Move to fresh air. Get medical attention if symptoms persist. If breathing stops, provide artificial respiration. If breathing is difficult, give oxygen.

Skin contact: Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention if symptoms occur. Wash contaminated clothing before reuse. Destroy or thoroughly clean contaminated shoes.

Eye contact: Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention if symptoms persist.

Most important symptoms/effects, acute and delayed
**Symptoms:** Corrosive to skin and eyes. Causes digestive tract burns.

**Indication of immediate medical attention and special treatment needed**

**Treatment:** Symptoms may be delayed. Treat symptomatically.

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### 5. Fire-fighting measures

**General fire hazards:** Dust may form explosive mixture with air.

**Suitable (and unsuitable) extinguishing media**

<table>
<thead>
<tr>
<th>Suitable extinguishing media</th>
<th>Foam. Carbon dioxide or dry powder.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unsuitable extinguishing media</td>
<td>None known.</td>
</tr>
</tbody>
</table>

**Specific hazards arising from the chemical:** Dust may form explosive mixture with air.

**Special protective equipment and precautions for firefighters**

**Special fire fighting procedures:** Move containers from fire area if you can do so without risk. Use water spray to keep fire-exposed containers cool. Cool containers exposed to flames with water until well after the fire is out.

**Special protective equipment for fire-fighters:** Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

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### 6. Accidental release measures

**Personal precautions, protective equipment and emergency procedures:** ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Keep unauthorized personnel away. Keep upwind. Use personal protective equipment. Avoid inhalation of dust. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. See Section 8 of the MSDS for Personal Protective Equipment.

**Methods and material for containment and cleaning up:** Neutralize with lime or soda ash. Sweep up and place in a clearly labeled container for chemical waste. Clean surface thoroughly to remove residual contamination. Dike far ahead of larger spill for later recovery and disposal.

**Notification Procedures:** Dike for later disposal. Prevent entry into waterways, sewer, basements or confined areas. Stop the flow of material, if this is without risk. Inform authorities if large amounts are involved.

**Environmental precautions:** Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so. Avoid release to the environment.

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### 7. Handling and storage

**Precautions for safe handling:** Do not taste or swallow. Do not get in eyes, on skin, on clothing. Do not breathe dust/fume/gas/mist/vapors/spray. Use personal protective equipment as required. Wear protective gloves/protective clothing/eye protection/face protection. See Section 8 of the MSDS for Personal Protective Equipment. Wash hands thoroughly after handling.
Conditions for safe storage, including any incompatibilities: Keep container tightly closed in a cool, well-ventilated place. Keep away from food, drink and animal feeding stuffs. Avoid heat, sparks, open flames and other ignition sources. Store away from incompatible materials. Avoid conditions which create dust. Store in corrosive resistant container with a resistant inner liner.

8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

None of the components have assigned exposure limits.

Appropriate engineering controls

No data available.

Individual protection measures, such as personal protective equipment

General information: Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. An eye wash and safety shower must be available in the immediate work area.

Eye/face protection: Wear safety glasses with side shields (or goggles). Use tight fitting goggles if dust is generated.

Skin protection

Hand protection: Chemical resistant gloves

Other: Wear suitable protective clothing.

Respiratory protection: If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Air-purifying respirator with a high efficiency particulate filter.

Hygiene measures: Provide eyewash station and safety shower. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance

Physical state: Solid
Form: Granules
Color: Colorless
Odor: Aromatic
Odor threshold: No data available.
pH: No data available.
Melting point/freezing point: 48 °C
Initial boiling point and boiling range: 233 °C
Flash Point: Not applicable
Evaporation rate: No data available.
Flammability (solid, gas): No data available.

Upper/lower limit on flammability or explosive limits
Flammability limit - upper (%): No data available.
Flammability limit - lower (%): No data available.
Explosive limit - upper (%): No data available.
Explosive limit - lower (%): No data available.
Vapor pressure: No data available.
Vapor density: No data available.
Relative density: 0.97 (20 °C)
Solubility(ies)
   Solubility in water: 1 g/l
   Solubility (other): No data available.
Partition coefficient (n-octanol/water): 3.30
Auto-ignition temperature: No data available.
Decomposition temperature: No data available.
Viscosity: No data available.

Other information
   Molecular weight: 150.22 g/mol (C10H14O)

10. Stability and reactivity

Reactivity: No dangerous reaction known under conditions of normal use.
Chemical stability: Material is stable under normal conditions.
Possibility of hazardous reactions: Hazardous polymerization does not occur.
Conditions to avoid: Heat, sparks, flames. Contact with incompatible materials.
Incompatible materials: Strong oxidizing agents.
Hazardous decomposition products: Thermal decomposition may release oxides of carbon.

11. Toxicological information

Information on likely routes of exposure
   Ingestion: Harmful if swallowed. May cause burns of the gastrointestinal tract if swallowed.
   Inhalation: Dust may irritate respiratory system.
   Skin contact: Causes severe skin burns.
   Eye contact: Causes serious eye damage.

Information on toxicological effects

Acute toxicity (list all possible routes of exposure)
   Oral Product: LD 50 (Rat): 980 mg/kg
   Dermal Product: No data available.
   Inhalation Product: No data available.
Repeated dose toxicity
Product: No data available.

Skin corrosion/irritation
Product: Causes severe skin burns.

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

Respiratory or skin sensitization
Product: Not a skin sensitizer.

Carcinogenicity
Product: This substance has no evidence of carcinogenic properties.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:
No carcinogenic components identified

US. National Toxicology Program (NTP) Report on Carcinogens:
No carcinogenic components identified

No carcinogenic components identified

Germ cell mutagenicity
In vitro
Product: No mutagenic components identified

In vivo
Product: No mutagenic components identified

Reproductive toxicity
Product: No components toxic to reproduction

Specific target organ toxicity - single exposure
Product: None known.

Specific target organ toxicity - repeated exposure
Product: None known.

Aspiration hazard
Product: Not classified

Other effects: None known.

12. Ecological information

Ecotoxicity:

Acute hazards to the aquatic environment:

Fish
Product: No data available.

Aquatic invertebrates
Product: No data available.

Chronic hazards to the aquatic environment:

Fish
Product: No data available.
Aquatic invertebrates
Product: No data available.

Toxicity to Aquatic Plants
Product: No data available.

Persistence and degradability
Biodegradation
Product: There are no data on the degradability of this product.

BOD/COD ratio
Product: No data available.

Bioaccumulative potential
Bioconcentration factor (BCF)
Product: No data available on bioaccumulation.

Partition coefficient n-octanol / water (log Kow)
Product: Log Kow: 3.30

Mobility in soil: No data available.

Other adverse effects: Toxic to aquatic life with long lasting effects.

13. Disposal considerations

Disposal instructions: Discharge, treatment, or disposal may be subject to national, state, or local laws.

Contaminated packaging: Since emptied containers retain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT
Not regulated.

IMDG
Not regulated.

IATA
Not regulated.

15. Regulatory information

US federal regulations

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)
None present or none present in regulated quantities.

CERCLA Hazardous Substance List (40 CFR 302.4):
None present or none present in regulated quantities.
Superfund amendments and reauthorization act of 1986 (SARA)

Hazard categories

[ ] Acute (Immediate) [ ] Chronic (Delayed) [ ] Fire [ ] Reactive [ ] Pressure Generating

SARA 302 Extremely hazardous substance
None present or none present in regulated quantities.

SARA 304 Emergency release notification
None present or none present in regulated quantities.

SARA 311/312 Hazardous chemical

<table>
<thead>
<tr>
<th>Chemical Identity</th>
<th>Threshold Planning Quantity</th>
</tr>
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<tbody>
<tr>
<td>THYMOL</td>
<td>500 lbs</td>
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</table>

SARA 313 (TRI reporting)
None present or none present in regulated quantities.

Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3)
None present or none present in regulated quantities.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):
None present or none present in regulated quantities.

US state regulations

US. California Proposition 65
No ingredient regulated by CA Prop 65 present.

US. New Jersey Worker and Community Right-to-Know Act
No ingredient regulated by NJ Right-to-Know Law present.

US. Massachusetts RTK - Substance List
No ingredient regulated by MA Right-to-Know Law present.

US. Pennsylvania RTK - Hazardous Substances
No ingredient regulated by PA Right-to-Know Law present.

US. Rhode Island RTK
No ingredient regulated by RI Right-to-Know Law present.

Inventory Status:

- Australia AICS: On or in compliance with the inventory
- Canada DSL Inventory List: On or in compliance with the inventory
- EU EINECS List: On or in compliance with the inventory
- EU ELINCS List: Not in compliance with the inventory.
- Japan (ENCS) List: On or in compliance with the inventory
- EU No Longer Polymers List: Not in compliance with the inventory.
- China Inv. Existing Chemical Substances: On or in compliance with the inventory
- Korea Existing Chemicals Inv. (KECI): On or in compliance with the inventory
- Canada NDSL Inventory: Not in compliance with the inventory.
- Philippines PICCS: On or in compliance with the inventory
- US TSCA Inventory: On or in compliance with the inventory
- New Zealand Inventory of Chemicals: On or in compliance with the inventory
- Japan ISHL Listing: On or in compliance with the inventory
- Japan Pharmacopoeia Listing: Not in compliance with the inventory.

16. Other information, including date of preparation or last revision
NFPA Hazard ID

Flammability Health Reactivity Special hazard.

Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe

Issue date: 05-16-2014
Revision date: No data available.
Version #: 1.0
Further information: No data available.

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