

**MATERIAL SAFETY DATA SHEET**  
**Capsaicin (technical grade)**

Cayman Chemical Company  
1180 E. Ellsworth Rd.  
Ann Arbor, MI 48108

Printed: 04/06/2009  
Revision: 04/04/2009

Date Created: 04/04/2009

**1. Product and Company Identification**

**Product Code:** 10010743  
**Product Name:** Capsaicin (technical grade)  
**Manufacturer Information**  
**Company Name:** Cayman Chemical Company  
**Emergency Contact:** Cayman Chemical Company (800)364-9897  
**Information:** Cayman Chemical Company (734)971-3335  
**CAS Number:** 404-86-4  
**RETECS #:** RA8530000  
**Synonyms:** N-[(4-hydroxy-3-methoxyphenyl)methyl]-6E-8-methyl-nonenamide

**2. Composition/Information on Ingredients**

Hazardous Components (Chemical Name)	CAS #	Concentration	OSHA PEL	ACGIH TLV	Other Limits
1. Capsaicin	404-86-4	100.0 %	No data.	No data.	No data.
Hazardous Components (Chemical Name)	RETECS #	OSHA STEL	OSHA CEIL	ACGIH STEL	ACGIH CEIL
1. Capsaicin	RA8530000	No data.	No data.	No data.	No data.

**3. Hazards Identification**

**Emergency Overview:** No data available.  
**Route(s) of Entry:** Inhalation? Yes Skin? Yes Eyes? Yes Ingestion? Yes Other: Injection  
**Potential Health Effects (Acute and Chronic):** Toxic.  
Irritant.  
Material may be irritating to the mucous membranes and upper respiratory tract.  
Material is harmful by inhalation, ingestion, or skin absorption.  
May cause eye, skin, or respiratory system irritation.  
Severe over-exposure can result in death.  
Repeated exposure to a highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.  
The toxicological properties of this compound have not been fully evaluated.  
**LD 50 / LC 50:** Please refer to Section 11  
**Signs and Symptoms Of Exposure:** Burning sensation, cough, sneezing, wheezing, laryngitis, shortness of breath, headache, nausea, vomiting.

**4. First Aid Measures**

**Emergency and First Aid Procedures:** If inhaled remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Get immediate medical attention.  
If swallowed, wash out mouth with water provided person is conscious. Never give anything by mouth to an unconscious person. Get medical attention. Do NOT induce vomiting unless directed to do so by medical personnel.  
In case of contact with eyes, hold eyelids apart and flush eyes with plenty of water. After initial flushings, remove any contact lenses and continue flushing for at least 20 minutes. Have eyes examined and tested by medical personnel.  
In case of skin contact, immediately wash skin with soap and plenty of water. Remove contaminated clothing. Get medical attention if symptoms occur. Wash clothing before reuse.

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**5. Fire Fighting Measures**

**Flash Pt:** 113.00 C Method Used: Closed Cup  
**Explosive Limits:** LEL: No data. UEL: No data.  
**Fire Fighting Instructions:** As in any fire, wear self-contained breathing apparatus pressure-demand (MSHA/NIOSH approved or equivalent), and full protective gear to prevent contact with skin and eyes.  
**Flammable Properties and Hazards:** Fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.  
**Hazardous Combustion Products:** carbon oxides  
nitrogen oxides  
**Extinguishing Media:** Use alcohol-resistant foam, carbon dioxide, water, or dry chemical spray when fighting fires involving this material.  
**Unsuitable Extinguishing Media:** No data available.

**6. Accidental Release Measures**

**Steps To Be Taken In Case Material Is Released Or Spilled:** Wear a NIOSH/MSHA approved self-contained breathing apparatus and appropriate personal protection (rubber boots, safety goggles, and heavy rubber gloves).  
Vacuum or sweep up material and place in disposal container.  
Avoid raising dust.  
After removal, ventilate contaminated area and flush thoroughly with water.

**7. Handling and Storage**

**Hazard Label Information:** Avoid contact with skin and eyes. Do not reuse this container. Use with adequate ventilation.  
Wash thoroughly after handling.  
**Precautions To Be Taken in Handling:** Avoid breathing (dust, vapor, mist, gas).  
Avoid formation of dust and aerosols.  
Avoid contact with eyes, skin, and clothing.  
Avoid prolonged or repeated exposure.  
Do not reuse this container.  
Use with adequate ventilation.  
Wash thoroughly after handling.  
**Precautions To Be Taken in Storing:** Store at correct temperature.

**8. Exposure Controls/Personal Protection**

**Protective Equipment Summary - Hazard Label Information:** Eye wash station in work area Lab coat Latex disposable gloves Safety glasses Safety shower in work area Vent Hood  
**Respiratory Equipment (Specify Type):** NIOSH/MSHA approved respirator  
**Eye Protection:** Safety glasses  
**Protective Gloves:** Compatible chemical-resistant gloves  
**Other Protective Clothing:** Lab coat  
**Engineering Controls (Ventilation etc.):** Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.  
**Work/Hygienic/Maintenance Practices:** Do not take internally.  
Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.  
Wash thoroughly after handling.

**9. Physical and Chemical Properties**

**Physical States:** [ ] Gas [ ] Liquid [X] Solid  
**Melting Point:** No data.  
**Boiling Point:** No data.  
**Autoignition Pt:** No data.  
**Flash Pt:** 113.00 C Method Used: Closed Cup

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**Explosive Limits:** LEL: No data. UEL: No data.  
**Specific Gravity (Water = 1):** No data.  
**Bulk density:** No data.  
**Vapor Pressure (vs. Air or mm Hg):** No data.  
**Vapor Density (vs. Air = 1):** No data.  
**Evaporation Rate (vs. Butyl Acetate=1):** No data.  
**Solubility in Water:** 0.1 mg/ml\* at 25.0 C  
**Solubility Notes:** \*PBS pH 7.2, also sol. in DMF, DMSO, & EtOH; see product insert.  
**Percent Volatile:** No data.  
**Heat Value:** No data.  
**Particle Size:** No data.  
**Corrosion Rate:** No data.  
**Formula:** C18H27NO3  
**Molecular Weight:** 305.40  
**pH:** No data.  
**Appearance and Odor:** A crystalline solid

**10. Stability and Reactivity**

**Stability:** Unstable [ ] Stable [X]  
**Conditions To Avoid - Instability:** No data available.  
**Incompatibility - Materials To Avoid:** strong oxidizing agents  
**Hazardous Decomposition Or Byproducts:** carbon oxides  
nitrogen oxides  
**Hazardous Polymerization:** Will occur [ ] Will not occur [X]  
**Conditions To Avoid - Hazardous Polymerization:** No data available.

**11. Toxicological Information**

: The toxicological effects of this compound have not been thoroughly studied.  
  
Capsaicin  
Toxicity Data:  
Oral LD50 (mouse): 47.2-118.8 mg/kg  
Oral LD50 (rat): 148.1-161.2 mg/kg  
Dermal LD50 (mouse): >512 mg/kg  
**Carcinogenicity/Other Information:** No data available.  
**Carcinogenicity:** NTP? No IARC Monographs? No OSHA Regulated? No

**12. Ecological Information**

: Runoff from fire control or dilution water may cause pollution.

**13. Disposal Considerations**

**Waste Disposal Method:** Dispose in accordance with local, state and federal regulations.

**14. Transport Information**

**LAND TRANSPORT (US DOT)**  
**DOT Proper Shipping Name:** Toxic solids, organic, n.o.s. (Capsaicin)  
**DOT Hazard Class:** 6.1  
**DOT Hazard Label:** POISON  
**UN/NA Number:** UN2811  
**Packing Group:** III  
**Additional Transport Information:** Transport in accordance with local, state, and federal regulations.

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**15. Regulatory Information**

US EPA SARA Title III

Hazardous Components (Chemical Name)	CAS #	Sec.302 (EHS)	Sec.304 RQ	Sec.313 (TRI)	Sec.110
1. Capsaicin	404-86-4	No	No	No	

US EPA CAA, CWA, TSCA

Hazardous Components (Chemical Name)	CAS #	EPA CAA	EPA CWA NPDES	EPA TSCA	CA PROP 65
1. Capsaicin	404-86-4	No		Inventory	

**16. Other Information**

**Company Policy or Disclaimer**  
For research use only, not for human or veterinary clinical use.  
DISCLAIMER: This information is provided to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes.

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