

# Safe Handling Guide

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## Capsaicin [8-Methyl-N-vanillyl-trans-6-nonenamide] [404-86-4]

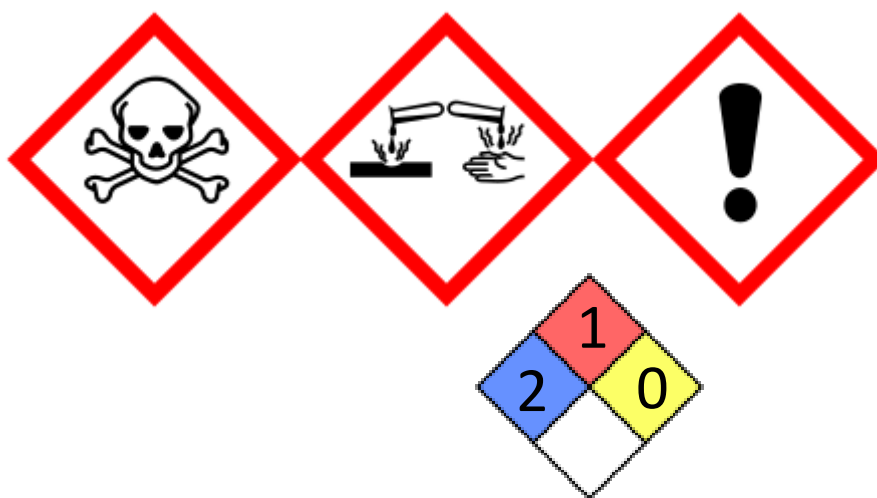
**Capsaicin (8-methyl-N-vanillyl-6-nonenamide)** is an active component of chili peppers, which are plants belonging to the genus *Capsicum*. It is a chemical irritant for mammals, including humans, and produces a sensation of burning in any tissue with which it comes into contact. Capsaicin and several related alkaloids are called capsaicinoids and are produced as secondary metabolites by chili peppers, probably as deterrents against certain mammals and fungi. Pure capsaicin is a hydrophobic, colorless, highly pungent, crystalline to waxy solid compound.

Capsaicin is a strong irritant requiring proper personal protective equipment and proper hazardous material-handling procedures. Capsaicin takes effect upon skin contact (irritant, sensitizer), eye contact (irritant), ingestion, and inhalation (lung irritant, lung sensitizer)

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**SIGNAL WORD: DANGER**

**HAZARD SIGNS**



- Toxic if swallowed
  - May cause irritation, allergic reaction, asthma symptoms or breathing difficulties
  - Causes serious eye damage
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# PRECAUTIONS

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## Before starting work:

- Review manufacturer's [Safety Data Sheet](#) and additional chemical information.
- Ensure that a written experimental protocol including safety information is available.
- Be familiar with the [Western Emergency Response Guide](#) and the [Exposure Response and Spill Response Posters](#).
- Use/handle only as much as you need.
- Identify the location of the nearest eyewash and shower and verify that they are accessible.
- Locate and verify that appropriate spill cleanup materials are available.
- Store capsaicin in a secure area only accessible to qualified or trained personnel.
- Do not perform hazardous work alone when at all possible. If you must work alone, notify your supervisor beforehand and ensure that you have a plan for handling an emergency.

## During work:

- All handling of Capsaicin **MUST** be done inside a fume hood. Never remove a container with Capsaicin from the fume hood unless fully capped. Keep the sash as low as possible. Never raise it above the indicated position (18 inches).
- Wear appropriate PPE including:
  - Lab coat
  - Safety goggles
  - Appropriate gloves (0.11 mm thick nitrile rubber gloves are recommended)
  - If dusts will be generated, filtering respiratory protection is recommended
- Wash hands thoroughly each time gloves are removed.
- Avoid intense heating as explosive mixtures may be formed.
- Avoid strong oxidizers, violent reactions are possible.

## After completing the work:

- Dispose of Capsaicin and Capsaicin-contain waste following [Western's Hazardous Waste Pickup Procedures](#):
    - Hazardous Waste Classification: Toxic/Irritant
    - Ensure that the waste container you are using is clean, dry, and does not have residual solvent or other organic materials in it.
    - Wash hands before leaving lab.
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# EMERGENCY PROCEDURES

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## FIRST AID

### SKIN CONTACT

- Flush skin with copious amounts of water for 15 minutes using the closest available sink, portable drench hose, or safety shower. Remove contaminated clothing.
- Call 360-650-3911 or 911 for emergency assistance and provide SDS sheet to responders/physicians.

### EYE CONTACT

- Using eyewash, flush eyes while hold eyelid open and away from exposed eye. Remove contacts lenses.
- Call 360-650-3911 or 911 for emergency assistance and provide SDS sheet to responders/physicians.
- Continue flushing with water until emergency medical personnel arrive.

### INHALATION

- If dust or mists are inhaled, immediately move to fresh air.
- If someone else has been exposed and is unconscious, remove the individual only if safe for you to do so.
- Call 360-650-3911 or 911 for emergency assistance and provide SDS sheet to responders/physicians.

### INGESTION

- Give person water to drink, two glasses at most and seek medical advice immediately.
- Call 360-650-3911 or 911 for emergency assistance and provide SDS sheet to responders/physicians.

## SPILL RESPONSE

### OUTSIDE FUME HOOD

- Alert others and evacuate to a safe distance and prevent entry.
- Avoid inhalation of dusts and substance contact.
- Only clean small (<100mg) spills if you have been fit-tested and trained to use a particulate respirator. You **must** be fit tested, trained, and wearing a respirator to handle toxic powder spills outside of a fume hood.
- Contact EHS at 360-650-3064 during business hours or 360-650-3911 or 911 outside of business hours.
- Remain in a safe location until EH&S or other response personnel arrive.

### INSIDE FUME HOOD

- Alert others of the spill.
  - If you are working alone, are not trained in spill response, or not comfortable cleaning the spill, contact EHS at 360-650-3064 during business hours or 360-650-3911 or 911 outside of business hours.
  - If trained and confident in spill response, don the appropriate PPE. In order to prevent dust formation and aerosolization, wet absorbent material and gently and slowly wipe up spilled powders. Place in a suitable container for disposal. Clean surfaces thoroughly with water to remove residual contamination. Capsaicin is only moderately soluble in water, so it may take some time to capture all spilled material. Dispose of all waste and cleanup materials as hazardous waste.
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