



SAFETY DATA SHEET

Preparation Date: 10/25/2021

Revision Date: 06/27/2023

Revision Number: G4

1. IDENTIFICATION

Product identifier

Product code: Cap2345
Product Name: CAPSAICIN USP GRADE

Other means of identification

Synonyms: (E)-8-Methyl-N-vanillyl-6-nonenamide
6-Nonenamide, 8-methyl-N-vanillyl-, (E)- (8CI)
8-Methyl-N-vanillyl-6-nonenamide
Capsaicine
N-((4-Hydroxy-3-methoxyphenyl)methyl)-8-methyl-6-nonenamide
trans-8-Methyl-N-vanillyl-6-nonenamide
trans-N-((4-Hydroxy-3-methoxyphenyl)methyl)-8-methyl-6-nonenamide

CAS #: 404-86-4
RTECS # RA8530000
CI#: Not available

Supplier: Adva Tech Group Inc.

Address: 100 Saunders Road, Suite 150, Lake Forest IL 60045

Recommended use of the chemical and restrictions on use

Recommended use: Topical analgesic. Animal and insect repellent.
Uses advised against No information available

2. HAZARDS IDENTIFICATION

Classification

This chemical is considered hazardous according to the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Considered a dangerous substance or mixture according to the Globally Harmonized System (GHS)

Acute toxicity - Oral	Category 3
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2A
Respiratory sensitization	Category 1
Skin sensitization	Category 1
Specific target organ toxicity (single exposure)	Category 3

Label elements

Product code: Cap2345

Danger

Hazard statements

Toxic if swallowed
Causes skin irritation
Causes serious eye irritation
May cause allergy or asthma symptoms or breathing difficulties if inhaled
May cause an allergic skin reaction
May cause respiratory irritation



Hazards not otherwise classified (HNOC)

Not Applicable

Other hazards

Not available

Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Avoid breathing dust/fume/gas/mist/vapors/spray
In case of inadequate ventilation wear respiratory protection
Contaminated work clothing must not be allowed out of the workplace
Use only outdoors or in a well-ventilated area
Wear protective gloves

Precautionary Statements - Response

Specific treatment (see .? on this label)

Specific treatment (see .? on this label)

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

IF ON SKIN: Wash with plenty of water

Take off contaminated clothing and wash it before reuse

If skin irritation or rash occurs: Get medical advice/attention

If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician. IF INHALED: Remove person to fresh air and keep comfortable for breathing.

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician

Rinse mouth

Precautionary Statements - Storage

Store locked up

Store in a well-ventilated place. Keep container tightly closed

Product code: Cap2345

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS-No.	Weight %
Capsaicin, natural	404-86-4	100

4. FIRST AID MEASURES

First aid measures

- General Advice:** National Capital Poison Center in the United States can provide assistance if you have a poison emergency and need to talk to a poison specialist. Call 1-800-222-1222. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves. First aider needs to protect himself.
- Skin Contact:** Wash off immediately with soap and plenty of water removing all contaminated clothing and shoes. Get medical attention. If skin irritation persists, call a physician.
- Eye Contact:** Flush eyes with water for 15 minutes. Get medical attention.
- Inhalation:** Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. **WARNING!** It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled or ingested material is toxic, infectious or corrosive. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Get medical attention.
- Ingestion:** Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Obtain medical attention. Call a physician or Poison Control Center immediately.

Most important symptoms and effects, both acute and delayed

- Symptoms**
- Toxic if swallowed
 - Irritating to eyes and skin
 - Redness and burning sensation on skin
 - Lacrimation
 - Causes conjunctivitis
 - Burning sensation or pain of the eyes
 - Irritating to respiratory system
 - Sensitizing
 - May cause an allergic skin reaction
 - May cause allergic respiratory reaction
 - Causes digestive (gastrointestinal) tract irritation
 - May cause gastritis
 - May cause abdominal pain, nausea, vomiting, diarrhea
 - May affect behavior/central nervous system (tremor, convulsions)

Indication of any immediate medical attention and special treatment needed

- Notes to Physician:** Treat symptomatically.

Protection of first-aiders

First-Aid Providers: Avoid exposure to blood or body fluids. Wear gloves and other necessary protective clothing. Dispose of contaminated clothing and equipment as bio-hazardous waste.

5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media: Dry chemical. Carbon dioxide (CO₂). Water spray mist or

foam.

Unsuitable Extinguishing Media:

No information available.

Specific hazards arising from the chemical

Hazardous Combustion Products:

Carbon Monoxide, Carbon Dioxide. Nitrogen Oxides.

Specific hazards:

May be combustible at high temperatures.

Special Protective Actions for Firefighters

Specific Methods:

No information available.

Special Protective Equipment for Firefighters:

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions:

Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Avoid contact with skin, eyes and clothing. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Use personal protective equipment. Avoid dust formation. Remove all sources of ignition.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Prevent entry into waterways, sewers, basements or confined areas.

Methods and material for containment and cleaning up

Methods for containment

Stop leak if you can do it without risk. Cover with plastic sheet to prevent spreading.

Methods for cleaning up

Sweep up and shovel into suitable containers for disposal. Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE

Precautions for safe handling

Technical Measures/Precautions:

Provide sufficient air exchange and/or exhaust in work rooms. Avoid dust formation. All equipment used when handling the product must be grounded. Keep away from incompatible materials.

Safe Handling Advice

Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Avoid dust formation. Do not ingest. Do not breathe dust. Keep away from heat and sources of ignition. Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Technical Measures/Storage Conditions:

Keep containers tightly closed in a cool, well-ventilated place. Keep refrigerated. Store at 2-8 deg. C. Store away from incompatible materials.

Incompatible Materials:
Oxidizing agents

8. **EXPOSURE CONTROLS/PERSONAL PROTECTION**

Control parameters

National occupational exposure limits

United States

Components	CAS-No.	OSHA	NIOSH	ACGIH	AIHA WEEL
Capsaicin, natural	404-86-4	None	None	None	None

Canada

Components	CAS-No.	Canada - Alberta	Canada - British Columbia	Canada - Ontario	Canada - Quebec
Capsaicin, natural	404-86-4	None	None	None	None

Australia and Mexico

Components	CAS-No.	Australia	Mexico
Capsaicin, natural	404-86-4	None	None

Appropriate engineering controls

Engineering measures to reduce exposure:

Ensure adequate ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Individual protection measures, such as personal protective equipment

Personal Protective Equipment

Eye protection:	Goggles
Skin and body protection:	Long sleeved clothing Chemical resistant apron Gloves
Respiratory protection:	Wear respirator with dust filter. Be sure to use an approved/certified respirator or equivalent.
Hygiene measures:	Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product. When using, do not eat, drink or smoke.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:

Solid

Upper Explosion Limit (%): Product code: Cap2345

Odor:

Pungent.

Molecular/Formula weight:

305.41

Flash Point Tested according to:

Not available

Appearance:

Color:
Powder

.
Off-
white.

Taste**Formula:**

Burning.
C₁₈H₂₇N
O₃

Flammability:**Flashpoint (°C/°F):**

No information available
No information available.

Autoignition**Temperature (°C/°F):****Lower Explosion Limit**

(%): No information
available

No information available

Product name: CAPSAICIN,
USP
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No information available

Melting point/range(°C/°F):
65 °C/149 °F

Decomposition temperature(°C/°F):
No information available

Boiling point/range(°C/°F):
210-220 °C/410-428 °F

Bulk density:
No information available

Density (g/cm3):
No information available

Specific gravity:
No information available

pH:
No information available

Vapor pressure @ 20°C (kPa):
No information available

Evaporation rate:
No information available

Vapor density:
No information available

VOC content (g/L):
No information available

Odor threshold (ppm):
No information available

**Partition coefficient
(n-octanol/water):**
3.04

Viscosity:
No information available

Miscibility:
No information available

Solubility:
Practically insoluble in cold water
Freely soluble in alcohol
Freely soluble in Benzene
Freely soluble in Ether
Soluble in carbon tetrachloride
Soluble in Petroleum Ether

10. STABILITY AND REACTIVITY

Reactivity

Reactive with oxidizing agents

Chemical stability

Stability: Stable under recommended storage conditions.

Possibility of Hazardous Reactions: Hazardous polymerization does not occur

Conditions to avoid: Heat. Avoid dust formation. Incompatible materials.

Incompatible Materials: Oxidizing agents

Hazardous decomposition products: When heated to decomposition it emits toxic fumes. Nitrogen oxides (NOx).
Carbon monoxide.

Other Information

Corrosivity: No information available

Special Remarks on Corrosivity: No information available

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Principal Routes of Exposure:
Ingestion. Inhalation. Skin.

Acute Toxicity

Component Information

Capsaicin, natural	
CAS-No.	404-86-4

LD50/oral/rat = 148.1 mg/kg Oral LD50 Rat; 161.2 mg/kg Oral LD50 Rat

LD50/oral/mouse = 47.2 mg/kg (RTECS)

60 - 294mg/kg (LOLI)

LD50/dermal/rabbit = No information available

LD50/dermal/rat = No information available

LC50/inhalation/rat = No information available

LC50/inhalation/mouse = No information available

Other LD50 or LC50information = > 512 mg/kg Dermal LD50 dermal Mouse

Product Information

LD50/oral/rat =

VALUE- Acute Tox Oral = No information available

LD50/oral/mouse =

Value - Acute Tox Oral = 47.2 mg/kg

LD50/dermal/rabbit

VALUE-Acute Tox Dermal = No information available

LD50/dermal/rat

VALUE -Acute Tox Dermal = No information available

LC50/inhalation/rat

VALUE-Vapor = No information available

VALUE-Gas = No information available

VALUE-Dust/Mist = No information available

LC50/Inhalation/mouse

VALUE-Vapor = No information available

VALUE - Gas = No information available

VALUE - Dust/Mist = No information available

Symptoms

Skin Contact:

Causes skin irritation. Moderately irritating to the skin. Causes burning or stinging pain and redness without blistering.

Eye Contact:

Causes serious eye irritation. Moderately irritating to the eyes. Causes intense tearing. Causes blepharospasm (forcible closure of the eyelids). Causes a burning sensation or pain. Causes conjunctival irritation.

Inhalation

Irritating to respiratory system.

Ingestion

Toxic if swallowed. May cause salivation. May cause cyanosis. May affect behavior/central nervous system (tremor, convulsions). Causes digestive (gastrointestinal) tract irritation. May cause gastritis. May cause abdominal pain, nausea, vomiting, diarrhea.

Aspiration hazard

No information available.

Product code: Cap2345

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Chronic Toxicity Prolonged or repeated exposure may cause allergic respiratory and skin reactions. Prolonged or repeated inhalation may cause allergic reaction. Skin: Prolonged or repeated skin contact may cause allergic skin reaction.

Sensitization: May cause sensitization by inhalation and skin contact.

Mutagenic Effects: No information available

Carcinogenic effects: Not considered carcinogenic.

Components	CAS-No.	IARC	ACGIH - Carcinogens	NTP	OSHA HCS - Carcinogens	Australia - Notifiable Carcinogenic Substances	Australia - Prohibited Carcinogenic Substances
Capsaicin, natural	404-86-4	Not listed	Not listed	Not listed	Not listed	Not listed	Not listed

ACGIH (American Conference of Governmental Industrial Hygienists)

IARC (International Agency for Research on Cancer)

NTP (National Toxicology Program)

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

Reproductive toxicity No data is available

Reproductive Effects: No information available

Developmental Effects: No information available

Teratogenic Effects: No information available

Specific Target Organ Toxicity

STOT - single exposure Respiratory system. **STOT**

- repeated exposure No information available. **Target**

Organs: No information available.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Ecotoxicity effects: No data available.

Persistence and degradability: No information available

Bioaccumulative potential: No information available.

Mobility: No information available.

13. DISPOSAL CONSIDERATIONS

Disposal Methods

Waste from residues / unused products:

Waste must be disposed of in accordance with Federal, State and Local regulation.

Product code: Cap2345

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Contaminated packaging:

Empty containers should be taken for local recycling, recovery or waste disposal

Components	CAS-No.	RCRA - F Series Wastes	RCRA - K Series Wastes	RCRA - P Series Wastes	RCRA - U Series Wastes
Capsaicin, natural	404-86-4	None	None	None	None

14. TRANSPORT INFORMATION

DOT

UN-No: Not Regulated
Proper Shipping Name: Toxic solids, organic, n.o.s. (capsaicin)
Hazard Class: 6.1
Subsidiary Class: No information available
Packing group: No information available
Emergency Response Guide Number: No information available
Marine Pollutant: No data available
DOT RQ (lbs): No information available
Special Provisions Symbol(s): No Information available
[DOT]: (G) - Identifies proper shipping names for which one or more technical names of the hazardous material must be entered in parentheses, in association with the basic description.
Description: UN2811, Toxic solids, organic, n.o.s. ,6.1,PG III

TDG (Canada)

UN-No: UN2811
Proper Shipping Name: Toxic solid, organic, n.o.s.
Hazard Class: Subsidiary: 6.1
Risk: Packing Group: No information available
Marine Pollutant: III
Description: No Information available
UN2811, TOXIC SOLID, ORGANIC, N.O.S., 6.1, PG III

ADR

UN-No:
Proper Shipping Name: UN2811
Hazard Class: Toxic solid, organic, n.o.s.
Packing Group: 6.1
Subsidiary Risk: III
Description: No information available
UN2811 Toxic solid, organic, n.o.s., 6.1, III

IMO / IMDG

UN-No:
Proper Shipping Name: UN2811
Hazard Class: Subsidiary: Toxic solid, organic, n.o.s.
Risk: Packing Group: 6.1
Marine Pollutant: No information available
EMS: III
No information available
F-A

RID

UN-No: UN2811
Proper Shipping Name: Toxic solid, organic, n.o.s.
Hazard Class: 6.1
Subsidiary Risk: No information available
Packing Group: III
Description: UN2811 Toxic solid, organic, n.o.s., 6.1, III

ICAO

UN-No: UN2811
Proper Shipping Name: Toxic solid, organic, n.o.s.
Hazard Class: 6.1
Subsidiary Risk: No information available
Packing Group: III

Product code: Cap2345

Description: UN2811, Toxic solid, organic, n.o.s., 6.1, PG III

IATA

UN-No: UN2811
Proper Shipping Name: Toxic solid, organic, n.o.s.
Hazard Class: Subsidiary 6.1
Risk: Packing Group: No information available
ERG Code: III
Special Provisions 6L
Description: No information available
 UN2811, Toxic solid, organic, n.o.s., 6.1, PG III

15. REGULATORY INFORMATION

International Inventories

Components	CAS-No.	U.S. TSCA	KOREA KECL	Philippines (PICCS)	Japan ENCS	CHINA	Australia (AICS)	EINECS-No.
<i>Capsaicin, natural</i>	404-86-4	Present(ACTIVE)	Not present	Not present	Present (3)-711	Not present	Present	Present 206-969-8

U.S. Regulations

Capsaicin, natural

FDA - 21 CFR - Total Food Additives Present (not regulated under 21 CFR)

California Prop. 65: Safe Drinking Water and Toxic Enforcement Act of 1986.

Chemicals Known to the State of California to Cause Cancer:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Chemicals Known to the State of California to Cause Reproductive Toxicity:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Components	CAS-No.	Carcinogen	Developmental Toxicity	Male Reproductive Toxicity	Female Reproductive Toxicity:
<i>Capsaicin, natural</i>	404-86-4	Not Listed	Not Listed	Not Listed	Not Listed

CERCLA/SARA

Components	CAS-No.	CERCLA - Hazardous Substances and their Reportable Quantities	Section 302 Extremely Hazardous Substances and TPQs	Section 302 Extremely Hazardous Substances and RQs	Section 313 - Chemical Category	Section 313 - Reporting de minimis
<i>Capsaicin, natural</i>	404-86-4	None	None	None	None	None

U.S. TSCA

Components	CAS-No.	TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS)	TSCA 8(d) -Health and Safety Reporting
<i>Capsaicin, natural</i>	404-86-4	Not Applicable	Not Applicable

Canada

WHIMIS 2015 - GHS Classifications

WHMIS 2015 Hazard Classification Information:

Component
Capsaicin, natural
404-86-4 (100)

WHMIS 2015 Hazard Classification
Acute toxicity - Oral - Category 3: H301 Toxic if swallowed.

Canada Hazardous Products Regulation This product has been classified according to the hazard criteria of the HPR (Hazardous Products Regulation) and the SDS contains all of the information required by the HPR

WHMIS 1988 Hazard Class

D1B Toxic materials
D2B Toxic materials

Components

Capsaicin, natural

WHMIS 1988
D1B,D2B

Canada Controlled Products Regulation:

This product has been classified according to the hazard criteria of the CPR (Controlled Products Regulation) and the MSDS contains all of the information required by the CPR.

Inventory

Components	CAS-No.	Canada (DSL)	Canada (NDSL)
Capsaicin, natural	404-86-4	Not Listed	Present

Components	CAS-No.	CEPA Schedule I - Toxic Substances
Capsaicin, natural	404-86-4	Not listed
Components	CAS-No.	CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting
Capsaicin, natural	404-86-4	Not listed

EU Classification

EU GHS - SV - CLP 1272/2008

Components	CAS-No.	EU GHS - SV - CLP (1272/2008)
Capsaicin, natural	404-86-4	No information

EU - CLP (1272/2008)

R-phrase(s)

R25 - Toxic if swallowed.
R38 - Irritating to skin.
R41 - Risk of serious damage to eyes.

S -phrase(s)

S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S28 - After contact with skin, wash immediately with plenty of water
S45 - In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
S36/37 - Wear suitable protective clothing and gloves.

Components	CAS-No.	Classification	Concentration Limits:	Safety Phrases
Capsaicin, natural	404-86-4		No information	

The product is classified in accordance with Annex VI to Directive 67/548/EEC

Indication of danger: T

- Toxic

Xi - Irritant.

T



Xi



16. OTHER INFORMATION

Disclaimer:

All chemicals may pose unknown hazards and should be used with caution. This Safety Data Sheet (SDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. The physical properties reported in this SDS are obtained from the literature and do not constitute product specifications. Information contained herein does not constitute a warranty, whether expressed or implied, as to the safety, merchantability or fitness of the goods for a particular purpose. Spectrum Chemicals & Laboratory Products, Inc. assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Spectrum assumes no responsibility for the completeness or accuracy of the information contained herein.

End of Safety Data Sheet