

# NONIVAMIDE

## Material Safety Data Sheet

Date Prepared: August 29, 2009  
 Date Revised: October 27, 2010

<b>1. Identification of the Substance and the Company</b>	
<b>Substance:</b>	<b>Nonivamide (Synthetic Capsaicin)</b>
<b>CAS#:</b>	2444-46-4
<b>Synonym:</b>	Pelargonic acid vanillylamide
<b>Chemical Name:</b>	n-(hydroxy-4 methoxy-3 benzyl) methyl-8 nonen-6 amide (trans-)
<b>Chemical Formula:</b>	C <sub>17</sub> H <sub>27</sub> NO <sub>3</sub>
<b>Supplier:</b>	Aversion Technologies, Inc 12220 Maycheck Lane Bowie, Maryland 20715 USA
<b>Telephone:</b>	+1-202-657-6300
<b>Emergency:</b>	<b>+1-202-365-9001</b>
<b>Web Address:</b>	www.aversiontech.com
<b>2. Composition:</b>	
<b>Substance:</b>	Nonivamide (Synthetic Capsaicin)
<b>Content %:</b>	95%
<b>3. Hazard Identification</b>	
<b>Potential Acute Health Effects:</b>	Very hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion. Hazardous in case of skin contact (permeator), of inhalation. Severe over- exposure can result in death. Inflammation of the eye is characterized by redness, watering, and itching. Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.
<b>Potential Chronic Health Effects:</b>	CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Mutagenic for bacteria. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. The substance is toxic to lungs, mucous membranes. Repeated or prolonged exposure to the substance can produce target organs damage. Repeated exposure to a highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.
<b>4. First Aid Measures</b>	
<b>Eye Contact:</b>	Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Cold water may be used. Do not use an eye ointment. Seek medical attention.
<b>Skin Contact:</b>	After contact with skin, wash immediately with plenty of water. Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. Be particularly careful to clean folds, crevices, creases and groin. Cover the irritated skin with an emollient. If irritation persists, seek medical attention. Wash contaminated clothing before reusing.
<b>Serious Skin Contact:</b>	Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention.
<b>Inhalation:</b>	Allow the victim to rest in a well-ventilated area. Seek immediate medical attention.
<b>Serious Inhalation:</b>	Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek medical attention.
<b>Ingestion:</b>	Do not induce vomiting. Examine the lips and mouth to ascertain whether the tissues are damaged, a possible indication that the toxic material was ingested; the absence of such signs, however, is not conclusive. Loosen tight clothing such as a collar, tie, belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek immediate medical attention.
<b>Serious Ingestion:</b>	Not available.

<b>5. Fire Fighting Measures</b>	
<b>Flammability of the Product:</b>	May be combustible at high temperature.
<b>Auto-Ignition Temperature:</b>	Not available.
<b>Flash Point:</b>	113°C
<b>Flammable Limits:</b>	Not available.
<b>Products of Combustion:</b>	These products are carbon oxides (CO, CO2), nitrogen oxides (NO, NO2...).
<b>Fire Hazards in Presence of Various Substances:</b>	Not available.
<b>Explosion Hazards in Presence of Various Substances:</b>	Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.
<b>Fire Fighting Media and Instructions:</b>	SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or foam. Do not use water jet.
<b>6. Accidental Release Measures</b>	
<b>Small Spill:</b>	Use appropriate tools to put the spilled solid in a convenient waste disposal container.
<b>Large Spill:</b>	Use a shovel to put the material into a convenient waste disposal container.
<b>7. Handling and Storage</b>	
<b>Precautions:</b>	Keep locked up. Keep away from heat. Keep away from sources of ignition. Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material. Do not ingest. Do not breathe dust. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes.
<b>Storage:</b>	Keep container dry. Keep in a cool place. Ground all equipment containing material. Keep container tightly closed. Keep in a cool, well-ventilated place. Highly toxic or infectious materials should be stored in a separate locked safety storage cabinet or room.
<b>8. Exposure Controls</b>	
<b>Engineering Controls:</b>	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.
<b>Personal Protection:</b>	Splash goggles, lab coat, dust respirator, gloves. Be sure to use an approved/certified respirator or equivalent.
<b>Personal Protection in Case of a Large Spill:</b>	Splash goggles, full suit, dust respirator, boots, and gloves. A self-contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.
<b>Exposure Limits:</b>	Not available.
<b>9. Physical and chemical properties</b>	
<b>Physical state and appearance:</b>	Solid Powder
<b>Odor:</b>	Slight
<b>Taste:</b>	Burning sensation
<b>Molecular Weight:</b>	293.41 g/mole
<b>Color:</b>	White or off-white powder
<b>pH (1% solution/water):</b>	Not applicable
<b>Boiling Point:</b>	492.7°C @ 760mm Hg
<b>Melting Point:</b>	54-61°C
<b>Critical Temperature:</b>	Not available
<b>Specific Gravity:</b>	0.94600 @ 20°C
<b>Vapor Pressure:</b>	Not applicable
<b>Vapor Density:</b>	Not available
<b>Volatility:</b>	Not available
<b>Odor Threshold:</b>	Not available
<b>Water/Oil Dist. Coeff.:</b>	Not available
<b>Ionicity (in Water):</b>	Not available
<b>Dispersion Properties:</b>	See solubility in water, methanol, diethyl ether
<b>Solubility:</b>	Easily soluble in methanol, diethyl ether. Very slightly soluble in cold water
<b>10. Stability and reactivity</b>	
<b>Stability:</b>	The product is stable
<b>Instability Temperature:</b>	Not available
<b>Conditions of Instability:</b>	Not available
<b>Incompatibility with various substances:</b>	Not available
<b>Corrosivity:</b>	Non-corrosive in presence of glass
<b>Special Remarks on Reactivity:</b>	Not available
<b>Special Remarks on Corrosivity:</b>	Not available
<b>Polymerization:</b>	No

<b>11. Toxicology information</b>	
<b>Routes of Entry:</b>	Inhalation, ingestion, dermal contact, eye contact
<b>Toxicity to Animals:</b>	Acute oral toxicity (LD50): 190 mg/kg (Mouse) Acute dermal toxicity (LD50): 512 mg/kg (Mouse)
<b>Chronic Effects on Humans:</b>	The substance is toxic to lungs, mucous membranes.
<b>Other Toxic Effects on Humans:</b>	Very hazardous in case of skin contact (irritant), of ingestion. Hazardous in case of skin contact (permeator), of inhalation.
<b>Special Remarks on Toxicity to Animals:</b>	Not available
<b>Special Remarks on Chronic Effects on Humans:</b>	Not available
<b>Special Remarks on other Toxic Effects on Humans:</b>	Not available
<b>12. Ecological Information</b>	
<b>Ecotoxicity:</b>	Not available
<b>BOD5 and COD:</b>	Not available
<b>Products of Biodegradation:</b>	Possibly hazardous short-term degradation products are not likely. However, long-term degradation products may arise.
<b>Toxicity of the Products of Biodegradation:</b>	The products of degradation are more toxic.
<b>Special Remarks on the Products of Biodegradation:</b>	Not available.
<b>13. Disposal Considerations</b>	
<b>Disposal Methods:</b>	Dispose of in accordance with local authority requirements.
<b>14. Transport information</b>	
<b>DOT Classification:</b>	CLASS 6.1: Poisonous material
<b>Identification:</b>	Toxic solid, organic, n.o.s. (Nonivamide): UN2811 PG: III
<b>TSCA:</b>	TSCA 8(b) inventory: Nonivamide (Synthetic Capsaicin)
<b>Special Provisions for Transport:</b>	Not available
<b>15. Regulatory Information</b>	
<b>Federal and State Regulations:</b>	TSCA 8(b) inventory: Nonivamide (Synthetic Capsaicin)
<b>Other Regulations:</b>	
<b>OSHA:</b>	Hazardous by definition of Hazard Communication Standard (29 CFR1910.1200).
<b>Other Classifications:</b>	
<b>WHMIS (Canada):</b>	CLASS D-1B: Material causing immediate and serious toxic effects (TOXIC). CLASS D-2B: Material causing other toxic effects (TOXIC).
<b>DSCL (EEC):</b>	R38- Irritating to skin R41- Risk of serious damage to eyes
<b>HMIS (U.S.A.):</b>	Health Hazard: 3 Fire Hazard: 1 Reactivity: 0 Personal Protection: E
<b>National Fire Protection Association (U.S.A.):</b>	Health: 3 Flammability: 1 Reactivity: 0 Specific hazard:
<b>Protective Equipment:</b>	Gloves, lab coat, dust respirator, splash goggles. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.
<b>16. Other Information</b>	
<b>DISCLAIMER:</b> Every effort has been made to ensure that this information is accurate and up to date. Users are reminded that they should ensure that they have retained or internally circulated the most up to date copy as provided to the persons or work locations that require them. No warranty is implied or given as to suitability for use for any activity that is not covered by either the technical data sheet or restrictions of use as above.	