1. Identification

Product identifier  
e,z-2,6-NONADIENOL FCC, NO ANTIOXIDANT

Other means of identification
- BRI Product Code: 3351
- CAS number: 28069-72-9
- FEMA number: 2780
- Synonyms: (*) Alt. CAS #: CAS: 7786-44-9; 2,6-Nonadienol * 2,6-Nonadien-1-ol * 2,6-Nonadien-1-ol, (2E,6Z)- * 2,6-Nonadienol * Cucumber alcohol * e,z-2,6-Nonadien-1-ol * FEMA CAS: 7786-44-9 * trans,cis-2,6-Nonadienol * trans-2,cis-6-Nonadien-1-ol * Violet Leaf Alcohol

Recommended use  
flavors and fragrances

For Manufacturing Use Only

Recommended restrictions  
Not for use in Tobacco or Nicotine delivery device applications and/or products.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer  
Bedoukian Research
6 Commerce Drive
Danbury, CT 06810
United States
Telephone: 1-203-830-4000

Emergency phone number  
Chemtrec (North America) 1-800-424-9300
Chemtrec (International) 1-703-527-3887

2. Hazard(s) identification

Physical hazards  
Not classified.

Health hazards  
Not classified.

Environmental hazards  
Not classified.

OSHA defined hazards  
Not classified.

Label elements
- Hazard symbol: None.
- Signal word: None.
- Hazard statement: The substance does not meet the criteria for classification.

Precautionary statement
- Prevention: Observe good industrial hygiene practices.
- Response: Wash hands after handling.
- Storage: Store away from incompatible materials.
- Disposal: Dispose of waste and residues in accordance with local authority requirements.

Hazard(s) not otherwise classified (HNOC)  
None known.

Supplemental information

100% of the mixture consists of component(s) of unknown acute inhalation toxicity. 100% of the mixture consists of component(s) of unknown acute hazards to the aquatic environment. 100% of the mixture consists of component(s) of unknown long-term hazards to the aquatic environment.

3. Composition/information on ingredients

Substances
### Chemical name
- e,z-2,6-NONADIENOL FCC, NO ANTIOXIDANT

### Common name and synonyms
- (* Alt. CAS #) CAS: 7786-44-9; 2,6-Nonadienol
- 2,6-Nonadien-1-ol
- 2,6-Nonadien-1-ol, (2E,6Z)-
- 2,6-Nonadienol
- Cucumber alcohol
- e,z-2,6-Nonadien-1-ol
- FEMA CAS: 7786-44-9
- trans,cis-2,6-Nonadienol
- trans-2,cis-6-Nonadien-1-ol
- Violet Leaf Alcohol

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

### Composition comments
Occupational Exposure Limits for stabilizers are listed in Section 8.

### 4. First-aid measures

#### Inhalation
Move to fresh air. Call a physician if symptoms develop or persist.

#### Skin contact
Wash off with soap and water. Get medical attention if irritation develops and persists.

#### Eye contact
Rinse with water. Get medical attention if irritation develops and persists.

#### Ingestion
Rinse mouth. Get medical attention if symptoms occur.

#### Most important symptoms/effects, acute and delayed
Direct contact with eyes may cause temporary irritation.

#### Indication of immediate medical attention and special treatment needed
Treat symptomatically.

#### General information
Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

### 5. Fire-fighting measures

#### Suitable extinguishing media
Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).

#### Unsuitable extinguishing media
Do not use water jet as an extinguisher, as this will spread the fire.

#### Specific hazards arising from the chemical
During fire, gases hazardous to health may be formed.

#### Special protective equipment and precautions for firefighters
Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

#### Fire fighting equipment/instructions
Move containers from fire area if you can do so without risk.

#### Specific methods
Use standard firefighting procedures and consider the hazards of other involved materials.

#### General fire hazards
No unusual fire or explosion hazards noted.

### 6. Accidental release measures

#### Personal precautions, protective equipment and emergency procedures
Keep unnecessary personnel away. For personal protection, see section 8 of the SDS.

#### Methods and materials for containment and cleaning up
- **Large Spills:** Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.
- **Small Spills:** Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

#### Environmental precautions
Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS. Avoid discharge into drains, water courses or onto the ground.

### 7. Handling and storage

#### Precautions for safe handling
Observe good industrial hygiene practices.

#### Conditions for safe storage, including any incompatibilities
Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS). Recommended Packaging: Glass, Plastic or Phenolic Lined Steel. Store tightly sealed under inert gas in a cool, well-ventilated area.
8. Exposure controls/personal protection

Occupational exposure limits  
This substance has no PEL, TLV, or other recommended exposure limit.

Biological limit values  
No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls  
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.

Individual protection measures, such as personal protective equipment  

Eye/face protection  
Wear safety glasses with side shields (or goggles).

Skin protection  
Hand protection  
Wear appropriate chemical resistant gloves.

Other  
Wear suitable protective clothing.

Respiratory protection  
In case of insufficient ventilation, wear suitable respiratory equipment.

Thermal hazards  
Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations  
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  
Liquid.

Color  
colorless to pale yellow

Odor  
cucumber or violet flower odor.

Odor threshold  
Not available.

pH  
Not available.

Melting point/freezing point  
Not available.

Initial boiling point and boiling range  

Flash point  
201 °F (94 °C) Closed Cup Bedoukian obtained value.

Evaporation rate  
Not available.

Flammability (solid, gas)  
Not applicable.

Upper/lower flammability or explosive limits  

Flammability limit - lower (%)  
Not available.

Flammability limit - upper (%)  
Not available.

Explosive limit - lower (%)  
Not available.

Explosive limit - upper (%)  
Not available.

Vapor pressure  
0.01 mmHg at 20°C; US EPA. 2014. Estimation Programs Interface Suite™ for Microsoft® Windows, v 4.11. US EPA, Washington, DC, USA.

Vapor density  
4.8 Relative to air; air = 1

Relative density  
Not available.

Solubility(ies)  

Solubility (water)  
Not available.

Partition coefficient (n-octanol/water)  

Auto-ignition temperature  
Not available.

Decomposition temperature  
Not available.

Viscosity  
Not available.

Other information  

Density  
0.863 - 0.867 g/cm3

Explosive properties  
Not explosive.
Flammability class: Combustible IIIB estimated
Molecular formula: C9H16O
Molecular weight: 140.23
Oxidizing properties: Not oxidizing.
Specific gravity: 0.863 - 0.867 at 25°C

10. Stability and reactivity
Reactivity: The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability: Material is stable under normal conditions.
Possibility of hazardous reactions: No dangerous reaction known under conditions of normal use.
Conditions to avoid: Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials: Strong oxidizing agents.
Hazardous decomposition products: No hazardous decomposition products are known.

11. Toxicological information
Information on likely routes of exposure
Inhalation: No adverse effects due to inhalation are expected.
Skin contact: No adverse effects due to skin contact are expected.
Eye contact: Direct contact with eyes may cause temporary irritation.
Ingestion: Expected to be a low ingestion hazard.

Symptoms related to the physical, chemical and toxicological characteristics
Direct contact with eyes may cause temporary irritation.

Information on toxicological effects
Acute toxicity: Not known.

<table>
<thead>
<tr>
<th>Product</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>e,z-2,6-NONADIENOL FCC, NO ANTIOXIDANT (CAS 28069-72-9)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Acute</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dermal</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Liquid</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LD50</td>
<td>Guinea pig</td>
<td>&gt; 5000 mg/kg Result for 2,6-Nonadienol CAS 7786-44-9.</td>
</tr>
<tr>
<td>Oral</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Liquid</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LD50</td>
<td>Mouse</td>
<td>&gt; 5000 mg/kg Result for 2,6-Nonadienol CAS 7786-44-9.</td>
</tr>
</tbody>
</table>

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation: Prolonged skin contact may cause temporary irritation.

Irritation Corrosion - Skin
Result: No irritation observed.
Species: Human
Organ: Skin
Notes: RIFM
5000 mg/kg LD50, Irritation evaluated on day 1 of an LD50 study, 5 animals evaluated. Slight redness in 2, moderate redness in 3. Result for 2,6-Nonadienol CAS 7786-44-9.
Result: Irritation noted.
Species: Guinea pig
Organ: Skin
Notes: RIFM

Serious eye damage/eye irritation: Direct contact with eyes may cause temporary irritation.
Respiratory or skin sensitization

Respiratory sensitization
Not a respiratory sensitizer.

Skin sensitization
This product is not expected to cause skin sensitization.

Skin sensitization
Species: Human
Organ: Skin
Notes: RIFM

Germ cell mutagenicity
No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Germ cell mutagenicity: Ames test
3 - 1000 µg/plate OECD 471, Strains TA 1535, TA 1537, TA 98, TA 100 and TA 102 with and without metabolic activation. Vehicle Ethanol. Result: Not mutagenic.
Species: Salmonella typhimurium
Notes: RIFM

Germ cell mutagenicity: Micronucleus
OECD 487, Human peripheral blood lymphocytes tested with and without metabolic activation. Result for similar material trans-2-Hexenol. Result: Not clastogenic.

Carcinogenicity
Not classifiable as to carcinogenicity to humans.

IARC Monographs. Overall Evaluation of Carcinogenicity
Not listed.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)
Not regulated.

US. National Toxicology Program (NTP) Report on Carcinogens
Not listed.

Reproductive toxicity
This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure
Not classified.

Specific target organ toxicity - repeated exposure
Not classified.

Aspiration hazard
Not an aspiration hazard.

12. Ecological information

Ecotoxicity
The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Persistence and degradability
The product is readily biodegradable.

Biodegradability
Percent degradation (Aerobic biodegradation-ready)
OECD 301F, 30 mg/L, 10-day criteria fulfilled. Result: Readily biodegradable.
Species: Activated sludge of a predominantly domestic sewage

Bioaccumulative potential
Partition coefficient n-octanol / water (log Kow)

Mobility in soil
No data available.

Other adverse effects
No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions
Collect and reclaim or dispose in sealed containers at licensed waste disposal site.

Local disposal regulations
Dispose in accordance with all applicable regulations.
Hazardous waste code

The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products

Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging

Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not established.

15. Regulatory information

US federal regulations

This product is not known to be a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Immediate Hazard - No
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical

No

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA)

Not regulated.

US state regulations

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

International Inventories

<table>
<thead>
<tr>
<th>Country(s) or region</th>
<th>Inventory name</th>
<th>On inventory (yes/no)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>Australian Inventory of Chemical Substances (AICS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Canada</td>
<td>Domestic Substances List (DSL)</td>
<td>Yes</td>
</tr>
<tr>
<td>Canada</td>
<td>Non-Domestic Substances List (NDSL)</td>
<td>No</td>
</tr>
<tr>
<td>Country(s) or region</td>
<td>Inventory name</td>
<td>On inventory (yes/no)*</td>
</tr>
<tr>
<td>----------------------</td>
<td>-------------------------------------------------------------------------------</td>
<td>------------------------</td>
</tr>
<tr>
<td>China</td>
<td>Inventory of Existing Chemical Substances in China (IECSC)</td>
<td>Yes</td>
</tr>
<tr>
<td>Europe</td>
<td>European Inventory of Existing Commercial Chemical Substances (EINECS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Europe</td>
<td>European List of Notified Chemical Substances (ELINCS)</td>
<td>No</td>
</tr>
<tr>
<td>Japan</td>
<td>Inventory of Existing and New Chemical Substances (ENCS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Korea</td>
<td>Existing Chemicals List (ECL)</td>
<td>Yes</td>
</tr>
<tr>
<td>New Zealand</td>
<td>New Zealand Inventory</td>
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</tr>
<tr>
<td>Philippines</td>
<td>Philippine Inventory of Chemicals and Chemical Substances (PICCS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Taiwan</td>
<td>Taiwan Toxic Chemical Substances (TCS)</td>
<td>Yes</td>
</tr>
<tr>
<td>United States &amp; Puerto Rico</td>
<td>Toxic Substances Control Act (TSCA) Inventory</td>
<td>Yes</td>
</tr>
</tbody>
</table>

*A “Yes” indicates that all components of this product comply with the inventory requirements administered by the governing country(s). A “No” indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

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

**Issue date**: 03-May-2017  
**Revision date**: 06-August-2019  
**Version #**: 02

**Disclaimer**: Bedoukian Research cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.

**Revision information**: This document has undergone significant changes and should be reviewed in its entirety.