



# Safety Data Sheet

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## Section 1: Product & Company Identification

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- 1.1** Product Name: **NATURAL CINNAMIC ALDEHYDE**  
Chemical name: Cinnamaldehyde, natural  
Product Number: 9337  
Brand: **Elan Inc.**  
CAS Number: **104-55-2**  
EC Number: **203-213-9**  
FEMA Number: 2286
- 1.2** Recommended use of chemical: Intermediate chemical used in flavor and food application
- 1.3** Supplier details: Elan Inc.  
268 Doremus Avenue  
Newark, NJ 07105  
U.S.A.  
(973) 344-8014  
[jbissonette@elan-chemical.com](mailto:jbissonette@elan-chemical.com)
- 1.4** Emergency telephone: (800) 424-9300 (Chemtrec)

## Section 2: Hazard(s) Identification

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- 2.1** Classification of the Substance or mixture: GHS classification in accordance to 29 CFR 1910 (OSHA HCS)

Physical Hazard(s): Flammable liquids: Category 4

Health Hazard(s): Skin irritation: Category 2  
Eye irritation: Category 2A  
Sensitization, skin: Category 1  
Specific target organ toxicity - single exposure: Category 3 (respiratory tract)

Environmental Hazard(s): Not Classified

**2.2** Label Elements:

Pictogram(s):



Signal word:

**Warning**

**Hazard Statement(s):**

**Physical Hazard(s)**

H227 Combustible liquid.

**Health Hazard(s)**

H315 Causes skin irritation.  
H317 May cause an allergic skin reaction.  
H319 Causes serious eye irritation.  
H335 May cause respiratory irritation.

H315+H320 Causes skin and eye irritation.

**Environmental Hazard(s)**

N/A

N/A

**Precautionary Statement(s):**

**Prevention:**

P235 Keep cool.  
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.  
P264 Wash hands thoroughly after handling.  
P271 Use only outdoors or in well-ventilated area.  
P272 Contaminated work clothing should not be allowed out of the workplace.  
P280 Wear protective gloves/protective clothing/eye protection/face protection.

**Response:**

P312 Call a POISON CENTER/doctor/if you feel unwell.  
P321 Specific treatment (see label).  
P302+P352 IF ON SKIN: Wash with plenty of water.  
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P332+P313 If skin irritation occurs: Get medical advice/attention.  
P337+P313 If eye irritation persists: Get medical advice/attention.  
P362+P364 Take off contaminated clothing and wash it before reuse.  
P370+P380 In case of Fire: Evacuate area.

**Storage:**

P405 Store locked up.  
P403+P233 Store in a well-ventilated place. Keep container tightly closed.  
P403+P235 Store in a well-ventilated place. Keep cool.

**Disposal:**

P501 Dispose of contents/container to your waste control program.

**2.3 Other Hazards:**

No additional information available

**Section 3: Composition/Information on Ingredients**

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**3.1 Substances:**

Identity:	Cinnamaldehyde, natural		
Synonyms:	(Cinnamic Aldehyde, Natural), (Cinnamal, Natural), (3-Phenylprop-2-enal, Natural), (Cassia Aldehyde, Natural)		
CAS Number:	104-55-2		
EC Number:	203-213-9		
Purity:	93.0% min.		
Molecular Formula:	<b>C9H8O</b>	Molecular Weight:	132.15 g/mol

**3.2 Mixtures:**

Not applicable

**Section 4: First Aid Measures**

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**4.1 Description of necessary measures:**

Inhalation Exposure: If inhaled, move to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen. Consult a physician.

Skin Exposure: In case of contact, immediately wash skin with soap and copious amounts of water. Consult a physician.

Eye Exposure: In case of contact, immediately flush eyes with copious amounts of water for at least 15 minutes as a precaution.

Oral Exposure: If swallowed; do not induce vomiting. Wash out mouth with water provided person is conscious. Call a physician.

4.2 Most important symptoms/effects, acute and delayed: If you feel unwell, seek medical advice (show the label where possible)

4.3 Indication of immediate medical attention and special treatment, if necessary: If the person is unconscious immediately call 911. Never give anything by mouth to an unconscious person.

## Section 5: Fire Fighting Measures

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### 5.1 Extinguishing media:

Suitable: For smaller fires use: Foam  
Carbon Dioxide  
Dry Chemical Powder

For Larger fires use: From a distance use very large quantities of misted water (flooding).

Unsuitable: Unknown

5.2 Specific hazards arising from the chemical: Emits toxic fumes under fire conditions – carbon oxides.

5.3 Special protective equipment and precautions for fire-fighters: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

5.4 Further information: Use flooding water to cool unopened containers

## Section 6: Accidental Release Measures

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6.1 Personal Precautions, Protective equipment, and emergency procedures: Exercise appropriate precautions to minimize direct contact with skin or eyes and prevent inhalation of vapors, mist or gas. Wear respirator, chemical safety goggles, rubber boots, and heavy rubber gloves. Remove all sources of ignition. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in lower areas.

6.2 Environmental precaution: Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up: Contain spillage and ventilate.

Collect with a properly grounded dedicated wet vacuum and place in container for waste disposal (see company waste SOP)

## Section 7: Handling and Storage Procedures

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7.1 Precautions for safe handling: Do not breathe vapor. Avoid contact with eyes, skin and clothing. Avoid prolonged or repeated exposure. No smoking! Avoid any electrostatic charges. Porous material such as rags, paper, insulation, or organic clay may spontaneously combust when wetted with this material. May auto-oxidize with sufficient heat generation to ignite if spread (as a thin film) or absorbed on porous or fibrous material. All equipment used when handling the product must be grounded. Contaminated rags and cloths must be put in fireproof containers for disposal.

7.2 Conditions for safe storage, including any incompatibilities: Keep container tightly closed. Keep away from heat and open flame. Store container(s) in a cool & dry place.

## Section 8: Exposure Controls/Personal Protection

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8.1 Control parameters: TWA 10mg/m3 USA NIOSH Recommended Exposure Limits

**8.2 Appropriate Engineering Controls:** Respiratory: At a minimum, workers should wear a NIOSH-approved full-face air-purifying respirator.

**8.3 Individual protection measures (PPEs):**

Eye Protection:	Chemical Safety goggles
Skin (Hand) Protection:	Chemical resistant gloves
Respiratory protection:	If exposure limits are exceeded or irritation is experienced, NIOSH approved respirator protection should be worn
Other Information:	Wash contaminated clothing before reuse Wash thoroughly after handling When using do not eat, drink or smoke

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## **Section 9: Physical/Chemical Properties**

Appearance:	Yellow liquid
Odor:	characteristic to cinnamon spicy
Odor Threshold:	N/A
pH:	N/A
Melting point/freezing point:	18.0 °F -7.5 °C
Initial Boiling Point and Boiling:	480-486 °F 249-252 °C
Flash Point:	200.0 °F 93.3 °C
Evaporation Rate:	N/A
Flammability (solid, gas):	N/A
Upper.lower flammability or explosive limits:	N/A %
Vapor pressure:	.0289mmHg @25 °C
Vapor Density:	4.6 (Air=1)
Relative Density:	1.046-1.050 g/cm3
Refractive index:	1.615-1.620 20 °C
Solubility (ies):	1:2.5 (v/v) in 70% ethanol
Partition coefficient: n-octanol/water:	logP (o/w) = 1.90
Auto-ignition Temperature:	N/A °F N/A °C
Decomposition Temperature:	N/A
Viscosity:	N/A

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## **Section 10: Stability and Reactivity**

<b>10.1 <u>Reactivity:</u></b>	no data available
<b>10.2 <u>Chemical Stability:</u></b>	Stable under recommended storage conditions.
<b>10.3 <u>Possibility of hazardous reactions:</u></b>	no data available
<b>10.4 <u>Conditions to avoid:</u></b>	Direct sunlight or heat
<b>10.5 <u>Incompatible material(s):</u></b>	Strong oxidizing agents, strong acids
<b>10.6 <u>Hazardous Decomposition Products:</u></b>	no hazardous decomposition if stored properly

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## **Section 11: Toxicological Information**

**11.1 Information on the likely routes of exposure:**

Inhalation:	May be harmful if inhaled. Material is irritating to mucous membranes and upper respiratory tract.
Ingestion:	May be harmful if swallowed
Skin Contact:	May cause skin irritation. May cause an allergic skin reaction.
Skin Absorption:	May be harmful if absorbed through skin
Eye Contact:	may cause eye irritation

**11.2 Symptoms related to the physical, chemical and toxicological characteristics:** Basic symptoms include, but are not exclusive, irritation, nausea, unconsciousness (consult specialist or Chemtrec).

**11.3 Delayed and immediate effects and also chronic effects from short and long term exposure:** Consult physician, specialist and/or Chemtrec.

**11.4 Numerical measures of toxicity (acute estimates):** To the best of our knowledge, the toxicological properties are the following:

Oral: mouse LD50:	2225 mg/kg
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BEHAVIORIAL: ATAXIA BEHAVIORIAL: CONVULSIONS OR EFFECT ON SEIZURE THRESHOLD LUNGS, THORAX, OR

RESPIRATION: RESPIRATORY STIMULATION  
Yakugaku Zasshi. Journal of Pharmacy. Vol. 92, Pg. 135, 1972.

Intravenous: mouse LD50: 75 mg/k no data available  
U.S. Army Armament Research & Development Command, Chemical Systems Laboratory, NIOSH Exchange Chemicals. Vol. NX#07571  
Exchange Chemicals. Vol. NX#07571

Intraperitoneal: mouse LD50: 200 mg/kg  
FAO Nutrition Meetings Report Series. Vol. 44A, Pg. 16, 1967.

Oral: guinea pig LD50: 1160 mg/kg  
BEHAVIORAL: COMA  
Food and Cosmetics Toxicology. Vol. 2, Pg. 327, 1964.

Parenteral: mouse LDLo: 200 mg/kg  
"Summary Tables of Biological Tests," National Research Council Chemical-Biological Coordination  
Center. Vol. 7, Pg. 687, 1955.

Dermal: rabbit LD50: 0.59 ml/kg  
"Summary Tables of Biological Tests," National Research Council Chemical-Biological Coordination  
Center. Vol. 7, Pg. 687, 1955.

Inhalation: no data available

## Section 12: Ecological Information

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|--|-------------------|
| 12.1 <u>Ecotoxicity (aquatic and terrestrial):</u> | no data available |
| 12.2 <u>Persistence and degradability:</u>         | no data available |
| 12.3 <u>Bioaccumulative potential:</u>             | no data available |
| 12.4 <u>Mobility in soil:</u>                      | no data available |
| 12.5 <u>Other adverse effects:</u>                 | no data available |

## Section 13: Disposal Considerations

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|--------------------------------------|---|
| Disposal Instructions:               | Do not discharge into drains, water courses or onto the ground. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national and international regulations. |
| Local disposal regulations:          | Dispose in accordance with all applicable regulations.  |
| Hazardous waste code:                | Not established.  |
| Waste from residues/unused products: | Empty containers or liners may retain some product residues. This material and its products container must be disposed of in a safe manner (see: Disposal instructions).  |
| Contaminated packaging:              | Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is empty.  |

## Section 14: Transportation Information

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|----------|---------------------|
| DOT (US) | not dangerous goods |
| IMDG     | not dangerous goods |
| IATA     | not dangerous goods |

## Section 15: Regulatory Information

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### SARA 302 Components

Not subject to reporting requirements of SARA Title III, section 302.

#### **SARA 313 Components**

Not subject to reporting requirements of SARA Title III, section 313.

#### **SARA 311/312 Hazards**

Acute Health Hazard

#### **Massachusetts Right to Know Components**

No components are subject to the Massachusetts Right to Know Act.

#### **Pennsylvania Right to Know Components**

Not listed

#### **New Jersey Right to Know Components**

Not listed

#### **California Prop. 65 Components**

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

### **Section 16: Other Information**

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#### **Classification according to EU Directives 67/548/EEC or 1999/45/EC**

##### **Symbol(s):**

**X<sub>n</sub>** Harmful

##### **R - phrase(s):**

R21/41 – Harmful in contact with skin, risk of serious damage to eyes

R38 – Irritating to skin

R43 – May cause sensitization by skin contact

##### **S - phrase(s):**

S24 – Avoid contact with skin

S26 – In case of contact with eyes, rinse immediately with plenty of water and seek medical advice

S36/37/39 – Wear suitable clothing, gloves and eye/face protection

#### **HMIS Rating**

Health hazard: 2  
Chronic Health hazard: \*  
Flammability: 1  
Physical hazard: 0

#### **NFPA Rating**

Health hazard: 2  
Fire hazard: 1  
Reactivity hazard: 0

**FEMA GRAS™ (Generally Recognized As Safe) status for the use of a flavor ingredient in food only stipulates current regulatory acceptability for oral ingestion as a food item and does not provide regulatory authority and/or acceptability in the U.S for the use of the flavor ingredient in devices which cause the flavorant to be inhaled.**

**Elan, Inc. does not represent or suggest that this flavor ingredient is safe for use in E-cigarettes.**

*This safety data sheet is intended to meet the specific requirements of GHS and should be used accordingly. While the information has been obtained from sources believed to be accurate and reliable, no warranty, expressed or implied, can be made with regard to its completeness, correctness or accuracy. Any users or handlers of this product who are not under the direct control of Elan Inc. are responsible for evaluating this information in light of their particular situation and are responsible for all losses, damages or expenses that result while this material is under their control. It is also the responsibility of the users and handlers to observe any and all laws and regulations (Global, Federal, State and Local) concerning the transportation, use, handling, storage and disposal of this product.*

1. Globally Harmonized System of Classification and Labelling of Chemicals (GHS) Sixth revised edition, United Nations, 2015.
2. ISO 11014:2009 Safety data sheet for chemical products -- Content and order of sections.
3. American National Standard for Hazardous Industrial Chemicals-MSDS Preparation (ANSI Z400.1/Z129.1-2010)
4. U.S. DOL, OSHA, 29 CFR 1910.1200, HAZCOM.