1 Identification

Product identifier
Product name: trans-Cinnamaldehyde
Stock number: L02972
CAS Number: 14371-10-9

Relevant identified uses of the substance or mixture and uses advised against.
Identified use: SU24 Scientific research and development

Details of the supplier of the safety data sheet
Manufacturer/Supplier:
Alfa Aesar
Thermo Fisher Scientific Chemicals, Inc.
30 Bond Street
Ward Hill, MA 01835-8099
Tel: 800-343-0660
Fax: 800-322-4757
Email: tech@alfa.com
www.alfa.com

Information Department: Health, Safety and Environmental Department
Emergency telephone number:
During normal business hours (Monday-Friday, 8am-7pm EST), call (800) 343-0660. After normal business hours, call Carechem 24 at (866) 928-0789.

2 Hazard(s) identification

Classification of the substance or mixture in accordance with 29 CFR 1910 (OSHA HCS)

GHS07
Skin Irrit. 2 H315 Causes skin irritation.
Eye Irrit. 2A H319 Causes serious eye irritation.
Skin Sens. 1 H317 May cause an allergic skin reaction.

Hazard not otherwise classified No information known.

Label elements
GHS label elements The product is classified and labeled in accordance with 29 CFR 1910 (OSHA HCS)

Hazard pictograms

GHS07

Signal word Warning
Hazard statements
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H317 May cause an allergic skin reaction.

Precautionary statements
P280 Wear protective gloves.
P262 Do not get in eyes, on skin, or on clothing.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

WHMIS classification
D2B - Toxic material causing other toxic effects

Classification system
HMIS ratings (scale 0-4)
(Hazardous Materials Identification System)

Health (acute effects) = 1
Flammability = 1
Physical Hazard = 1

Other hazards
Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.

3 Composition/information on ingredients

Chemical characterization: Substances
CAS# Description: 14371-10-9 trans-Cinnamaldehyde

4 First-aid measures

Description of first aid measures
After inhalation
Supply fresh air. If required, provide artificial respiration. Keep patient warm. Seek immediate medical advice.

After skin contact
Immediately wash with water and soap and rinse thoroughly. Seek immediate medical advice.

After eye contact
Rinse opened eye for several minutes under running water. Then consult a doctor.

After swallowing
Seek medical treatment. After swallowing, seek medical treatment. Information for doctor

Most important symptoms and effects, both acute and delayed No further relevant information available.

Indication of any immediate medical attention and special treatment needed No further relevant information available.

(Contd. on page 2)
5 Fire-fighting measures
Extending media
Suitable extinguishing agents Carbon dioxide, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
Special hazards arising from the substance or mixture
If this product is involved in a fire, the following can be released:
Carbon monoxide and carbon dioxide
Advice for firefighters
Protective equipment: Wear self-contained respirator.
Protective impervious suit.

6 Accidental release measures
Personal precautions, protective equipment and emergency procedures
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation.
Environmental precautions: Do not allow product to reach sewage system or any water course.
Methods and material for containment and cleaning up:
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Ensure adequate ventilation.
Prevention of secondary hazards: No special measures required.
Reference to other sections
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage
Handling
Precautions for safe handling
Handle under dry protective gas.
Keep container tightly sealed.
Store in cool, dry place in tightly closed containers.
Ensure good ventilation at the workplace.

Information about protection against explosions and fires: No information known.

Conditions for safe storage, including any incompatibilities
Storage
Requirements to be met by storerooms and receptacles: No special requirements.
Information about storage in one common storage facility:
Store away from air.
Store away from oxidizing agents.
Further information about storage conditions:
Store under dry inert gas.
This product is air sensitive.
Keep container tightly sealed.
Store in cool, dry conditions in well sealed containers.

Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection
Additional information about design of technical systems:
Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.

Control parameters
Components with limit values that require monitoring at the workplace:
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
Additional information: No data

Exposure controls
Personal protective equipment
General protective and hygienic measures
The usual precautionary measures for handling chemicals should be followed.
Keep away from foods, beverages and feed.
Remove all soiled and contaminated clothing immediately.
Wash hands before breaks and at the end of work.
Do not inhale dust / smoke / mist.
Avoid contact with the eyes and skin.
Maintain an ergonomically appropriate working environment.

Breathing equipment: Use suitable respirator when high concentrations are present.
Recommended filter device for short term use:
Use a respirator with organic vapor/acid gas cartridges as a backup to engineering controls. Risk assessment should be performed to determine if air-purifying respirators are appropriate. Only use equipment tested and approved under appropriate government standards such as NIOSH (USA) or CEN (EU).

Protection of hands:
Impervious gloves
Check protective gloves prior to each use for their proper condition.
The selection of suitable gloves not only depends on the material, but also on quality. Quality will vary from manufacturer to manufacturer.

Material of gloves Butyl rubber, BR
Penetration time of glove material (in minutes) 480
Glove thickness 0.3 mm
Eye protection: Safety glasses
Body protection: Protective work clothing.

9 Physical and chemical properties
Information on basic physical and chemical properties
General information
Appearance:
Form: Liquid
Color: Yellow
Odor: Characteristic
Odor threshold: Not determined.

pH-value: Not determined.
### Product name: trans-Cinnamaldehyde

#### Change in condition
- Melting point/Melting range: -8 °C (18 °F)
- Boiling point/Boiling range: 250-252 °C (482-486 °F)

#### Change in physical and chemical properties
- Sublimation temperature / start: Not determined
- Flash point: > 110 °C (> 230 °F)
- Flammability (solid, gaseous): Not determined
- Ignition temperature: Not determined
- Decomposition temperature: Not determined
- Auto Igniting: Not determined

#### Danger of explosion:
- Explosion limits: Not determined.
  - Lower: Not determined
  - Upper: Not determined
- Vapor pressure: Not determined
- Density at 20 °C (68 °F): 1.05 g/cm³ (8.762 lbs/gal)
- Relative density: Not determined
- Vapor density: Not determined
- Evaporation rate: Not determined
- Solubility in / Miscibility with Water at 20 °C (68 °F): 1.1 g/l
- Partition coefficient (n-octanol/water): Not determined

#### 10 Stability and reactivity
- Reactivity: No information known.
- Chemical stability: Stable under recommended storage conditions.
- Thermal decomposition / conditions to be avoided: Decomposition will not occur if used and stored according to specifications.
- Possibility of hazardous reactions: Reacts with strong oxidizing agents
- Conditions to avoid: No further relevant information available.
- Incompatible materials: Air, Oxidizing agents
- Hazardous decomposition products: Carbon monoxide and carbon dioxide

#### 11 Toxicological information
- Information on toxicological effects
  - Acute toxicity: The Registry of Toxic Effects of Chemical Substances (RTECS) contains acute toxicity data for this substance.
  - LD/LC50 values that are relevant for classification:
    - Oral LD50: 3350 mg/kg (rat)
- Skin irritation or corrosion: Causes skin irritation.
- Eye irritation or corrosion: Causes serious eye irritation.
- Sensitization: May cause an allergic skin reaction.
- Germ cell mutagenicity: The Registry of Toxic Effects of Chemical Substances (RTECS) contains mutation data for this substance.
- Carcinogenicity: No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.
- Reproductive toxicity: No effects known.
- Specific target organ system toxicity - repeated exposure: No effects known.
- Specific target organ system toxicity - single exposure: No effects known.
- Aspiration hazard: No effects known.
- Subacute to chronic toxicity: The Registry of Toxic Effects of Chemical Substances (RTECS) contains multiple dose toxicity data for this substance.
- Additional toxicological information: To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

#### 12 Ecological information
- Aquatic toxicity: No further relevant information available.
- Persistence and degradability: No further relevant information available.
- Bioaccumulative potential: No further relevant information available.
- Mobility in soil: No further relevant information available.
- Additional ecological information:
  - General notes:
    - Do not allow undiluted product or large quantities to reach ground water, water course or sewage system.
    - Avoid transfer into the environment.
  - Results of PBT and vPvB assessment:
    - PBT: Not applicable.
    - vPvB: Not applicable.
- Other adverse effects: No further relevant information available.

#### 13 Disposal considerations
- Waste treatment methods: Consult state, local or national regulations to ensure proper disposal.
- Uncleaned packagings:
  - Recommendation: Disposal must be made according to official regulations.

#### 14 Transport information
- UN-Number
  - DOT, ADN, IMDG, IATA: Not applicable
- UN proper shipping name
  - DOT, ADN, IMDG, IATA: Not applicable
- Transport hazard class(es)
  - DOT, ADR, ADN, IMDG, IATA: Not applicable
  - Class: Not applicable
Product name: trans-Cinnamaldehyde

Packing group
DOT, IMDG, IATA
Not applicable

Environmental hazards:
Not applicable.

Special precautions for user
Not applicable.

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code
Not applicable.

Transport/Additional information:
DOT
Marine Pollutant (DOT):
No

UN "Model Regulation":
-

15 Regulatory information
Safety, health and environmental regulations/legislation specific for the substance or mixture
GHS label elements The product is classified and labeled in accordance with 29 CFR 1910 (OSHA HCS)

Hazard pictograms

GHS07

Signal word Warning

Hazard statements
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National regulations
This product is not listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical Substance Inventory. Use of this product is restricted to research and development only. This product must be used by or directly under the supervision of a technically qualified individual as defined by TSCA. This product must not be used for commercial purposes or in formulations for commercial purposes.
This product is not listed on the Canadian Domestic Substances List (DSL) or the Canadian Non-Domestic Substances List (NDSL).
SARA Section 313 (specific toxic chemical listings) Substance is not listed.
California Proposition 65
Prop 65 - Chemicals known to cause cancer Substance is not listed.
Prop 65 - Developmental toxicity Substance is not listed.
Prop 65 - Developmental toxicity, female Substance is not listed.
Prop 65 - Developmental toxicity, male Substance is not listed.

Information about limitation of use: For use only by technically qualified individuals.

Other regulations, limitations and prohibitive regulations
Substance of Very High Concern (SVHC) according to the REACH Regulations (EC) No. 1907/2006. Substance is not listed.
The conditions of restrictions according to Article 67 and Annex XVII of the Regulation (EC) No 1907/2006 (REACH) for the manufacturing, placing on the market and use must be observed.
Substance is not listed.
Annex XIV of the REACH Regulations (requiring Authorisation for use) Substance is not listed.
Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information
Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

Department issuing SDS: Global Marketing Department
Date of preparation / last revision 11/24/2015

Abbreviations and acronyms:
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
DOT: US Department of Transportation
CAS: Chemical Abstracts Service (division of the American Chemical Society)
HMIS: Hazardous Materials Identification System (USA)
WHMIS: Workplace Hazardous Materials Information System (Canada)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
vPvB: very Persistent and very Bioaccumulative
ACGIH: American Conference of Governmental Industrial Hygienists (USA)
OSHA: Occupational Safety and Health Administration (USA)
NTP: National Toxicology Program (USA)
IARC: International Agency for Research on Cancer
EPA: Environmental Protection Agency (USA)