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1 Identification	
Product identifier Product name: trans-Cinnamaldehyde	
Stock number: A14689, 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 Tel: 200-243-0660	
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) 928-0	789.
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. Hazards 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. H317 May cause an allergic skin reaction. Precautionary statements P262 Do not get in eyes, on skin, or on clothing. P280 Wear protective gloves. 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 FIRE I Flammability = 1	
REACTIVITY 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 Concentration: ≤100%	
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. Information for doctor	
Most important symptoms and effects, both acute and delayed Causes skin irritation.	(Contd. on page 2)
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Product name: trans-Cinnamaldehyde

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Causes serious eye irritation. May cause an allergic skin reaction. **Indication of any immediate medical attention and special treatment needed** No further relevant information available.

5 Fire-fighting measures

Extinguishing media Extinguishing 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. Wear fully protective impervious suit.

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures Wear protective equipment. Keep unprotected persons away Ensure adequate ventilation 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

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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. Store away from Oxinizing agends. 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

Exposure controls Personal protective equipment General protective and hygienic measures The usual precautionary measures for handling chemicals should be followed. Keep away from foodstuffs, 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 eraonomically appropriate working environment.

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 multi-purpose combination (US) or type ABEK (EN 14387) 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 (FLI) determine if air-purifying respirators are appropriate. Only use equipment tested and approved under appropriate government estimates (EV) 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 **Even protection:** Safety classes

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:

Odor:

Liquid Characteristic

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Product name: trans-Cinnamaldehyde

Product name: trans-Cinnamaldehy	/de			
		(Contd. of page 2)		
Odor threshold:	Not determined.			
pH-value:	Not determined.			
Change in condition Melting point/Melting range: Boiling point/Boiling range: Sublimation temperature / start:	-8 °C (18 °F) 250-252 °C (482-486 °F) Not determined			
Flash point: Flammability (solid, gaseous) Ignition temperature: Decomposition temperature: Auto igniting:	> 110 °C (> 230 °F) Not determined Not determined Not determined Not determined			
Danger of explosion: Explosion limits: Lower: Upper: Vapor pressure: Density at 20 °C (68 °F): Relative density Vapor density Evaporation rate Solubility in / Miscibility with Water at 20 °C (68 °F): Partition coefficient (n-octanol/water Viscosity: dynamic: kinematic: Other information	Not determined. Not determined Not determined Not determined 1.05 g/cm ³ (8.762 lbs/gal) Not determined. Not determined. 1.1 g/l): Not determined. 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 and lergic skin reaction. Germ cell mutagenicity: The Registry of Toxic Effects of Chemical Substances (RTECS) contains mutation data for this substance. 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.				

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.

Carcinogenic categories OSHA-Ca (Occupational Safety & Health Administration) Substance is not listed.

12 Ecological information

Toxicity 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. 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 **Recommendation** 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

Product name: trans-Cinnamaldehyde

		(Contd. of page 3)		
UN proper shipping name DOT, ADN, IMDG, IATA	Not applicable			
Transport hazard class(es)				
DOT, ADR, ADN, IMDG, IATA Class	Not applicable			
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



Signal word Warning

Hazard statements H315 Causes skin irritation.

H319 Causes skir initiation. H319 Causes serious eye irritation. H317 May cause an allergic skin reaction.

Precautionary statements P262

Do not get in eyes, on skin, or on clothing.

P280 Wear protective gloves. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

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).

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.

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 Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

conformance with this 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 01/16/2017 / -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 VPWE: very Persistent and very Bioaccumulative ACGIH: American Conference of Governmental Industrial Hygienists (USA) OSHA: Occupational Safety and Health Administration (USA) MTP: National Toxicology Program (USA) HARC: International Agency (USA) Skin Intri: 2: Skin corrosion/intition, Hazard Category 2 Eye Irnt. 2A: Serious eye damage/eye irritation, Hazard Category 1

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