



1 Identification Product identifier Product name: Ethyl 4-nitrocinnamate Stock number: L04391 CAS Number: 953-26-4 EC number: 213-463-0 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. Inerrito Fisher Scheman C. 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) The substance is not classified according to the Globally Harmonized System (GHS). Hazards not otherwise classified No information known. I abel elements GHS label elements Not applicable Hazard pictograms Not applicable Signal word Not applicable Hazard statements Not applicable WHMIS classification Not controlled Classification system HMIS ratings (scale 0-4) (Hazardous Materials Identification System) 1 Health (acute effects) = 1Flammability = 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: 953-26-4 Ethyl 4-nitrocinnamate Identification number(s): EC number: 213-463-0 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 No further relevant information available. Indication of any immediate medical attention and special treatment needed No further relevant information available. 5 Fire-fighting measures 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 Nitrogen oxides (NOx) Hydrogen cyanide (HCN) 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 **Environmental precautions:** Do not allow material to be released to the environment without proper governmental permits.

| Product name: Ethyl 4-nitrocinnama | ate | |
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| Methods and material for containment Prevention of secondary hazards: No Reference to other sections See Section 7 for information on safe ha See Section 8 for information on person See Section 13 for disposal information. | andling nal protection equipment. | (Contd. of page 1) |
| 7 Handling and storage | | |
| Handling Precautions for safe handling Keep container tightly sealed. Store in cool, dry place in tightly closed | containers. • explosions and fires: No information known. | |
| Conditions for safe storage, including Storage | g any incompatibilities | |
| Requirements to be met by storeroon | | |
| 8 Exposure controls/personal prote | | |
| Additional information about design of Properly operating chemical fume hood | of technical systems: I designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute. | |
| Control parameters Components with limit values that red Additional information: No data | equire monitoring at the workplace: Not required. | |
| Impervious gloves Check protective gloves prior to each us The selection of suitable gloves not only Penetration time of glove material (in Eye protection: Safety glasses Body protection: Protective work cloth | handling chemicals should be followed. and feed. Sold of work. working environment. spirator when high concentrations are present. se for their proper condition. y depends on the material, but also on quality. Quality will vary from manufacturer to manufacturer. o minutes) Not determined | |
| 9 Physical and chemical properties | | |
| Information on basic physical and ch General Information Appearance: Form: Color: | Powder Light yellow | |
| Odor: Odor threshold: | Not determined Not determined | |
| pH-value: | Not applicable. | |
| Change in condition Melting point/Melting range: Boiling point/Boiling range: Sublimation temperature / start: Flammability (solid, gaseous) Ignition temperature: Decomposition temperature: Auto igniting: | 138-140 °C (280-284 °F) Not determined Not determined Not determined Not determined Not determined Not determined Not determined. | |
| Danger of explosion: Explosion limits: Lower: Upper: | Product does not present an explosion hazard. Not determined Not determined | |

 Lower:
 Not determined

 Upper:
 Not determined

 Vapor pressure:
 Not applicable.

 Density:
 Not determined

 Relative density
 Not determined.

 Vapor density
 Not determined.

 Solubility in / Miscibility with
 Not applicable.

 Water:
 Not determined.

 Partition coefficient (n-octanol/water):
 Not determined.

 Viscosity: dynamic: Not applicable. kinematic: Other information Not applicable. No further relevant information available.

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 No dangerous reactions known Conditions to avoid No further relevant information available. Incompatible materials: Oxidizing agents

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| Hazardous decomposition products: Carbon monoxide and carbon dioxide Nitrogen oxides Hydrogen cyande 11 Toxicological information Information on toxicological effects Acute toxicity: No effects known. Eve initiation or corrosion: May cause irritation Sensitization: No sensitizing effects known. Germ cell mutagenicity: No effects known. Specific target organ system toxicity - single exposure: No effects known. Aspiration hazard: No effects known. Subacute to chronic toxicity: No effects known. Subacute to chronic toxicity: No effects known. Additional toxicological information: To the best of our knowledge the acute and chronic toxicity of this substance is not fully known. 12 Ecological information Toxicity Aquatic toxicity: No further relevant information available. Persistence and degradability No further relevant information available. Persistence and degradability No further relevant information available. Madity of acothy No further relevant information available. Madity of acothy No further relevant information available. Madity of acothy of the system more environment without proper governmental permits. Do not allow material No further relevant information available. Madity of acothy of acothy acoth | iontd. of page 2) |
|--|-------------------|
| Information on toxicological effects Acute toxicity: No effects known. EXPLC50 values that are relevant for classification: No data Skin intration or corrosion: May cause initiation Sensitization: No sensitizing effects known. Germ cell mutagenicity: No effects known. Carcinogenicity: No effects known. Carcinogenicity: No effects known. Specific arget organ system toxicity - speated exposure: No effects known. Specific arget organ system toxicity - speated exposure: No effects known. Aspiration hazard: No effects known. Additional toxicological information: Subacute to chronic toxicity: No effects known. Additional toxicological information: Toxicity Additional toxicological information available. Persistence and degradability No further relevant information available. Bioaccumulative potential No further relevant information available. Additional ecological information: Cargen degradability No further relevant information available. Additional ecological information Cargen degradability No further relevant information available. Additional ecological information: Cargen degradability No further relevant information available. Additional 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. Additional ecological information: General notes: Do not allow material to be released to the environment without proper governmental permits. 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. VPvB: Not applicable. VPvB: Not applicable. VPvB: Not applicable. VInter adverse effects No further relevant information available. 13 Disposal considerations Waste treatment methods Recommendation: Disposal must be made according to official regulations. 14 Transport information Not a hazardous material for transportation. UN-Number DOT, IMDG, IATA None | |
| 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 Not a hazardous material for transportation. UN-Number DOT, IMDG, IATA UN proper shipping name | |
| Not a hazardous material for transportation. UN-Number DOT, IMDG, IATA None UN proper shipping name | |
| UN-Number DOT, IMDG, IATA None UN proper shipping name | |
| UN proper shipping name | |
| DOT, IMDG, IATA | |
| Transport hazard class(es) DOT, ADR, IMDG, IATA Class None | |
| Packing group DOT, IMDG, IATA None | |
| 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: Not dangerous according to the above specifications. | |
| DOT Marine Pollutant (DOT): No | |
| 15 Regulatory information Safety, health and environmental regulations/legislation specific for the substance or mixture GHS label elements Not applicable Hazard pictograms Not applicable Hazard statements Not applicable Mational regulations All components of this product are listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical substance Inventory. All components of this product are listed on 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, female Substance is not listed. Prop 65 - Developmental toxicity, female Substance is not listed. Prop 65 - Developmental toxicity, female Substance is not listed. Prop 65 - Developmental toxicity, female Substance is not listed. Prop 65 - Developmental toxicity, female Substance is not listed. Prop 65 - Developmental toxicity, female Substance is not listed. Prop 65 - Developmental toxicity, female Substance is not listed. Prop 65 - Developmental toxicity, female Substance is not listed. Prop 65 - Developmental toxicity, female Substance is not listed. Prop 65 - Developmental toxicity, female Substance is not listed. Prop 65 - Developmental toxicity, female Substance is not listed. Prop 65 - Developmental toxicity, female Substance is not listed. Prop 65 - Developmental toxicity, female Substance is not listed. Prop 65 - Developmental toxicity, female Substance is not listed. Prop 65 - Developmental toxicity, female Substance is not listed. Prop 65 - Developmental toxicity, female Substance is not listed. Prop 65 - Developmental toxicity, female Substance is not listed. Prop 65 - Developmental toxicity 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 Anne | acing on the |

Annex XIV of the REACH Regulations (requiring Authorisation for use) Substance is not listed.

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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.

- Information to endure proper last and provide and provide a set of in combination with any other product or process, is use responsibility of the user.

 Department issuing SDS: Global Marketing Department
 Date of preparation / last revision 11/23/2015 /
 Abbreviations and acronyms:

 RD: Reglement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
 IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)
 ICAO: International Concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
 IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)
 ICAO: International Concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
 IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (ICAO)
 IMDG: International Air Transport Association
 ICAO: International Air Transport Association
 IENECS: European Inventory of Existing Commercial Chemical Substances
 ENECS: European Inventory of Existing Commercial Chemical Substances
 CAS: Chemical Abstracts Service (division of the American Chemical Society)
 HMIS: Hazardous Materials Information System (Canada)
 LCSO: Lethal concentration, 50 percent
 UPSV every Persistent and very Bioaccumulative
 ACGHI: American Conference of Goovernmental Industrial Hygienists (USA)
 OXFH: Occupational Safety and Health Administration (USA)
 NTP: National Sofery (USA)

USA