



1 Identification Product identifier Product name: Ethyl (R)-nipecotate L-tartrate Stock number: H56226 CAS Number: 167392-57-6 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 Ana Aesan Thermo Fisher Scientific Chemicals, Inc. 30 Bond Street Ward Hill, MA 01835-8099 Tel: 800-343-0660 Fax: 800-322-4757 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 Eye Irrit. 2A H319 Causes serious eye irritation. 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 H319 Causes serious eye irritation. P280 Wear protective gloves/protective clothing/eye protection/face protection. P264 Wash thoroughly after handling. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337+P313 If eye irritation persists: Get medical advice/attention. WHMIS classification P3P D2B - Toxic material causing other toxic effects T Classification system (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: 167392-57-6 Ethyl (R)-nipecotate L-tartrate 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 freatment needed No further relevant information available.

## (Contd. of page 1) 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) 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 material to be released to the environment without proper governmental permits. Methods and material for containment and cleaning up: Pick up mechanically. 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 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 oxidizing agents. Further information about storage conditions: 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 General protective equipment General protective and hygienic measures General protective and nyglenic 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. Avoid contact with the eyes. Avoid contact with the eyes and skin. Maintain an ergonomically appropriate working environment. Breathing equipment: Use suitable respirator when high concentrations are present. Protection of hands: Impervious gloves 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. **Penetration time of glove material (in minutes)** Not determined **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: Powder Color: White Odor: Not determined Odor threshold: Not determined pH-value: Not applicable Change in condition Melting point/Melting range: Boiling point/Boiling range: Sublimation temperature / start: 157-159 °C (315-318 °F) Not determined Not determined Flammability (solid, gaseous) Ignition temperature: Not determined Not determined Decomposition temperature: Not determined Auto igniting: Not determined Danger of explosion: Not determined. Explosion limits: Lower: Not determined

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Upper: Vapor prossuro:	Not determined	
Vapor pressure: Density:	Not applicable. Not determined	
Relative density Vapor density	Not determined.	
Evaporation rate	Not applicable. Not applicable.	
Solubility in / Miscibility with Water:	Not determined	
Partition coefficient (n-octanol/wate Viscosity:	r): Not determined.	
dynamic: kinematic:	Not applicable. Not applicable.	
Other information	No further relevant information available.	
Possibility of hazardous reactions F Conditions to avoid No further releva Incompatible materials: Oxidizing ag Hazardous decomposition products	<b>s to be avoided:</b> Decomposition will not occur it used and stored according to specifications. Reacts with strong oxidizing agents ant information available. ients	
Carbon monoxide and carbon dioxide Nitrogen oxides		
11 Toxicological information		
Information on toxicological effects Acute toxicity: No effects known.		
LD/LC50 values that are relevant for Skin irritation or corrosion: May cau	use irritation	
Eye irritation or corrosion: Causes serious eye irritation. Sensitization: No sensitizing effects known.		
Sensitization: No sensitizing effects known. Germ cell mutagenicity: No effects known.		
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: No effe	ects known.	
Additional toxicological information	a: 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 i Persistence and degradability No fu Bioaccumulative potential No further Mobility in soil No further relevant inf	rther relevant information available.	
Mobility in soil No further relevant inf Additional ecological information: General notes:	ormation available.	
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.		
Other adverse effects No further rele	vant information available.	
13 Disposal considerations		
Waste treatment methods		
Recommendation Consult state, loca Uncleaned packagings:	l or national regulations to ensure proper disposal.	
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 Class	Not applicable	
Packing group DOT, IMDG, IATA		
Environmental hazards:	Not applicable Not applicable.	
Special precautions for user	Not applicable. Not applicable.	
	ex II of MARPOL73/78 and the IBC Code Not applicable.	
Transport in bulk according to Anne Transport/Additional information:		
DOT		
Marine Pollutant (DOT):	No	
UN "Model Regulation":		
		USA -

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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 H319 Causes serious eye irritation. Precautionary statements Precaduonary statements P280 Wear protective gloves/protective clothing/eye protection/face protection. P264 Wash thoroughly after handling. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337+P313 If eye irritation persists: Get medical advice/attention. 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, female Substance is not listed. Prop 65 - Developmental toxicity, female Substance is not listed. Prop 65 - Developmental toxicity, male Substance is not listed. Prop 65 - Developmental toxicity, male Substance is not listed. Prop 65 - Developmental toxicity, male Substance is not listed. Prop 65 - Developmental toxicity, male Substance is not listed. Prop 65 - Developmental toxicity, male Substance is not listed. Prop 65 - Developmental toxicity, male Substance is not listed. Prop 65 - Developmental toxicity, male Substance is not listed. Prop 65 - Developmental toxicity, formale Substance is not listed. Prop 65 - Developmental toxicity, formale Substance is not listed. Prop 65 - Developmental toxicity, formale Substance is not listed. Prop 65 - Developmental toxicity, formale Substance is not listed. Prop 65 - Developmental toxicity, formale Substance is not listed. Prop 65 - Developmental toxicity, 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 (RE National regulations 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. conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the use Department issuing SDS: Global Marketing Department Date of preparation / last revision 11/24/2015 / - Abbreviations and acconyms: 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) LDS0: Lethal concentration, 50 percent LDS0: Lethal concentration, 50 percent LDS0: Lethal concentration, 50 percent CAGIH: American Conference of Governmental Industrial Hygienists (USA) OSHA: Occupational Safety and Health Administration (USA) MTP: National Toxicology Program (USA) MTP