



1 Identification Product identifier Product name: 1,4'-Bipiperidine Stock number: B22028 **CAS Number:** 4897-50-1 EC number: 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) EZ GHS05 Corrosion Skin Corr. 1B H314 Causes severe skin burns and eye damage. Eye Dam. 1 H318 Causes serious eye damage. 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 E.F. GHS05 Signal word Danger Hazard statements H314 Causes severe skin burns and eye damage. Precautionary statements P260 Do not b Precautionary statements P260 Do not breathe dust/fume/gas/mist/vapours/spray. P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P301+P330+P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting. P405 Store locked up. Dispose of contents/container in accordance with local/regional/national/international regulations. WHMIS classification D2B - Toxic material causing other toxic effects E - Corrosive material of the Classification system HMIS ratings (scale 0-4) (Hazardous Materials Identification System) 2 Health (acute effects) = 21 Flammability = 1Physical 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: 4897-50-1 1,4'-Bipiperidine Identification number(s): EC number: 225-522-8 4 First-aid measures Description of first aid measures General information Immediately remove any clothing soiled by the product. 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. (Contd. on page 2)

Product name: 1,4'-Bipiperidine

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 severe skin burns. Causes serious eye damage. Indication of any immediate medical attention and special treatment 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 Environmental precautions: Do not allow material to be released to the environment without proper governmental permits. Methods and material for containment and cleaning up: Use neutralizing agent. Dispose of contaminated material as waste according to section 13. 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 oxidizing agents. Store away from oxidizing agents. Store under dry inert gas. This product is air sensitive. Keep container tightly sealed. Store in cool, dry conditions in well sealed containers. Store in cool, dry conditions in well sealed containers. 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 lume 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: Not required. Additional information: No data Exposure controls Personal protective equipment General 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 solied and contaminated clothing immediately. Wash hands before breaks and at the end of work. 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 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. Eye protection: Tightly sealed goggles Full face protection: Body protection: Protective work clothing.	
9 Physical and chemical properties Information on basic physical and chemical properties General Information Appearance: Form: Crystalline powder Color: White Odor: Not determined	
	(Contd. on page 3) USA

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Page 3/5 Printing date 11/23/2015 Reviewed on 12/29/2008

A 4 Dininguiding	Review	ved on 12/29/2008
Product name: 1,4'-Bipiperidine		(Contd. of page 2)
Odor threshold:	Not determined.	(Conta. or page z)
pH-value:	Not applicable.	
Change in condition Melting point/Melting range: Boiling point/Boiling range: Sublimation temperature / start:	66-70 °C (151-158 °F) Not determined Not determined	
Flash point: Flammability (solid, gaseous) Ignition temperature: Decomposition temperature: Auto igniting:	Not applicable Not determined Not determined Not determined Not determined.	
Danger of explosion: Explosion limits:	Product does not present an explosion hazard.	
Lower: Upper: Vapor pressure: Density: Relative density	Not determined Not determined Not applicable. Not determined Not determined.	
Vapor density Evaporation rate Solubility in / Miscibility with Water:	Not applicable. Not applicable. Soluble	
Partition coefficient (n-octanol/water): Viscosity: dynamic: kinematic: Other information	: Not determined. Not applicable. Not applicable. No further relevant information available.	
10 Stability and reactivity		
Reactivity No information known	mended storage conditions. to be avoided : Decomposition will not occur if used and stored according to specifications. o dangerous reactions known t information available.	
Carbon monoxide and carbon dioxide Nitrogen oxides		
LD/LC50 values that are relevant for c. Skin irritation or corrosion: Causes se Eye irritation or corrosion: Causes ser Sensitization: No sensitizing effects kno Germ cell mutagenicity: No effects know Carcinogenicity: No effects know Specific target organ system toxicity - Specific target organ system toxicity - Aspiration hazard: No effects known. Subacute to chronic toxicity: No effect	evere skin burns. rious eye damage. own. on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH. vn. - repeated exposure: No effects known. - single exposure: No effects known.	
12 Ecological information		
Toxicity Aquatic toxicity: No further relevant info Persistence and degradability No furth Bioaccumulative potential No further re Mobility in soil No further relevant inforr Additional ecological information: General notes:	her relevant information available. relevant information available. rmation available.	
Do not allow material to be released to th Do not allow undiluted product or large q Avoid transfer into the environment. Results of PBT and vPvB assessment PBT : Not applicable. vPvB : Not applicable. Other adverse effects No further releval		
13 Disposal considerations Waste treatment methods		
	or national regulations to ensure proper disposal. nade according to official regulations. er, if necessary with cleansing agents.	
14 Transport information		
UN-Number DOT, IMDG, IATA	UN3259	
		(Contd. on page 4)

Product name: 1,4'-Bipiportidine	Printing date 11/23/201 Reviewed on 12/29/200	Print Revie	SHA HazCom 2012
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Transport hazard class(es) DOT Class Clas	nel	Amines, solid, corrosive, n.o.s. (1,4'-Bipiperidine)	
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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 manuf 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. 6 Other information Employers should use this information only as a supplement to other information gathered by them, and should make independent judgem information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any u 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 11/23/2015 / - Abbreviations and accordyms: RID: Reglement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Regulations by the "International Civil Aviation Organization" (ICAO) ICAO: International Civil Aviation Organization ICAO: International Civil Aviation Organization ICAO: The redenical Instructions by the "International Civil Aviation Organization	e of this product is restrict defined by TSCA. This	regional/national/international regulations. ic Substances Control Act Chemical Substance Inventory. Use of this p y under the supervision of a technically qualified individual as defined b ommercial purposes. sted.	105 Store locked up. Dispose of contents/container in accordance with loca ational regulations nis product is not listed in the U.S. Environmental Protection Agency To research and development only. This product must be used by or direc oduct must not be used for commercial purposes or in formulations for ARA Section 313 (specific toxic chemical listings) Substance is not alifornia Proposition 65 op 65 - Chemicals known to cause cancer Substance is not listed. op 65 - Developmental toxicity, Substance is not listed. op 65 - Developmental toxicity, male Substance is not listed. op 65 - Developmental toxicity, male Substance is not listed. op 65 - Developmental toxicity, male Substance is not listed. op 65 - Developmental toxicity, male Substance is not listed.
Employers should use this information only as a supplement to other information gathered by them, and should make independent judgem information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any u 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 11/23/2015 / - Abbreviations and acronyms: RID: Reglement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Re International Civil Aviation Organization (IATA) (CAO: International Civil Aviation Organization Civil Aviation Organization Civil Aviation Organization Civil Aviation Organization (IACA): Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road) WOC : Hormotionel Martine Civil Aviation Organization Civil Aviation Organization (ICAO) ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)	ufacturing, placing on t	gulations (EC) No. 1907/2006. Substance is not listed. of the Regulation (EC) No 1907/2006 (REACH) for the manufacturir e) Substance is not listed.	ther regulations, limitations and prohibitive regulations ubstance of Very High Concern (SVHC) according to the REACH R he conditions of restrictions according to Article 67 and Annex XV arket and use must be observed. ubstance is not listed. nnex XIV of the REACH Regulations (requiring Authorisation for us
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ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO) ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road) IMDG: International Maritime Code for Dangerous Goods DOT: US Department of Transportation IATA: International Air Transport Association EINECS: European Inventory of Existing Commercial Chemical Substances EINECS: European Inventory of Existing Commercial Chemical Substances	y Rail)	de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)	sparament issuing Sps. Global Markeling Department ate of preparation / last revision 11/23/2015 / - bbreviations and acronyms: D: Règlement international concernant le transport des marchandises dangereuses par chemir A-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA 40: International Civil Aviation Organization
Enversa. European inveniory of Existing Commercial Chemical Substances		ement concerning the International Carriage of Dangerous Goods by Road)	AO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO) R: Accord européen sur le transport des marchandises dangereuses par Route (European Ag DG: International Maritime Code for Dangerous Goods T: US Department of Transportation TA: International Air Transport Association
CAS. Chemical Absorbers device (division of the American Chemical Society) HMIS: Hazardous Materials Identification System (USA)			истор с ширеал Inventory of Existing Commercial Chemical Substances S: Chemical Abstracts Service (division of the American Chemical Society) IIS: Hazardous Materials Identification System (USA)
WHMIS: Workplace Hazardous Materials Information System (Canada) LC50: Lethal concentration, 50 percent	(Contd. on pag		IMIS: Workplace Hazardous Materials Information System (Canada) 50: Lethal concentration, 50 percent

Product name: 1,4'-Bipiperidine

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) Page 5/5 Printing date 11/23/2015 Reviewed on 12/29/2008

(Contd. of page 4)

USA -