



1 Identification

Product identifier Product name: 2-Hydroxy-4-methylpyridine Stock number: L16188 CAS Number: 13466-41-6 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 Alla Aesai 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 Skin Irrit. 2 H315 Causes skin irritation. Eye Irrit. 2A H319 Causes serious eye irritation. STOT SE 3 H335 May cause respiratory 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 H315 Causes skin irritation. H319 Causes serious eye irritation. H335 May cause respiratory irritation. Precautionary statements P280 Woor protocting of 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 Flammability = 1 Y [] 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: 13466-41-6 2-Hydroxy-4-methylpyridine 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.

(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) Possibly Hydrogen cyanide (HCN)

Nulloger Dxloes (NOX) Possibly 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. Methods and material for containment and cleaning up: 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 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: Not required. Additional information: No data Exposure controls Personal protective equipment General protective and hygienic measures 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. 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:

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. Penetration time of glove material (in minutes) Not determined Eye protection: Safety glasses Body protection: Protective work clothing.

0 Physical and chemical properties

9 Physical and chemical properties			
Information on basic physical and ch General Information Appearance:			
Form:	Powder		
Color:	White		
Odor: Odor threshold:	Odorless Not determined.		
pH-value:	Not applicable.		
Change in condition Melting point/Melting range: Boiling point/Boiling range: Sublimation temperature / start:	128-131 °C (262-268 °F) 186-187 °C (367-369 °F) (12 mmHg) 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:	Product does not present an explosion hazard.		
	(Contd on page 2)		

Product name: 2-Hydroxy-4-methylpyridine

Explosion limits: Not determined University Not applicable Websy pressure: Not applicable Density Not applicable Websy pressure: Not applicable Websy pressure: Not applicable Websy pressure: Not applicable Websy pressure: Not applicable Websy: Not determined Websy:	Product name: 2-Hydroxy-4-methylp	ridine	
Lower: Med determined Vapor censure: Med applicable Vapor censure			(Contd. of page 2)
Rescutively No information income. Chemical secont position / conditions to be avoided. Becomposition will not occur if used and stored according to specifications. Chemical secont position / conditions to be avoided. Becomposition will not occur if used and stored according to specifications. Conditions in evolved No further relevant information available. Hazardous devemposition of the evolution evolution of the evolution of the evolution of the e	Lower: Upper: Vapor pressure: Density: Relative density Vapor density Evaporation rate Solubility in / Miscibility with Water: Partition coefficient (n-octanol/water): Viscosity: dynamic: kinematic:	Not determined Not applicable. Not determined Not applicable. Not applicable. Not determined Not determined. Not applicable. Not applicable.	
Information on toxicological effects Acute toxics: No effects known. LDLCS0 values that are relevant for classification: No data Stin initiation or corrests with initiation. Sensification: Courses skin initiation. Sensification: No sensitizing effects known. Gerr cell mutagenicity: No effects known. Specific target organ system toxicity - single exposure: No effects known. Specific target organ system toxicity - single exposure: May cause respiratory initiation. Aspiration toxicological information: To the beat of our knowledge the acute and chronic toxicity of this substance is not fully known. 12 Ecological information Toxicity: No inther relevant information available. Residuation and toxicological and information: To the beat of our knowledge the acute and chronic toxicity of this substance is not fully known. 12 Ecological information Toxicity: No inther relevant information available. Residuation and degradability No further relevant information available. Boaccumulative potential No further relevant information available. On ot allow material to be released to reach ground water, water course or sewage system. Application formation 13 Disposal considerations 13 Disposal considerations Master treatment methods More HP and why be assestment </td <td>Reactivity No information known. Chemical stability Stable under recomm Thermal decomposition / conditions to Possibility of hazardous reactions No Conditions to avoid No further relevant Incompatible materials: Oxidizing agent Hazardous decomposition products: Carbon monoxide and carbon dioxide Nitrogen oxides</td> <th>nformation available.</th> <td>ons.</td>	Reactivity No information known. Chemical stability Stable under recomm Thermal decomposition / conditions to Possibility of hazardous reactions No Conditions to avoid No further relevant Incompatible materials: Oxidizing agent Hazardous decomposition products: Carbon monoxide and carbon dioxide Nitrogen oxides	nformation available.	ons.
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. VPNE: Not applicable. VPVB:	Information on toxicological effects Acute toxicity: No effects known. LD/LC50 values that are relevant for cl Skin irritation or corrosion: Causes ski Eye irritation or corrosion: Causes seri Sensitization: No sensitizing effects kno Germ cell mutagenicity: No effects kno Carcinogenicity: No classification data c Reproductive toxicity: No effects known Specific target organ system toxicity - Specific target organ system toxicity - Aspiration hazard: No effects known.	n irritation. Jus eye irritation. vn. n carcinogenic properties of this material is available from the EPA, IARC, NTP, OSH. repeated exposure: No effects known. single exposure: May cause respiratory irritation.	
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 None UN proper shipping name DOT, IMDG, IATA None Transport hazard class(es) DOT, ADR, IMDG, IATA None Packing group DOT, IMDG, IATA None Packing group DOT, IMDG, IATA None Packing proper None Environmental hazards: Not applicable. Special precautions for user Not applicable.	Toxicity Aquatic toxicity: No further relevant info Persistence and degradability No furthe Bioaccumulative potential No further re Mobility in soil No further relevant inform Additional ecological information: General notes: Do not allow material to be released to th Do not allow undiluted product or large qu Avoid transfer into the environment. Results of PBT and vPvB assessment PBT: Not applicable.	er relevant information available. levant information available. lation available. e environment without proper governmental permits. lantities to reach ground water, water course or sewage system.	
Not a hazardous material for transportation. UN-Number DOT, IMDG, IATA None UN proper shipping name DOT, IMDG, IATA None Transport hazard class(es) None DOT, ADR, IMDG, IATA None Packing group DOT, IMDG, IATA None Packing group DOT, IMDG, IATA None Special precautions for user Not applicable.	Waste treatment methods Recommendation Consult state, local or Uncleaned packagings:		
DOT, IMDG, IATA None UN proper shipping name None DOT, IMDG, IATA None Transport hazard class(es) None DOT, ADR, IMDG, IATA None Packing group None DOT, IMDG, IATA None Packing group None DOT, IMDG, IATA None Special precautions for user Not applicable.	4 Transport information Not a hazardous material for transportation	n.	
Transport hazard class(es) DOT, ADR, IMDG, IATA Class None Packing group DOT, IMDG, IATA None Environmental hazards: Special precautions for user	DOT, ÎMDĞ, IATA	None	
DOT, ADR, IMDG, IATA None Class None Packing group None DOT, IMDG, IATA None Environmental hazards: Not applicable. Special precautions for user Not applicable.	· · ·	None	
Environmental hazards: Not applicable. Special precautions for user Not applicable.	DOT, ADR, IMDG, IATA Class	None	
Special precautions for user Not applicable.	Packing group DOT, IMDG, IATA	None	
	Environmental hazards:	· · · · · · · · · · · · · · · · · · ·	
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.	Transport/Additional information:	Not dangerous according to the above specific	ications. (Contd. on page 4) USA

Product name: 2-Hydroxy-4-methylpyridine	(Orath starse)
	(Contd. of page 3)
DOT Marine Pollutant (DOT): No	
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 Hazard pictograms	HCS)
GHS07	
Signal word Warning Hazard statements H315 Causes skin irritation. H319 Causes serious eye irritation. H319 Causes serious eye irritation. H335 May cause respiratory irritation. Precautionary statements P280 Wear protective gloves. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact len National regulations This product is not listed in the U.S. Environmental Protection Agency Toxic Substances Control Act to research and development only. This product must be used by or directly under the supervision of product must not be used for commercial purposes or in formulations for commercial purposes. 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, 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 is provide the complexity qualified individuals. Other regulations, limitations and prohibitive regulations Substance of Very High Concern (SVHC) according to the REACH Regulations (EC) No. 1907/2	Chemical Substance Inventory. Use of this product is restricted a technically qualified individual as defined by TSCA. This 2006. Substance is not listed.
The conditions of restrictions according to Article 67 and Annex XVII of the Regulation (EC) N 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.	o 1907/2006 (REACH) for the manufacturing, placing on the
16 Other information Employers should use this information only as a supplement to other information gathered by them, a information to ensure proper use and protect the health and safety of employees. This information is conformance with this Material Safety Data Sheet, or in combination with any other product or process.	s furnished without warranty, and any use of the product not in
Department issuing SDS: Global Marketing Department Date of preparation / last revision 11/24/2015 / - Abbreviations and acronyms: RID: Réglement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA) ICAO: International Civil Aviation Organization ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO) IMDG: International Maritime Code for Dangerous Goods DOT: US Department of Transportation IATA: International Abstracts Service (division of the American Chemical Society) HMIS: Hazardous Materials Information System (USA) WHMIS: Workplace Hazardous Materials Information System (Canada) LC50: Lethal concentration, 50 percent LD50: Lethal concentration, 50 percent VPVB: very Persistent and very Bioaccumulative ACGIH: American Conference of Governmental Industrial Hygienists (USA) OSHA: Occupational Toxicology Program (USA) NTP: National Toxicology Program (USA)	International Transport of Dangerous Goods by Rail)