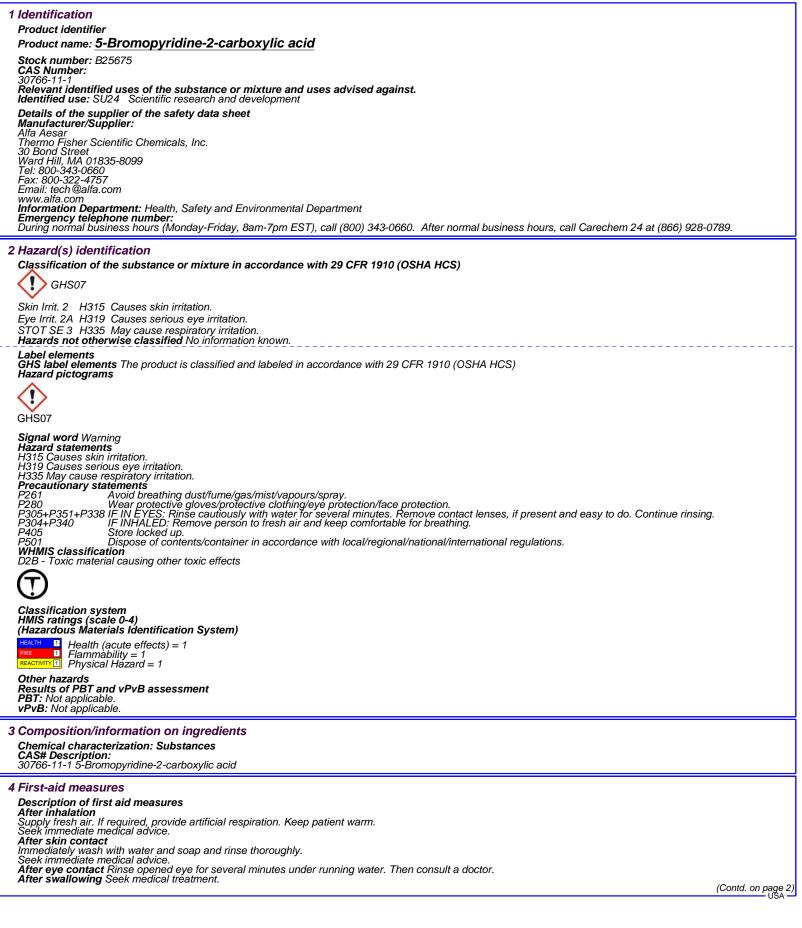


Safety Data Sheet per OSHA HazCom 2012



Product name: 5-Bromopyridine-2-carboxylic acid (Contd. of page 1) 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 bromide (HBr) 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 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: Impervious gloves The selection of suitable 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 Odor: Not determined Odor threshold: Not determined pH-value: Not applicable Change in condition 173-175 °C (343-347 °F) Not determined Not determined Melting point/Melting range: Boiling point/Boiling range: Sublimation temperature / start: Not applicable Flash point: Flammability (solid, gaseous) Ignition temperature: Decomposition temperature: Not determined. Not determined Not determined (Contd. on page 3)

Product name: 5-Bromonyridine-2-carboxylic acid

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		viewed on 09/27/2006
Product name: 5-Bromopyridine-2-c	arboxylic acid	
		(Contd. of page 2)
Auto igniting:	Not determined.	
Danger of explosion:	Product does not present an explosion hazard.	
Explosion limits: Lower:	Not determined	, i i i i i i i i i i i i i i i i i i i
Upper:	Not determined	I
Vapor pressure: Density:	Not applicable. Not determined	I
Relative density	Not determined.	l I
Vapor density Evaporation rate	Not applicable. Not applicable.	l I
Solubility in / Miscibility with		l I
Water: Partition coefficient (n-octanol/water):	Not determined): Not determined.	1
Viscosity:		l I
dynamic: kinematic:	Not applicable. Not applicable.	I
Other information	No further relevant information available.	
A Stability and reactivity		
0 Stability and reactivity Reactivity No information known		
Reactivity No information known. Chemical stability Stable under recomm	mended storage conditions. to be avoided: Decomposition will not occur if used and stored according to specifications.	
Thermal decomposition / conditions t Possibility of hazardous reactions No	to be avoided: Decomposition will not occur if used and stored according to specifications.	
Conditions to avoid No further relevant	nt information available.	
Incompatible materials: Oxidizing ager	ents	
Hazardous decomposition products: Carbon monoxide and carbon dioxide		
Nitrogen oxides Hydrogen bromide		
Hyarogen bronnae		
11 Toxicological information		
Information on toxicological effects		
Acute toxicity: No effects known. LD/LC50 values that are relevant for c	alocation: No data	
Skin irritation or corrosion: Causes sk	kin irritation.	
Eye irritation or corrosion: Causes ser	erious eye irritation.	
Sensitization: No sensitizing effects kno Germ cell mutagenicity: No effects kno	OWN. Jown	
Carcinogenicity: No classification data	own. a on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.	
Specific target organ system toxicity	wn. • - repeated exposure: No effects known.	
Specific target organ system toxicity	- single exposure: May cause respiratory irritation.	
Aspiration hazard: No effects known. Subacute to chronic toxicity: No effect	ofe 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 info	formation available.	
Persistence and degradability No furth Bioaccumulative potential No further r	her relevant information available.	
Mobility in soil No further relevant infor	relevant information available.	
Additional ecological information:		
General notes: Do not allow material to be released to the	the environment without proper aovernmental permits.	
Do not allow undiluted product or large c	the environment without proper governmental permits. quantities to reach ground water, water course or sewage system.	
Avoid transfer into the environment. Results of PBT and vPvB assessment	1f	
PBT: Not applicable. vPvB: Not applicable.		
Other adverse effects No further releva	ant information available.	
13 Disposal considerations		
13 DISPOSAL CONSIDERATIONS Waste treatment methods		
Recommendation Consult state, local of	or national regulations to ensure proper disposal.	
Uncleaned packagings: Recommendation: Disposal must be m		
Recommendation. Disposal must be m	iade according to official regulations.	
14 Transport information		
Not a hazardous material for transportati	ion.	
UN-Number DOT, IMDG, IATA	None	
UN proper shipping name		
DOT, IMDG, IÁTA	None	
Transport hazard class(es)		
DOT, ADR, IMDG, IATA	A. 7	
Class Packing group	None	
Packing group DOT, IMDG, IATA	None	
Environmental hazards:	Not applicable.	
Special precautions for user	Not applicable.	
	x II of MARPOL73/78 and the IBC Code Not applicable.	
Transport in terms of the		(Contd. on page 4
		USA -

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Product name: 5-Bromopyridine-2-carboxylic ac	
Transport/Additional information:	(Contd. of page 3) Not dangerous according to the above specifications.
DOT	Not dangerous according to the above specifications.
Marine Pollutant (DOT):	No
P304+P340 IF INHALED: Remove person to fresh Store locked up. P501 Dispose of contents/container in accornation and regulations This product is not listed in the U.S. Environmental Protection research and development only. This product must be product must not be used for commercial purposes or in SARA Section 313 (specific toxic chemical listings) SC alifornia Proposition 65 Prop 65 - Chemicals known to cause cancer Substance Prop 65 - Developmental toxicity, female Substance is not listed prop 65 - Developmental toxicity, male 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, 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, female Substance is not listed. Substance of Very High Concern (SVHC) according to The conditions of restrictions according to Article 67 market and use must be observed. Substance is not listed. Annex XIV of the REACH Regulations (requiring Auth Chemical Safety Assessment: A Chemical Safety Assessment: A Chemical Safety Assessment: A Chemical Safety Assessment: A Chemical Safety Assessment information not ensure proper use and protect the health and to according to the sense proper use and protect the health anot to and the substance on to ensure proper	ed in accordance with 29 CFR 1910 (OSHA HCS) apours/spray. thing/eye protection/face protection. ther for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. h air and keep comfortable for breathing. bordance with local/regional/national/international regulations. ection Agency Toxic Substances Control Act Chemical Substance Inventory. Use of this product is restricted product by or directly under the supervision of a technically qualified individual as defined by TSCA. This formulations for commercial purposes. Substance is not listed. ec is not listed. ad. to the REACH Regulations (EC) No. 1907/2006. Substance is not listed. 7 and Annex XVII of the Regulation (EC) No 1907/2006 (REACH) for the manufacturing, placing on the horisation for use) Substance is not listed.
Department issuing SDS: Global Marketing Department Date of preparation / last revision 11/24/2015 / - Abbreviations and acronyms: IMDG. International Maritime Code for Dangerous Goods DOT: US Department of Transport Association IATA: International Air Transport Association	
Abbreviations and acronyms: IMDG: International Maritime Code for Dangerous Goods DOT: US Department of Transportation IATA: International Altr Transport Association CAS: Chemical Abstracts Service (division of the American Chemical Socie HMIS: Hazardous Materials Identification System (USA) WHMIS: Workplace Hazardous Materials Information System (Canada) LC50: Lethal dose Hazardous Materials Information System (Canada) LC50: Lethal concentration, 50 percent USA): Lethal dose, 50 percent vPvB: very Persistent and very Bioaccumulative ACGIH: American Conference of Governmental Industrial Hygienists (USA) OSHA: Occupational Safety and Health Administration (USÅ) NTP: National Toxicology Program (USA) IARC: International Agency for Research on Cancer EPA: Environmental Protection Agency (USA))
NTP: National Toxicology Program (USA) IARC: International Agency for Research on Cancer	
EPA: Environmental Protection Agency (USA)	

USA