

Safety Data Sheet per OSHA HazCom 2012

1 Identification Product identifier Product name: 5-Bromosalicylaldehyde Stock number: L01837 CAS Number: 1761-61-1 EC number: 217-167-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) ! 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 P261 Avoid breathing dust/fume/gas/mist/vapours/spray. P280 Wear protective gloves/protective clothing/eye protection/face protection. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Store locked up. Dispose of contents/container in accordance with local/regional/national/international regulations. P405 WHMIS classification D2B - Toxic material causing other toxic effects Ţ Classification system HMIS ratings (scale 0-4) (Hazardous Materials Identification System) Health (acute effects) = 1Flammàbility = 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: 1761-61-1 5-Bromosalicylaldehyde Identification number(s): EC number: 217-167-2 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. (Contd. on page 2)

Product name: 5-Bromosalicylaldehyde

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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 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 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. 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 equipment of 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. Breating 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: Protective work clothing. 			
9 Physical and chemical properties Information on basic physical and che General Information Appearance: Form: Color:	emical properties Powder White		
Odor: Odor threshold:	Not determined Not determined.		
pH-value:	Not applicable.		
Change in condition			
Melting point/Melting range: Boiling point/Boiling range:	106-108 °C (223-226 °F) Not determined	(Control on the col	
		(Contd. on page 3)	

Product name: 5-Bromosalicylaldehyde

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 Incompatible materials: With according agents With according agents Pressibility Conditions and the materials: Information on toxicological effects Accurding agents LipU.CQU alues that are relevant for classification: No data LipU.CQU alues that are relevant for classification: No data Explicit to release that are relevant for classification: No data Explicit to xinding: No assistication and an charatoning effects known. Gentral coll to xinding effects known. Specific target organ system toxicity - repeated exposure: No effects known. Specific target organ system toxicity - repeated exposure: No effects known. Subacute to kindina toxicological information Toxicity Agentional toxicological information Toxicity Agention fazard: No effects known. Subacu	Product name: 5-Bromosalicylaldeh	yde		
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Accomposition temperature: Not determined Description Unitia: Product does not present an explosion hazard. Description Unitia: Product does not present an explosion hazard. Description Unitia: Not determined Value pressure: Not deplicable. Value control	Flammability (solid, gaseous)	Not determined.		
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Explosion timits: Use determined by the second seco	Danger of explosion:			
Upper: Not determined Warship: Workship: Not applicable workship: Partition: confident (n-octant/water): Not applicable workship: Uscostly: Not applicable workship: Uscostly: Not applicable workship: Other Information Not applicable workship: Control Information workship: Not applicable workship: Presentable materials: Not applicable workship: Presentable workship: Not applicable workship:	Explosion limits:			
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UN-Number None DOT, IMDG, IATA None UN proper shipping name None DOT, IMDG, IATA None Transport hazard class(es) DOT, ADR, IMDG, IATA Dot, Solution None	14 Transport information Not a hazardous material for transportati	ion.		
UN proper shipping name DOT, IMDG, IATA None Transport hazard class(es) DOT, ADR, IMDG, IATA Class None	UN-Number			
Transport hazard class(es) DOT, ADR, IMDG, IATA Class None	UN proper shipping name			
DOT, ADR, IMDG, IATA Class None		ivone		
	DOT, ADR, IMDG, IATA			
USA -	Class	None	(Contd. on page 4)	
			USA USA	

Product name: 5-Bromosalicylaldehyde		
	(Contd. of page 3)	
Packing group DOT, IMDG, IATA		
	None	
Environmental hazards:	Not applicable.	
Special precautions for user Transport in bulk according to Appen II of MARPOL 72/78 and	Not applicable.	
Transport in bulk according to Annex II of MARPOL73/78 and Transport/Additional information:	Not dangerous according to the above specifications.	
DOT	ไขย์เ นลายุยายนร ละบบเน่าหยู เข แก่ย ลมองช รัตยอากอิลแอกร.	
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 HCS) Hazard pictograms		
Department intro within Michael and Status Data Oricci, of in combining Department issuing SDS: Global Marketing Department Date of preparation / last revision 11/23/2015 / - Abbreviations and acronyms: IMDG: International Maritime Code for Dangerous Goods DOT: US Department of Transport Association IATA: International Air Transport Association EINECS: European Inventory of Existing Commercial Chemical Substances CAS: Chemical Abstracts Service (division of the American Chemical Society) HMIS: Hazardous Materials Identification System (USA) WHMIS: Workplace Hazardous Materials Information System (Canada) LC50: Lethal dose, 50 percent LD50: Lethal dose, 50 percent		

VPB: very Persistent and very Bioaccumulative VPB: 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)

USA