

Safety Data Sheet per OSHA HazCom 2012

1 Identification Product identifier Product name: 5-(Bromoacetyl)-2-hydroxybenzamide Stock number: B24330 CAS Number: 73866-23-6 EC number: 277-628-8 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 Acute Tox. 4 H302 Harmful if swallowed. 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 H302 Harmful if swallowed. H315 Causes skin irritation. H319 Causes serious eye irritation. H335 May cause respiratory irritation. Precautionary statements 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. P405 Store locked up. P50' Dispose of contents/container in accordance with local/regional/national/international regulations. WHMIS classification D1B - Toxic material causing immediate and serious toxic effects D2B - Toxic material causing other toxic effects Т Classification system HMIS ratings (scale 0-4) (Hazardous Materials Identification System) 1 Health (acute effects) = 1Flammability = 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: 73866-23-6 5-(Bromoacetyl)-2-hydroxybenzamide Identification number(s): EC number: 277-628-8 4 First-aid measures

Description of first aid measures After inhalation Supply fresh air. If required, provide artificial respiration. Keep patient warm.

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After swallowing Seek medical treatmer Information for doctor	several minutes under running water. Then consult a doctor.	(Contd. of page 1)
5 Fire-fighting measures Extinguishing media Suitable extinguishing agents Carbon of Special hazards arising from the subsi If this product is involved in a fire, the foll 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.	dioxide, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam. tance or mixture owing can be released:	
6 Accidental release measures Personal precautions, protective equip Wear protective equipment. Keep unprote Ensure adequate ventilation Environmental precautions: Do not allo Methods and material for containment Dispose of contaminated material as was Ensure adequate ventilation. Prevention of secondary hazards: No s Reference to other sections See Section 7 for information on safe har See Section 8 for information on persona See Section 13 for disposal information.	ected persons away. The environment without proper governmental permits. and cleaning up: te according to section 13. special measures required.	
Conditions for safe storage, including Storage Requirements to be met by storeroom	explosions and fires: No information known. any incompatibilities s and receptacles: No special requirements. mon storage facility: Store away from oxidizing agents. ditions: d containers.	
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 solied and contaminated clothing immediately. Wash hands before breaks and at the end of work. Avoid contact with the eyes and shin. 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: Safety glasses Body protection: Protective work clothing.		
9 Physical and chemical properties		
	Solid	
Odor:	Not determined Not determined.	
-	Not applicable.	
	Not determined Not determined	(Control on page 2)
		(Contd. on page 3)

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Product name: 5-(Bromoacetyl)-2-h	,,	
Sublimation tomporature / starts	Not determined	(Contd. of page 2
Sublimation temperature / start: Flash point:	Not determined Not applicable	
Flammability (solid, gaseous)	Not determined.	
Ignition temperature:	Not determined	
Decomposition temperature: Auto igniting:	Not determined Not determined.	
Danger of explosion:	Product does not present an explosion hazard.	
Explosion limits:		
Lower: Upper:	Not determined Not determined	
Vapor pressure:	Not applicable.	
Density: Bolotivo density	Not determined	
Relative density Vapor density	Not determined. Not applicable.	
Evaporation rate	Not applicable.	
Solubility in / Miscibility with Water:	Not determined	
Partition coefficient (n-octanol/water		
Viscosity: dynamic:	Not applicable.	
kinematic:	Not applicable.	
Other information	No further relevant information available.	
10 Stability and reactivity		
Reactivity No information known.	amondod otorogo opaditiono	
Chemical stability Stable under recon Thermal decomposition / conditions	menueu storage conditions. to be avoided: Decomposition will not occur if used and stored according to specifications	
Possibility of hazardous reactions N	to be avoided: Decomposition will not occur if used and stored according to specifications. o dangerous reactions known	
Conditions to avoid No further relevant Incompatible materials: Oxidizing age	nt information available.	
Hazardous decomposition products	5/11S	
Carbon monoxide and carbon dioxide		
Nitrogen oxides Hydrogen bromide		
11 Toxicological information		
Information on toxicological effects Acute toxicity: Harmful if swallowed.		
LD/LC50 values that are relevant for	classification:	
Oral LD50 800 mg/kg (rat)		
Skin irritation or corrosion: Causes s	skin irritation.	
Eye irritation or corrosion: Causes se	erious eye irritation.	
Sensitization: No sensitizing effects ki Germ cell mutagenicity: No effects ki	lown. Jown.	
Carcinogenicity: No classification data	a on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.	
Reproductive toxicity: No effects kno 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.		
The Registry of Toxic Effects of Chemi	cal Substances (RTECS) reports the following effects in laboratory animals:	
Behavioral - somnolence (general depr	'essed activity).	
Gastrointestinal - hypermotility, diarrhea. Kidney, Ureter, Bladder - other changes.		
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 in	nformation available.	
Persistence and degradability No fur Bioaccumulative potential No further	ther relevant information available.	
Mobility in soil No further relevant info	relevant information available. smation available	
Additional ecological information:		
General notes:	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 assessme		
PBT: Not applicable.	16	
vPvB: Not applicable.	vent information available	
Other adverse effects No further relev	ranı inivimalion avaliabit.	
13 Disposal considerations		
Waste treatment methods		
Recommendation Consult state, local	or national regulations to ensure proper disposal.	
Uncleaned packagings: Recommendation: Disposal must be r	nade according to official regulations.	
14 Transport information Not a hazardous material for transporta	stion	
UN-Number		
DOT, IMDG, IATA	None	
UN proper shipping name		
DOT, IMDG, IATA	None	
		(Contd. on page 4

(Contd. on page 4) USA

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	(Contd. of page
Transport hazard class(es)	
DOT, ADR, IMDG, IATA Class	None
Packing group DOT, IMDG, IATA	None
Environmental hazards:	Not applicable.
Special precautions for user	Not applicable.
Transport in bulk according to Annex II of MARPOL73/78 and	
Transport/Additional information:	Not dangerous according to the above specifications.
DOT	Not dangerous according to the above specifications.
Marine Pollutant (DOT):	No
5 Regulatory information	
Safety, health and environmental regulations/legislation speci GHS label elements The product is classified and labeled in acco Hazard pictograms	<i>ific for the substance or mixture</i> rdance with 29 CFR 1910 (OSHA HCS)
$\langle \mathbf{\hat{l}} \rangle$	
GHS07	
Signal word Warning Hazard statements H302 Harmful if swallowed. H315 Causes skin irritation. H319 Causes serious eye irritation.	
H335 May cause respiratory irritation. Precautionary statements P261 Avoid breathing dust/fume/gas/mist/vapours/sp P280 Wear protective gloves/protective clothing/eye P305+P351+P338 IF IN EYES: Rinse cautiously with water for se	protection/face protection. veral minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P304+P340 IF INHALED: Remove person to fresh air and k P405 Store locked up. P501 Dispose of contents/container in accordance w	teep confortable for breathing. http://regional/national/international regulations.
National regulations ' This product is not listed in the U.S. Environmental Protection Age to research and development only. This product must be used by product must not be used for commercial nurroses or in formulation	ency Toxic Substances Control Act Chemical Substance Inventory. Use of this product is restricted or directly under the supervision of a technically qualified individual as defined by TSCA. This pays for commercial nurroses
SARA Section 313 (specific toxic chemical listings) Substance California Proposition 65 Prop 65 - Chemicals known to cause cancer Substance is not li Prop 65 - Developmental toxicity Substance is not listed.	isted.
Prop 65 - Developmental toxicity, female Substance is not listed. Prop 65 - Developmental toxicity, male Substance is not listed. Information about limitation of use: For use only by technically of	J. qualified individuals.
Substance of Very High Concern (SVHC) according to the REA The conditions of restrictions according to Article 67 and Ann market and use must be observed.	ACH Regulations (EC) No. 1907/2006. Substance is not listed. nex XVII of the Regulation (EC) No 1907/2006 (REACH) for the manufacturing, placing on th
Substance is not listed. Annex XIV of the REACH Regulations (requiring Authorisation Chemical safety assessment: A Chemical Safety Assessment ha	n for use) Substance is not listed. as not been carried out.
information to ensure proper use and protect the health and safety	her information gathered by them, and should make independent judgement of suitability of this < of employees. This information is furnished without warranty, and any use of the product not in on with any other product or process, is the responsibility of the user.
Department issuing SDS: Global Marketing Department Date of preparation / last revision 11/24/2015 / - Abbreviations and acronyms: IMDS: International Maritime Code for Dangerous Goods	
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 concentration, 50 percent LD50: Lethal concentration, 50 percent	
LC50: Lethal concentration, 50 percent 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 (USÅ) NTP: National Toxicology Program (USA) IARC: International Agency for Research on Cancer EPA: Environmental Protection Agency (USA)	
ACGIH: American Conference of Governmental Industrial Hygienists (USA)	