

Safety Data Sheet per OSHA HazCom 2012

1 Identification Product identifier Product name: 2-Bromophenylacetic acid Stock number: L11909 CAS Number: 18698-97-0 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) ! 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 TIVITY 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: 18698-97-0 2-Bromophenylacetic acid Identification number(s): EC number: 242-509-2 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: 2-Bromophenylacetic acid (Contd. of page 1) 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 freatment 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 firefireture 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. Revented and indering the secondary has and cleaning up. Listing Revented in the secondary has and it is a second revented in the secondary has a secondary h 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. International and the second s 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: The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace. Additional information: No data Exposure controls Personal protective equipment rersonal 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 Maintain an ergonomically appropriate working environment. Breathing equipment: Use suitable respirator when high concentrations are present. Protection of hands: Impervious gloves The protective gloves prior to each use for their proper condition. 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. 9 Physical and chemical properties Information on basic physical and chemical properties **General Information** Appearance: Form: Powder Color: White Not determined Odor: Odor threshold: Not determined pH-value: Not applicable. Change in condition Melting point/Melting range: Boiling point/Boiling range: Sublimation temperature / start: Flammability (solid, gaseous) 105-106 °C (221-223 °F) Not determined Not determined Not determined

(Contd. on page 3)

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Ignition temperature: Decomposition temperature:		(Contd. of page
Auto igniting:	Not determined Not determined Not determined.	
Danger of explosion:	Not determined.	
Explosion limits:		
Lower: Upper:	Not determined Not determined	
Vapor pressure:	Not applicable. Not determined	
Density: Relative density	Not determined Not determined.	
Vapor density	Not applicable.	
Evaporation rate	Not applicable.	
Solubility in / Miscibility with Water:	Not determined	
Partition coefficient (n-octanol/water):	: Not determined.	
Viscosity: dynamic:	Not applicable.	
kinematic: Other information	Not applicable. No further relevant information available.	
0 Stability and reactivity		
Reactivity No information known. Chemical stability Stable under recomr	mended storage conditions	
Thermal decomposition / conditions to	to be avoided: Decomposition will not occur if used and stored according to specifications.	
Possibility of hazardous reactions Re Conditions to avoid No further relevant		
Incompatible materials: Oxidizing agen	inormation available.	
Hazardous decomposition products: Carbon monoxide and carbon dioxide		
Hydrogen bromide		
1 Toxicological information		
Information on toxicological effects		
Acute toxicity: No effects known.		
LD/LC50 values that are relevant for c Skin irritation or corrosion: Causes sk		
Eye irritation or corrosion: Causes se		
Sensitization: No sensitizing effects kno Germ cell mutagenicity: No effects kno	wn.	
Germ cell mutagenicity: No effects kno	own. on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.	
Reproductive toxicity: No effects know		
Specific target organ system toxicity	- repeated exposure: No effects known.	
Specific target organ system toxicity Aspiration hazard: No effects known.	- single exposure: May cause respiratory irritation.	
Subacute to chronic toxicity: No effects	ts known.	
	To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.	
2 Ecological information		
Toxicity		
Aquatic toxicity: No further relevant info Persistence and degradability No furth	ormation available.	
Bioaccumulative potential No further re-	elevant information available.	
Mobility in soil No further relevant infor	mation available.	
Additional ecological information: General notes:		
Do not allow material to be released to the	he environment without proper governmental permits.	
Do not allow undiluted product or large q Avoid transfer into the environment	quantities to reach ground water, water course or sewage system.	
Results of PBT and vPvB assessment	t	
PBT: Not applicable.	ant information available.	
PBT: Not applicable. vPvB: Not applicable. Other adverse effects No further releva		
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roduct name: 2-Bromophenylacetic acid		
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Transport/Additional information:		
DOT Marine Pollutant (DOT):	No	
UN "Model Regulation":		
15 Regulatory information Safety, health and environmental regulations GHS label elements The product is classified a Hazard pictograms	s/legislation specific for the substance or mixture and labeled in accordance with 29 CFR 1910 (OSHA HCS)	
GHS07		
P305+P351+P338 IF IN EYES: Rinse cautiously P304+P340 IF INHALED: Remove persor P405 Store locked up. P501 Dispose of contents/containe National regulations This product is not listed in the U.S. Environment to research and development only. This product product must not be used for commercial purpos This product is not listed on the Canadian Dome SARA Section 313 (specific toxic chemical lis California Proposition 65 Prop 65 - Chemicals known to cause cancer s Prop 65 - Developmental toxicity, substance is Prop 65 - Developmental toxicity, male Subst Information about limitation of use: For use o Other regulations, limitations and prohibitive Substance of Very High Concern (SVHC) acc The conditions of restrictions according to A market and use must be observed. Substance is not listed.	ective clothing/eyé protection/face protection. y with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. in to fresh air and keep comfortable for breathing. er in accordance with local/regional/national/international regulations. Intal Protection Agency Toxic Substances Control Act Chemical Substance Inventory. Use of this product is restricted t must be used by or directly under the supervision of a technically qualified individual as defined by TSCA. This ses or in formulations for commercial purposes. estic Substances List (DSL) or the Canadian Non-Domestic Substances List (NDSL). istings) Substance is not listed. Substance is not listed. is not listed. both listed. Descriptions for commercial purposes. estic Substance is not listed. Substance is not listed. Substance is not listed. Substance is not listed. Descriptions cording to the REACH Regulations (EC) No. 1907/2006. Substance is not listed. Article 67 and Annex XVII of the Regulation (EC) No 1907/2006 (REACH) for the manufacturing, placing on the ring Authorisation for use) Substance is not listed.	
information to ensure proper use and protect the conformance with this Material Safety Data Shee	a supplement to other information gathered by them, and should make independent judgement of suitability of this e health and safety of employees. This information is furnished without warranty, and any use of the product not in set, or in combination with any other product or process, is the responsibility of the user.	
Department issuing SDS: Global Marketing De Date of preparation / last revision 11/24/2015 Abbreviations and acronyms: ADR: Accord européen sur le transport des marchandises dang DOT: US Department of Transportation EINECS: European Inventory of Existing Commercial Chemical CAS: Chemical Abstracts Service (division of the American Che- HMIS: Hazardous Materials Identification System (USA) WHMIS: Workplace Hazardous Materials Information System (C LC50: Lethal concentration, 50 percent LD50: Lethal dose, 50 percent vPvB: very Persistent and very Bioaccumulative ACGIH: American Conference of Governmental Industrial Hygie OSHA: Occupational Safety and Health Administration (USA) NTP: National Toxicology Program (USA) IARC: International Agency for Research on Cancer EPA: Environmental Protection Agency (USA)	5 / - gereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road) I Substances mical Society) Canada)	