

Safety Data Sheet per OSHA HazCom 2012

1 Identification Product identifier

## Product name: 1-(4-BromophenvI)ethanol

Product normal 1-(A.Promonbony/)othanol
Product name: 1-(4-Bromophenyl)ethanol
Stock number: B23561, L07516 CAS Number:
5391-88-8
<b>EC number:</b> 226-389-9
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. 30 Bond Street Ward Hill, MA 01835-8099 Tel: 800-343-0660 Fax: 800-322-4757 Email: tech@alfa.com
30 Bond Street
Wald Thil, MA 01535-0099 Tel: 800-343-0660
Fax: 800-322-4757
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.         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.
P304+P340 IF INHALED: Remove person to tresh air and keep comfortable for breathing. P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
WHMIS classification D2B - Toxic material causing other toxic effects
$(\bar{T})$
Classification system
HMSS ratings (scale 0-4) (Hazardous Materials Identification System)
HEALTH I Health (acute effects) = 1 FIRE 2 $Flammability = 2$
FIRE     Prescrivity       REACTIVITY     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: 5391-88-8 1-(4-Bromophenyl)ethanol
Identification number(s): EC number: 226-389-9
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.
Seek immediate medical advice. After skin contact
Immediately wash with water and soap and rinse thoroughly. (Contd. on page 2)
USA

## Product name: 1-(4-Bromophenyl)ethanol

(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. Prevention of secondary hazards: Keep away from ignition sources. Reference to other sections Concernent and cleaning up: Ensure adequate ventilation. 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 Recautions for sale nanoling 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: Keep ignition sources away. 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 Automati 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 Check protective gloves prior to each use for their proper condition 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: Solid Odor: Odor threshold: Not determined Not determined. pH-value: Not applicable. Change in condition Melting point/Melting range: Boiling point/Boiling range: 36-38 °C (97-100 °F) 119-121 °C (246-250 °F) Sublimation temperature / start: Not determined 63 °C (145 °F) Flash point: Flammability (solid, gaseous) Ignition temperature: Not determinéd

Not determined

## Product name: 1-(4-Bromophenyl)ethanol

Product name: 1-(4-Bromophenyl)e	inanoi	
Decomposition tomperature:	Not determined	(Contd. of page 2)
Decomposition temperature: Auto igniting:	Not determined Not determined.	
Danger of explosion: Explosion limits: Lower: Upper: Vapor pressure: Density at 20 °C (68 °F): Relative density Vapor density	Product does not present an explosion hazard. Not determined Not applicable. 1.46 g/cm <sup>3</sup> (12.184 lbs/gal) Not determined.	
Vapor density Evaporation rate Solubility in / Miscibility with Water: Partition coefficient (n-octanol/water) Viscosity: dynamic:	Not applicable. Not applicable. Insoluble : Not determined. Not applicable.	
kinematic: Other information	Not applicable. No further relevant information available.	
10 Stability and reactivity Reactivity No information known. Chemical stability Stable under recom Thermal decomposition / conditions No Possibility of hazardous reactions No Conditions to avoid No further relevan Incompatible materials: Oxidizing age Hazardous decomposition products: Carbon monoxide and carbon dioxide Hydrogen bromide	to be avoided: Decomposition will not occur it used and stored according to specifications. o dangerous reactions known it information available.	
Reproductive foxicity: No effects know Specific target organ system toxicity Specific target organ system toxicity Aspiration hazard: No effects known. Subacute to chronic toxicity: No effect	kin irritation. rious eye irritation. own. on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIF vn. <b>- repeated exposure:</b> No effects known. <b>- single exposure:</b> May cause respiratory irritation.	1.
12 Ecological information Toxicity Aquatic toxicity: No further relevant im Persistence and degradability No furt Bioaccumulative potential No further Mobility in soil No further relevant info Additional ecological information: General notes: Do not allow material to be released to a Avoid transfer into the environment. Results of PBT and vPvB assessment PBT: Not applicable. vPvB: Not applicable. Other adverse effects No further relevant	her relevant information available. relevant information available. rmation available. the environment without proper governmental permits. I <b>t</b>	
13 Disposal considerations Waste treatment methods Recommendation Consult state, local Uncleaned packagings: Recommendation: Disposal must be m	or national regulations to ensure proper disposal. nade according to official regulations.	
<b>14 Transport information</b> Not a hazardous material for transportat	tion	
UN-Number DOT, IMDG, IATA	None	
UN proper shipping name DOT, IMDG, IATA	None	
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 Transport/Additional information:	I of MARPOL73/78 and the IBC Code Not applicable. Not dangerous according to the above specifications.	
Transport/Additional mormation.		(Contd. on page 4)
		USA -

	(Contd. of page
DOT	
Marine Pollutant (DOT):	No
Hazard pictograms	egislation specific for the substance or mixture I labeled in accordance with 29 CFR 1910 (OSHA HCS)
P405 Store locked up. P501 Dispose of contents/container in National regulations This product is not listed in the U.S. Environmental to research and development only. This product mus product must not be used for commercial purposes SARA Section 313 (specific toxic chemical listin California Proposition 65 Prop 65 - Chemicals known to cause cancer Sul Prop 65 - Developmental toxicity Substance is no Prop 65 - Developmental toxicity, female Substan Prop 65 - Developmental toxicity, male Substance Information about limitation of use: For use only	ive clothing/eye protection/face protection. vith water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. o fresh air and keep comfortable for breathing. in accordance with local/regional/national/international regulations. I Protection Agency Toxic Substances Control Act Chemical Substance Inventory. Use of this product is restrictu ust be used by or directly under the supervision of a technically qualified individual as defined by TSCA. This s or in formulations for commercial purposes. <b>ngs)</b> Substance is not listed. ubstance is not listed.
Annex XIV of the REACH Regulations (requiring Chemical safety assessment: A Chemical Safety 6 Other information	<i>y Authorisation for use)</i> Substance is not listed. / Assessment has not been carried out.
Employers should use this information only as a su information to ensure proper use and protect the he conformance with this Material Safety Data Sheet,	upplement to other information gathered by them, and should make independent judgement of suitability of this lealth and safety of employees. This information is furnished without warranty, and any use of the product not ir or in combination with any other product or process, is the responsibility of the user.
Department issuing SDS: Global Marketing Depa Date of preparation / last revision 11/23/2015 / - Abbreviations and acronyms: IMDG: International Maritime Code for Dangerous Goods DOT: US Department of Transportation IATA: International Air Transport Association EINECS: European Inventory of Existing Commercial Chemical Sub CAS: Chemical Abstracts Service (division of the American Chemica HMIS: Hazardous Materials Identification System (USA) WHMIS: Workplace Hazardous Materials Information System (Cana LOSO: Lethal concentration, 50 percent LDSO: Lethal dose, 50 percent VPW: very Persistent and very Bioaccumulative ACGIH: American Conference of Governmental Industrial Hygienist: OSHA: Occupational Safety and Health Administration (USA) NTP: National Toxicology Program (USA) IARC: International Agency for Research on Cancer EPA: Environmental Protection Agency (USA)	rtment bstances al Society) ada) ts (USA)