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	Version 1
1 Identification	
Product identifier	
Product name: 4-(2-Methoxycarbonylethyl)benzeneboronic acid	
Stock number: H53243 CAS Number: 850568-44-4	
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	'
www.alfa.com	'
Information Department: Health, Safety and Environmental Department Emergency telephone number: Demonstration of the second second second second second the second s	
During normal business hours (Monday-Friday, 8am-7pm EST), call (800) 343-0660. After normal business hours, call Carechem 24 at (866) 928-0	789.
2 Hazard(s) identification	!
Classification of the substance or mixture in accordance with 29 CFR 1910 (OSHA HCS) GHS07	1
Skin Irrit. 2 H315 Causes skin irritation.	!
Even Init. 2A H319 Causes serious eye irritation. STOT SE 3 H335 May cause respiratory irritation. Hazards not otherwise classified No information known.	1
Label elements	'
GHS label elements The product is classified and labeled in accordance with 29 CFR 1910 (OSHA HCS) Hazard pictograms	
	1
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/vapors/spray P280 Wear protecting dovers/eve protection/ face protection	
P305+P351+P338 If in eyes: Rinse cautionsly with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P305+P351+P348 If in eyes: Rinse cautionsly 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.	
P312 Call a POISON CENTER/doctor if vou feel unwell.	
P332+P313 If skin irritation occurs: Get medical advice/attention.	
P403+P233 Store in a well-ventilated place. Keep container tightly closed.	
WHMIS classification	
D2B - Toxic material causing other toxic effects	
T	
Classification system HMIS ratings (scale 0-4)	
(Hazardou's Materials Identification System)	
HEATH I Health (acute effects) = 1 FIRE I Flammability = 1	
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:	
850568-44-4 4-(2-Methoxycarbonylethyl)benzeneboronic acid Concentration: ≤100%	
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)
	USA



Product name: 4-(2-Methoxycarbonylethyl)benzeneboronic 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 Causes skin irritation. Causes serious eye irritation. 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 Boron oxide 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. Environmental precautions: Do not allow material to be released to the environment will 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 7 for information on personal protection equipment. See Section 13 for disposal information. Protective Action Criteria for Chemicals PAC-1: Substance is not listed. PAC-3: Substance is not listed. 7 Handling and storage Handling Precautions for safe handling Recalitions for sale managing 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: 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

Solid

Not determined

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. Recommended filter device for short term use: Use a respirator with type N95 (USA) or PE (EN 143) cartridges as a backup to engineering controls. Risk assessment should be performed to determine if air-purifying respirators are appropriate. Only use equipment tested and approved under appropriate government standards. Impervious gloves

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. **Penetration time of glove material (in minutes)** Not determined **Eye protection:** Safety glasses with side shields / NIOSH (US) or EN 166(EU) **Body protection:** Protective work clothing.

9 Physical and chemical properties	
Information on basic physical and chemical properties General Information	

Appearance: Form: Odor:

(Contd. on page 3)



Product name: 4-(2-Methoxycarbonylethyl)benzeneboronic acid

	(Contd. of page 2)	
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) Ignition temperature: Decomposition temperature: Auto igniting:	90-94 °C (194-201 °F) Not determined Not determined Not determined Not determined Not determined Not determined	
Danger of explosion: Explosion limits: Lower: Upper: Vapor pressure: Density: Relative density Vapor density Evaporation rate Solubility in / Miscibility with Water: Partition coefficient (n-octanol/water): Viscosity: dynamic: kinematic: Other information	Not determined. Not determined Not applicable. Not determined Not determined. Not applicable. Not applicable. Not determined Not determined. Not determined. Not determined. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable.	
10 Stability and reactivity 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 Reacts with strong oxidizing agents Conditions to avoid No further relevant information available. Incompatible materials: Oxidizing agents		

Hazardous decomposition products: Carbon monoxide and carbon dioxide Boron oxide

11 Toxicological information

Information on toxicological effects

Information on toxicological effects Acute toxicity: No effects known. LD/LC50 values that are relevant for classification: No data Skin irritation or corrosion: Causes skin irritation. Eye irritation or corrosion: Causes serious eye irritation. Sensitization: No sensitizing effects known. Germ cell mutagenicity: No effects known. Carcinogenicity: EPA-I: Data are inadequate for an assessment of human carcinogenic potential. Reproductive toxicity: No effects known. Specific tarret organ system toxicity - repeated exposure: No effects known.

Specific target organ system toxicity - repeated exposure: No effects known. Specific target organ system toxicity - repeated exposure: May cause respiratory irritation. Aspiration hazard: No effects known. Subacute to chronic toxicity: No effects 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 information available. Persistence and degradability No further relevant information available. Bioaccumulative potential No further relevant information available. Mobility in soil No further relevant information available. Additional ecological information: General notes: Do not ollow motorial to be released to the environment without proper co General notes: Do not allow material to be released to the environment without proper governmental permits. Do not allow undiluted product or large quantities to reach ground water, water course or sewage system. Avoid transfer into the environment. Results of PBT and vPvB assessment **PBT:** Not applicable. **vPvB:** Not applicable. **Other adverse effects** No further relevant information available. 13 Disposal considerations Waste treatment methods Recommendation Consult state, local or national regulations to ensure proper disposal. Uncleaned packagings: Recommendation: Disposal must be made according to official regulations. 14 Transport information UN-Number DOT, ADN, IMDG, IATA Not applicable

Not applicable

UN proper shipping name DOT, ADR, ADN, IMDG, IATA

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USA

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		(Contd. of page 3)		
Transport hazard class(es)				
DOT, ADR, ADN, IMDG, IATA Class	Not applicable			
Packing group DOT, ADR, IMDG, IATA	Not applicable			
Environmental hazards: Marine pollutant (IMDG):	No			
Special precautions for user	Not applicable.			
Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code Not applicable.				
Transport/Additional information:				
DOT Marine Pollutant (DOT):	No			
UN "Model Regulation":	Not applicable			

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



Signal word Warning Hazard statements 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/vapors/spray P280 Wear protective gloves / 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. P312 Call a POISON CENTER/doctor if you feel unwell. P321 Specific treatment (see on this label). P322+P212 If alvin irritation oncourse: Cot modional advino/attention P304+P340 P312 P321 P332+P313 P405 If skin irritation occurs: Get medical advice/attention. Store locked up. Store in a well-ventilated place. Keep container tightly closed. Dispose of contents/container in accordance with local/regional/national/international regulations. P403+P233 P501 National regulations National regulations This product is not listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical Substance Inventory. Use of this product is restricted to research and development only. This product must be used by or directly under the supervision of a technically qualified individual as defined by TSCA. This product must not be used for commercial purposes or in formulations for commercial purposes. This product is not listed on the Canadian Domestic Substances List (DSL) or the Canadian Non-Domestic Substances List (NDSL). This product is not listed on the Canadian Domestic Substances List (DSL) or the Can SARA Section 313 (specific toxic chemical listings) Substance is not listed. California Proposition 65 Prop 65 - Chemicals known to cause cancer Substance is not listed. Prop 65 - Developmental toxicity Substance is not listed. 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 qualified individuals. Other regulations limitations and prohibitive regulations Other regulations, limitations and prohibitive regulations Substance of Very High Concern (SVHC) according to the REACH Regulations (EC) No. 1907/2006. Substance is not listed. The conditions of restrictions according to Article 67 and Annex XVII of the Regulation (EC) No 1907/2006 (REACH) for the manufacturing, placing on the marked and use much becamer the substance of the conditions of restrictions according to Article 67 and Annex XVII of the Regulation (EC) No 1907/2006 (REACH) for the manufacturing, placing on the market and use must be observed. Substance is not listed. Annex XIV of the REACH Regulations (requiring Authorisation for use) Substance is not listed. Chemical safety assessment: A Chemical Safety Assessment has not been carried out. 16 Other information Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user. conformance with this Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user." Department issuing SDS: Global Marketing Department Date of preparation/Revision: Print date, revision date and version number are in the header of each page. Abbreviations and acronyms: ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road) IMDG: International Maritime Code for Dangerous Goods DOT: US Department of Transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road) IMDG: International Maritime Code for Dangerous Goods DOT: US Department of Transport Association CAS: Chemical Abstracts Service (division of the American Chemical Society) HMIS: Hazardous Materials Information System (USA) WHMIS: Workplace Hazardous Materials Information System (Canada) LC50: Lethal concentration, 50 percent PBT: Persistent, Bioaccumulative and Toxic SYHC: Substances of Very High Concern PVV: very Persistent and very Bioaccumulative AGIH: American Ostervence (Governmental Industrial Hygienists (USA) MTP: National Toxicology Program (USA) Strint T: 2: Skin corrosion/Irritation – Category 2A STOT SE 3: Specific target organ toxicity (single exposure) – Category 3