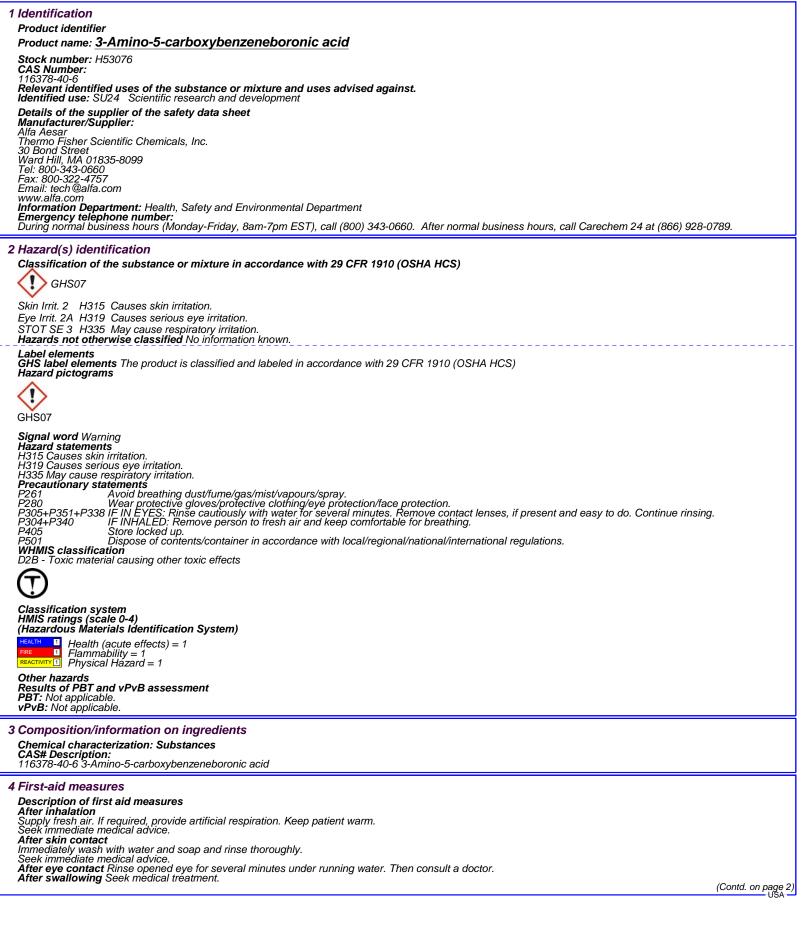


Safety Data Sheet per OSHA HazCom 2012



## Product name: 3-Amino-5-carboxybenzeneboronic acid

(Contd. of page 1) 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 Nitrogen oxides (NOx) 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. 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 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. 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 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 aves and exin. 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 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 **Body protection:** Protective work clothing. 9 Physical and chemical properties Information on basic physical and chemical properties General Information Appearance: Form: Solid Color: Grey Not determined Odor: Odor threshold: Not determined. Not applicable. pH-value: Change in condition Change in condition Melting point/Melting range: Boiling point/Boiling range: Sublimation temperature / start: Flammability (solid, gaseous) Ignition temperature: Decomposition temperature: 210-212 °C (410-414 °F) Not determined Not determined

Not determined. Not determined Not determined

(Contd. on page 3)

## Product name: 3-Amino-5-carboxybenzeneboronic acid

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Product name: 3-Amino-5-carboxyb	enzeneboronic acid	
		(Contd. of page 2)
Auto igniting:	Not determined.	
Danger of explosion: Explosion limits:	Not determined.	
Lower:	Not determined	
Upper: Vapor pressure:	Not determined	
Vapor pressure: Density:	Not applicable. Not determined	
Relative density	Not determined.	
Vapor density Evaporation rate	Not applicable. Not applicable.	
Solubility in / Miscibility with		
Water: Partition coefficient (n-octanol/water)	Not determined	
Viscosity:	. Not determined.	
dynamic: kinematic:	Not applicable. Not applicable.	
Other information	Not applicable. No further relevant information available.	
10 Stability and reactivity		
Reactivity No information known.	mandad ataraga conditiona	
Thermal decomposition / conditions t	mended storage conditions. to <b>be avoided:</b> Decomposition will not occur if used and stored according to specifications.	
Possibility of hazardous reactions Re Conditions to avoid No further relevan	acts with strong oxidizing agents	
Incompatible materials: Oxidizing agei	t information available. nte	
Hazardous decomposition products:		
Carbon monoxide and carbon dioxide		
Nitrogen oxides Boron oxide		
11 Toxicological information		
Information on toxicological effects Acute toxicity: No effects known.		
LD/LC50 values that are relevant for o	classification: No data	
Skin irritation or corrosion: Causes sl	kin irritation.	
Eye irritation or corrosion: Causes se Sensitization: No sensitizing effects kni	rious eye irritation. own	
Sensitization: No sensitizing effects known Germ cell mutagenicity: No effects known	own.	
Carcinogenicity: EPA-I: Data are inade	equate for an assessment of human carcinogenic potential.	
Reproductive toxicity: No effects know Specific target organ system toxicity	- repeated exposure: No effects known.	
Specific target organ system toxicity	<ul> <li>repeated exposure: No effects known.</li> <li>single exposure: May cause respiratory irritation.</li> </ul>	
Aspiration hazard: No effects known. Subacute to chronic toxicity: No effect	ts 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 inf	ormation available.	
Persistence and degradability No furth	rer relevant information available.	
Bioaccumulative potential No further r Mobility in soil No further relevant infor	elevant information available. mation available	
Additional ecological information:		
General notes: Do not allow material to be released to t	the environment without proper governmental permits.	
Do not allow undiluted product or large of	quantities to reach ground water, water course or sewage system.	
Avoid transfer into the environment. Results of PBT and vPvB assessmen	f	
PBT: Not applicable.	t i i i i i i i i i i i i i i i i i i i	
vPvB: Not applicable.	ant information available	
Other adverse effects No further releva	ant information available.	
13 Disposal considerations		
Waste treatment methods		
Recommendation Consult state, local of	or national regulations to ensure proper disposal.	
Uncleaned packagings: Recommendation: Disposal must be m	ade according to official regulations.	
14 Transport information		
UN-Number DOT, ADN, IMDG, IATA	Not applicable	
· · · ·	Νοι αρμιταωτε	
UN proper shipping name DOT, ADN, IMDG, IATA	Not applicable	
Transport hazard class(es)		
DOT, ADR, ADN, IMDG, IATA		
Class	Not applicable	
Packing group DOT, IMDG, IATA		
	Not applicable	
Environmental hazards:	Not applicable.	
Special precautions for user	Not applicable.	
Transport in bulk according to Annex	II of MARPOL73/78 and the IBC Code Not applicable.	
		(Contd. on page 4)

	Reviewed on 04/23/2
oduct name: 3-Amino-5-carboxybenzer	neboronic acid
	(Contd. of page
Transport/Additional information:	
DOT Marine Pollutant (DOT):	No
UN "Model Regulation":	- · · · · · · · · · · · · · · · · · · ·
5 Regulatory information Safety, health and environmental regulation GHS label elements The product is classified a Hazard pictograms	ns/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 cautious P304+P340 IF INHALED: Remove perso Store locked up. P501 Dispose of contents/contain National regulations This product is not listed in the U.S. Environme to research and development only. This produc product must not be used for commercial purpo This product is not listed on the Canadian Dom SARA Section 313 (specific toxic chemical I California Proposition 65 Prop 65 - Developmental toxicity, substance Prop 65 - Developmental toxicity, male Subs Information about limitations of use: For use a Other regulations, limitations and prohibitiv Substance of Very High Concern (SVHC) ac The conditions of restrictions according to a market and use must be observed. Substance is not listed.	<ul> <li>Tective clothing/eye protection/ace protection.</li> <li>sly with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</li> <li>on to fresh air and keep comfortable for breathing.</li> <li>ner in accordance with local/regional/national/international regulations.</li> <li>ental Protection Agency Toxic Substances Control Act Chemical Substance Inventory. Use of this product is restrict the supervision of a technically qualified individual as defined by TSCA. This oses or in formulations for commercial purposes.</li> <li>nestic Substance List (DSL) or the Canadian Non-Domestic Substances List (NDSL).</li> <li><b>Istings)</b> Substance is not listed.</li> <li>is not listed.</li> <li>is not listed.</li> </ul>
Other information Employers should use this information only as information to ensure proper use and protect th conformance with this Material Safety Data She	a supplement to other information gathered by them, and should make independent judgement of suitability of this he health and safety of employees. This information is furnished without warranty, and any use of the product not i eet, or in combination with any other product or process, is the responsibility of the user.
Department issuing SDS: Global Marketing D Date of preparation / last revision 11/24/2013 Abbreviations and acronyms:	Department 5 / -
DOT: US Department of Transportation CAS: Chemical Abstracts Service (division of the American Ch HMIS: Hazardous Materials Identification System (USA) WHMIS: Workplace Hazardous Materials Information System ( LCSD: Lethal concentration, 50 percent	(Canada)
LD50: Lethal dose, 50 percent ' vPvB: very Persistent and very Bioaccumulative ACGIH: American Conference of Governmental Industrial Hyg OSHA: Occupational Safety and Health Administration (USA) NTP: National Toxicology Program (USA) IARC: International Agency for Research on Cancer EPA: Environmental Protection Agency (USA)	ienists (USA)
EPA: Environmental Protection Agency (USA)	