

## 1 Identification

Product identifier Product name: N-Boc-S-(4-methoxybenzyl)-L-cysteine Stock number: H63808 CAS Number: 18942-46-6 EC number: 242-695-5 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) The substance is not classified according to the Globally Harmonized System (GHS). Hazards not otherwise classified No information known. I abel elements GHS label elements Not applicable Hazard pictograms Not applicable Signal word Not applicable Hazard statements Not applicable WHMIS classification Not controlled Classification system HMIS ratings (scale 0-4) (Hazardous Materials Identification System) Health (acute effects) = 1 Flammability = 1 Flammability = 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: 18942-46-6 N-Boc-S-(4-methoxybenzyl)-L-cysteine Identification number(s): EC number: 242-695-5 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. 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 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 Sulfur oxides (SOx) Nitrogen oxides (NOx) 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 product to reach sewage system or any water course. (Contd. on page 2)

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Methods and material for containment and cleaning up: Pick up mechanically. 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.	(Contd. of page 1)
7 Handling and storage	
Handling Precautions for safe handling Keep container tightly sealed. 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: Refrigerate Information about storage in one common storage facility: Protect from heat. Store away from oxidizing agents. Further information about storage conditions: Keep container tightly sealed. Refrigerate 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 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. 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 de purifying respirators are appropriate. Only use equipment tested and approved under appropriate government standards. 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.	termine if air-
9 Physical and chemical properties	
Information on basic physical and chemical properties General Information	

Informat	ion on	basic	physic
General	Inform	ation	

General Information	ennear properties
Appearance:	
Form:	Solid
Odor:	Not determined
Odor threshold:	Not determined.
pH-value:	Not applicable.
Change in condition	
Melting point/Melting range:	Not determined
Poiling point/Neiting range.	Not determined
Boiling point/Boiling range: Sublimation temperature / start:	
Sublimation temperature / start:	Not determined
Flammability (solid, gaseous)	Not determined.
Ignition temperature:	Not determined
Decomposition temperature:	Not determined
Auto igniting:	Not determined.
Danger of explosion:	Not determined.
Explosion limits:	
Lower:	Not determined
Upper:	Not determined
Vapor pressure:	Not applicable.
Density:	Not determined
Relative density	Not determined.
Vapor density	Not applicable.
Evaporation rate	Not applicable.
Solubility in / Miscibility with	Not applicable.
Water:	Not determined
Partition coefficient (n-octanol/water)	, Not determined.
Viscosity:	Netenstische
dynamic:	Not applicable.
kinematic:	Not applicable.
Other information	No further relevant information available.
10 0 1 W 1	

## 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.

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Product name: N-Boc-S-(4-methoxybenzyl)-L-cysteine		
Incompatible materials:		(Contd. of page 2)
Oxidizing agents Heat		
Hazardous decomposition products: Çarbon monoxide and carbon dioxide		
Sulfur oxides (SOx)		
Nitrogen oxides		
11 Toxicological information Information on toxicological effects		
Acute toxicity: No effects known. LD/LC50 values that are relevant for classification: No data		
Skin irritation or corrosion: May cause irritation		
Eye irritation or corrosion: May cause irritation Sensitization: No sensitizing effects known.		
Germ cell mutagenicity: No effects known. Carcinogenicity: No classification data on carcinogenic properties of this mate	erial is available from the EPA, IARC, NTP, OSHA or ACGIH.	
Reproductive toxicity: No effects known. Specific target organ system toxicity - repeated exposure: No effects know	ın.	
Specific target organ system toxicity - single exposure: No effects known. 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.		
<b>Bioaccumulative potential</b> No further relevant information available. <b>Mobility in soil</b> No further relevant information available.		
Additional ecological information: General notes:		
Do not allow undiluted product or large quantities to reach ground water, water Avoid transfer into the environment.	course or sewage system.	
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 Uncleaned packagings:	r disposal.	
<b>Recommendation:</b> Disposal must be made according to official regulations.		
14 Transport information UN-Number		
DOT, ADN, IMDG, IATA	Not applicable	
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 Coc Transport/Additional information:	ie Not applicable.	
DOT		
Marine Pollutant (DOT): UN "Model Regulation":	No -	
	-	
15 Regulatory information		
Safety, health and environmental regulations/legislation specific for the s GHS label elements Not applicable	ubstance or mixture	
Hazard pictograms Not applicable Signal word Not applicable		
Hazard statements Not applicable National regulations		
All components of this product are listed in the U.S. Environmental Protection A All components of this product are listed on the Canadian Non-Domestic Subsi	Agency Toxic Substances Control Act Chemical substance Inventory. tances List (NDSL).	
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 indi	viduals.	
Other regulations, limitations and prohibitive regulations Substance of Very High Concern (SVHC) according to the REACH Regula The conditions of restrictions according to Article 67 and Approx VVII of th	tions (EC) No. 1907/2006. Substance is not listed.	placing on the
The conditions of restrictions according to Article 67 and Annex XVII of the market and use must be observed.	ie Regulation (EC) NO 1907/2000 (REACH) for the manufacturing	, placing on the
Substance is not listed.		(Contd. on page 4)

## Product name: N-Boc-S-(4-methoxybenzyl)-L-cysteine

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.	Contd. of page 3)
<b>16 Other information</b> Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitab information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the pro- conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.	ility of this oduct not in
Department issuing SDS: Global Marketing Department Date of preparation / last revision 11/24/2015 / - 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) DOT: US Department of Transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road) DOT: US Department of Transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road) DOT: US Department of Transportation EINECS: European Inventory of Existing Commercial Chemical Substances CAS: Chemical Abstracts Service (division of the American Chemical Society) HMIS: Hazardous Materials Information System (Canada) LCSO: Lethal concentration, 50 percent UDSO: Lethal dose, 50 percent VPB: very Persistent and very Bioaccumulative ACGIH: American Conference of Governmental Industrial Hygienists (USA) OSHA: Occupational Safety and Health Administration (USA) NTP: National Society and Health Administration (USA) NTP: National Safety and Health Administration (USA) NTP: National Jagency for Research on Cancer EPA: Environmental Protection Agency (USA)	1154