



Page 1/5 Printing date 10/20/2017 Revision date 10/18/2017 Version 1

Revisi	Version 1
1 Identification Product identifier Product name: 2,2'-Azino-bis(3-ethylbenzothiazoline-6-sulfonic acid) diammonium salt	
Stock number: J65535 CAS Number: 30931-67-0 EC number:	
250-396-6 <b>Relevant identified uses of the substance or mixture and uses advised against.</b> 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 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. <b>Hazards not otherwise classified</b> 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.         P261       Avoid breathing dust/fume/gas/mist/vapors/spray         P260       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.         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	
Classification system HMIS ratings (scale 0-4) (Hazardous Materials Identification System)	
HEALTH       I       Health (acute effects) = 1         FIRE       I       Flammability = 1         Reactivity[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: 30931-67-0 2,2'-Azino-bis(3-ethylbenzothiazoline-6-sulfonic acid) diammonium salt Concentration: ≤100% Identification number(s): EC number: 250-396-6	
4 First-aid measures	
Description of first aid measures After inhalation Supply fresh air. If required, provide artificial respiration. Keep patient warm.	(Contd. on page 2)
	USA -

(Contd. of page 1)

## Product name: 2,2'-Azino-bis(3-ethylbenzothiazoline-6-sulfonic acid) diammonium salt

### Seek immediate medical advice.

After skin contact Immediately wash with water and soap and rinse thoroughly. After swallowing Seek medical treatment. After swallowing Seek medical treatment. Information for doctor 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 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 Ensure adequate ventilation Environmental precautions: Do not allow product to reach sewage system or any water course. 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. Protective Action Criteria for Chemicals PAC-1: Substance is not listed PAC-1: Substance is not listed. PAC-2: Substance is not listed.

PAC-3: Substance is not listed

### 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 air. Store in the dark. Store away from oxidizing agents. Further information about storage conditions: Store under dry inert gas. Keep container tightly sealed. Store in cool, dry conditions in well sealed containers. Protect from exposure to light. 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

Tersonal 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 appringment

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. Protection of hands: Impervious gloves

Protection of manuas. 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. **Material of gloves** Nitrile rubber, NBR **Penetration time of glove material (in minutes)** 480

# Safety Data Sheet acc. to OSHA HCS

(Contd. of page 2)

### Product name: 2,2'-Azino-bis(3-ethylbenzothiazoline-6-sulfonic acid) diammonium salt

Glove thickness: 0.11 mm Eye protection: Safety glasses with side shields / NIOSH (US) or EN 166(EU) Body protection: Protective work clothing.

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9 Physical and chemical properties			
Information on basic physical and ch General Information Appearance: Form: Odor: Odor threshold:	emical properties Powder Not determined 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:	Not determined Not determined 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 at 20 °C (68 °F): Partition coefficient (n-octanol/water) Viscosity: dynamic: kinematic:	Not applicable. Not applicable.		
Other information	No further relevant information available.		
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: Air Oxidizing agents Light Hazardous decomposition products: Carbon 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 o Skin irritation or corrosion: Causes sl Eye irritation or corrosion: Causes se Sensitization: No sensitizing effects kn Germ cell mutagenicity: The Registry Carcinogenicity: No classification data	kin irritation. rious eve irritation.		

Carcinogenicity: No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH. Reproductive toxicity: No effects known. Specific target organ system toxicity - repeated exposure: No effects known. Specific target organ system toxicity - single 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 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. **PBT:** Not applicable. **vPvB:** Not applicable. **Other adverse effects** No further relevant information available.

- USA (Contd. on page 4)

### Product name: 2,2'-Azino-bis(3-ethylbenzothiazoline-6-sulfonic acid) diammonium salt

		(Contd. of page 3)	
13 Disposal considerations		(Conta: of page of	
Waste treatment methods			
Recommendation Consult state, local or national regulations to ensure prop Uncleaned packagings:	per disposal.		
<b>Recommendation:</b> Disposal must be made according to official regulations.			
14 Transport information			
UN-Number			
DOT, ADN, IMDG, IATA UN proper shipping name	Not applicable		
DOT, ADR, ADN, IMDG, IATA	Not applicable		
Transport hazard class(es)			
DOT, ADR, ADN, IMDG, IATA Class	Not applicable		
Packing group DOT, ADR, 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 C	ode Not applicable.		
Transport/Additional information:			
DOT Marine Pollutant (DOT):	No		
UN "Model Regulation":	Not applicable		
15 Regulatory information			
<b>o y</b>	substance or mixture		
Safety, health and environmental regulations/legislation specific for the GHS label elements The product is classified and labeled in accordance with	th 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/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.			
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing. P405 Store locked up.			
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.			
National regulations All components of this product are listed on the Canadian Domestic Substances List (DSL).			
This product is not listed in the U.S. Environmental Protection Agency Toxic to research and development only. This product must be used by or directly	Substances Control Act Chemical Substance Inventory. Use of this pro under the supervision of a technically qualified individual as defined by	duct is restricted TSCA. This	
All components of this product are listed on the Canadian Domestic Substances List (DSL). 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. 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.			
<b>Information about limitation of use:</b> For use only by technically qualified in	ndividuals.		
Other regulations, limitations and prohibitive regulations Substance of Very High Concern (SVHC) according to the REACH Regu The conditions of restrictions according to Article 67 and Annex XVII of	Ilations (EC) No. 1907/2006. Substance is not listed.		
market and use must be observed		placing on the	
Substance is not listed. Annex XIV of the REACH Regulations (requiring Authorisation for use) Chemical safety assessment: A Chemical Safety Assessment has not bee	Substance is not listed		
Chemical safety assessment: A Chemical Safety Assessment has not bee	n carried out.		
16 Other information			
Employers should use this information only as a supplement to other informa information to ensure proper use and protect the health and safety of employ	ation gathered by them, and should make independent judgement of suit	tability of this	
conformance with this Safety Data Sheet, or in combination with any other pl	roduct or process, is the responsibility of the user.	product not in	
Department issuing SDS: Global Marketing Department Date of preparation/Revision: Print date, revision date and version number	r are in the header of each nade		
Abbroviations and acronyms:			
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreen IMDG: International Maritime Code for Dangerous Goods DOT: US Department of Transportation			
IATA: International Air Transport Association EINECS: European Inventory of Existing Commercial Chemical Substances			
оно, онетной науктаких service (anvision or the American Chemical Society) HMIS: Hazardous Materials Identification System (USA) WHMIS: Workplace Hazardous Materials Information System (Canada)			
LC50: Lethal concentration, 50 percent LD50: Lethal dose, 50 percent			
PBT: Persistent, Bioaccumulative and Toxic SVHC: Substances of Very High Concern			
IMDG: International Maritime Code for Dangerous Goods DOT: US Department of Transportation IATA: International Air Transport Association EINECS: European Inventory of Existing Commercial Chemical Substances CAS: Chemical Abstracts Service (division of the American Chemical Society) HMIS: Hazardous Materials Information System (USA) WHMIS: Workplace Hazardous Materials Information System (Canada) LC00: Lethal concentration, 50 percent LD00: Lethal concentration, 50 percent PBT: Persistent, Bioaccumulative and Toxic SVHC: Substances of Very High Concern vPvB: very Persistent and very Bioaccumulative ACGIH: American Conference of Governmental Industrial Hygienists (USA) OSHA: Occupational Safety and Health Administration (USA)			
		(Contd. on page 5)	
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### Product name: 2,2'-Azino-bis(3-ethylbenzothiazoline-6-sulfonic acid) diammonium salt

NTP: National Toxicology Program (USA) IARC: International Agency for Research on Cancer EPA: Environmental Protection Agency (USA) Skin Irrit. 2: Skin corrosion/irritation – Category 2 Eye Irrit. 2: Serious eye damage/eye irritation – Category 2A STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

(Contd. of page 4)

USA