

Safety Data Sheet per OSHA HazCom 2012

| Revie | wed on 10/07/2014 |
|--|--------------------|
| 1 Identification | |
| Product identifier Product name: 17-(Allylamino)-17-demethoxygeldanamycin | |
| Stock number: J66960 | |
| CAS Number: 75747-14-7 | |
| 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 | |
| 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. | |
| Label 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 I Health (acute effects) = 1 FIRE I Flammability = 1 REACTIVITY I 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: | |
| 75747-14-7 17-(Allylamino)-17-demethoxygeldanamycin | |
| 4 First-aid measures | |
| Description of first aid measures After inhalation Supply frequencing a provide artificial respiration. Keep patient warm | |
| Supply fresh air. If required, provide artificial respiration. Keep patient warm. Seek immediate medical advice. After skin contact | |
| After skin contact Immediately wash with water and soap and rinse thoroughly. Seek immediate medical advice. | |
| After swallowing Seek medical advice. 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 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. | |
| 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. | (Contd. on page 2) |
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See Section 13 for disposal information.

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: Store in freezer (-20 °C). Information about storage in one common storage facility: Store in the dark. Protect from heat. Store away from oxidizing agents. Further information about storage conditions: Keep container tightly sealed. 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

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 determine if air-purifying respirators are appropriate. Only use equipment tested and approved under appropriate government standards. **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. **Eve protection:** Safety glasses **Body protection:** Protective work clothing.

9 Physical and chemical properties

| 9 Physical and chemical properties | |
|---|---|
| Information on basic physical and che General Information Appearance: Form: Odor: Odor: Odor threshold: | Solid Not determined Not determined. |
| pH-value: | Not applicable. |
| Change in condition Melting point/Melting range: Boiling point/Boiling range: Sublimation temperature / start: | 207-209 °C (405-408 °F) Not determined Not determined |
| Flash point: Flammability (solid, gaseous) Ignition temperature: Decomposition temperature: Auto igniting: | > 110 °C (> 230 °F) Not determined. Not determined Not determined Not determined. |
| Explosion limits: Lower: Upper: Vapor pressure: Density: Relative density Vapor density Evaporation rate Solubility in / Miscibility with Water: Partition coefficient (n-octanol/water): Viscosity: | Not determined. Not determined Not determined Not determined. Not determined. Not applicable. Not applicable. Insoluble Not determined. Not applicable. Not applicable. 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

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| Heat Light | | |
| Hazardous decomposition products: Carbon monoxide and carbon dioxide | | |
| Nitrogen oxides | | |
| 11 Toxicological information | | |
| Information on toxicological effects Acute toxicity: The Registry of Toxic Effects of Chemical Substances (RTECS) | contains coute tovicity data for this substance | |
| LD/LC50 values that are relevant for classification: No data | CONTAINS ACULE LOXICITY LALA TOT THIS SUBSICITIES. | |
| 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 materi | ial 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: No effects known. Aspiration hazard: No effects known | | |
| Subacute to chronic toxicity: The Registry of Toxic Effects of Chemical Substa Additional toxicological information: To the best of our knowledge the acute a | ances (RTECS) contains multiple dose toxicity data for this substance. | |
| | Alla Chronic toxicity of this substance is not rany 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: | | |
| Mobility in soil No further relevant information available. | | |
| General notes: 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 of | disposal. | |
| Uncleaned packagings: Recommendation: 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 nazaros: Special precautions for user | Not applicable. Not applicable. | |
| Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code | | |
| Transport/Additional information: | | |
| DOT Marine Pollutant (DOT): | No | |
| UN "Model Regulation": | - | |
| | | |
| 15 Regulatory information | | |
| Safety, health and environmental regulations/legislation specific for the sul GHS label elements Not applicable | bstance or mixture | |
| Hazard pictograms Not applicable Signal word Not applicable | | |
| Hazard statements Not applicable | | |
| National regulations This product is not listed in the U.S. Environmental Protection Agency Toxic Sub | ostances Control Act Chemical Substance Inventory. Use of this product is restricted | |
| product must not be used for commercial purposes or in formulations for comme | ostances Control Act Chemical Substance Inventory. Use of this product is restricted er the supervision of a technically qualified individual as defined by TSCA. This ricial purposes. | |
| This product is not listed on the Canadian Domestic Substances List (DSL) or the Canadian Non-Domestic Substances 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 individ | duals. | |
| Other regulations, limitations and prohibitive regulations Although this chemical may sometimes be used as a food or drug or cosmetic, o | pur products are not approved or suitable for such use or for human consumption. | |
| Substance of Very High Concern (SVHC) according to the REACH Regulation's (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 | | |
| market and use must be observed. Substance is not listed. | | |
| Annex XIV of the REACH Regulations (requiring Authorisation for use) Sub- | stance is not listed. | |
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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 Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user. conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the use 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 Transportation Of Transportation Of Transportation (USA) WHMIS: Hazardous Materials Identification System (USA) WHMIS: Workplace Hazardous Materials Information System (Canada) LDS0: Lethal concentration, 50 percent VPUB: very Persistent and very Bioaccumulative ACGIH: American Conference of Governmental Industrial Hygienists (USA) OSHA: Occupational Safety and Health Administration (USA) MTP: National Toxicology Program (USA) MARC: International Agency for Research on Cancer EPA: Environmental Protection Agency (USA)

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