## Safety Data Sheet



Revisio	on date 05/31/2016
1 Identification	
Product identifier	
Product name: <u>Tobramycin</u> Stock number: J66040	
CAS Number: 32986-56-4	
EC number: 251-322-5	
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	1
Manufacturer/Supplier: Alfa Aesar Theme Fisher Scientific Chemicalo, Inc.	
Thermo Fisher Scientific Chemicals, Inc. 30 Bond Street Word Hill Min 04825 8000	
Ward Hill, MA 01835-8099 Tel: 800-343-0660 Fax: 800-322-4757	1
Fax: 600-322-4737 Email: tech@alfa.com www.alfa.com	
www.ana.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 as hazardous according to 29 CFR 1910 (OSHA GHS).	
Hazards not otherwise classified No information known.	
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)	
<b>HEALTH</b> $\blacksquare$ Health (acute effects) = 1	
FIRE 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: 32986-56-4 O-[3-Amino-3-deoxy-α-D-glucopyranosyl-(1→6)]-O-[2,6- djamino_2,3,6-trideoxy-α-D-ribohexopyranosyl-(1→4)]-2-	
deoxy-D-streptamine	
Identification number(s): EC number: 251-322-5	
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. <b>After eye contact</b> Rinse opened eye for several minutes under running water. Then consult a doctor.	
After syallowing 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 improvidue suit	
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	
	(Contd. on page 2)

		Revision date 03/31/2010	
Product name: Tobramycin			
Environmental precautions: Do not all Methods and material for containmen Prevention of secondary hazards: No Reference to other sections See Section 7 for information on safe ha See Section 8 for information on person See Section 13 for disposal information.	ndling	(Contd. of page 1)	
7 Handling and storage Handling Precautions for safe handling Keep co Information about protection against Conditions for safe storage, including Storage Requirements to be met by storeroon Information about storage in one com Protect from heat. Store away from oxidizing agents. Further information about storage con Keep container tightly sealed. Refrigerate Specific end use(s) No further relevant	explosions and fires: No information known. any incompatibilities as and receptacles: Refrigerate mon storage facility: nditions:		
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 respirators 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 Check protective gloves prior to each use for their proper condition. The selection of suitable legioves 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.			
9 Physical and chemical properties			
	Appearance:		
Odor:	Powder Odorless		
Odor threshold: pH-value:	Not determined. 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:	Not determined Not determined Not applicable. Not determined Not determined. Not applicable. Not applicable. Soluble		
Partition coefficient (n-octanol/water). Viscosity: dynamic: kinematic: Other information	Not determined. Not applicable. Not applicable. No further relevant information available.		
10 Stability and reactivity Reactivity No information known. Chemical stability Stable under recom Thermal decomposition / conditions to Presibility of bazardous reactions Po	nended storage conditions. <b>o be avoided:</b> Demposition will not occur if used and stored according to specifications.		

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

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Product name: Tobramvcin

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<b>Conditions to avoid</b> No further relevant information available. Incompatible materials: Oxidizing agents Heat Hazardous decomposition products: Carbon monoxide and carbon dioxide	(Contd. of page 2)	
Nitrogen oxides		
<b>11 Toxicological information</b> Information on toxicological effects Acute toxicity: The Registry of Toxic Effects of Chemical Substances (RTECS LD/LC50 values that are relevant for classification:	contains acute toxicity data for this substance.	
Oral LD50 >7500 mg/kg (rat)		
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 Reproductive toxicity: The Registry of Toxic Effects of Chemical Substances Specific target organ system toxicity - repeated exposure: No effects known. Aspiration hazard: No effects known. Subacute to chronic toxicity: The Registry of Toxic Effects of Chemical Substances Additional toxicological information: To the best of our knowledge the acute Carcinogenic categories OSHA-Ca (Occupational Safety & Health Administration) Substance is not 1	tances (RTECS) contains multiple dose toxicity data for this substance. and chronic toxicity of this substance is not fully known.	
ConA-Ca (Occupational Salety & Health Authinistration) Substance is not	isicu.	
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. vPvB: Not applicable. Other adverse effects No further relevant information available.		
12 Dispasal considerations		
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. Recommended cleansing agent: Water, if necessary with cleansing agents.		
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 Coo Transport/Additional information: DOT	le Not applicable.	
DOT Marine Pollutant (DOT):	No	
UN "Model Regulation":	-	
15 Regulatory information Safety, health and environmental regulations/legislation specific for the substance or mixture GHS label elements Not applicable Hazard pictograms Not applicable Signal word Not applicable Hazard statements Not applicable Mational 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 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.		

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.

## Product name: Tobramycin

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(Contd. of page 3) 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 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 market and use must be observed. Substance is not listed.

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 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 06/01/2016 / - 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 EINECS: European Inventory of Existing Commercial Chemical Substances CAS: Chemical Abstracts Service (division of the American Chemical Substances CAS: Chemical Abstracts Service (division of the American Chemical Society) HMIS: Hazardous Materials Information System (Canada) LC50: Lethal concentration, 50 percent VPUB: very Persistent and very Bioaccumulative ACGIH: American Conference of Governmental Industrial Hygienists (USA) 0SHA: Occupational Safety and Heelth Administration (USA) NTP: National Toxicology Program (USA)