

## Safety Data Sheet per OSHA HazCom 2012

	wed on 07/25/2013
1 Identification	
Product identifier	
Product name: <u>Tozasertib</u>	
Stock number: J63232 CAS Number: 639089-54-6	
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	9-0789.
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	
Hazard pictograms Not applicable Signal word Not applicable Hazard statements Not applicable	
WHMIS classification Not <sup>*</sup> controlled Classification system	
HMIS ratings (scale 0-4) (Hazardous Materials Identification System)	
HEALTH I Health (acute effects) = 1 FIRE I Flammability = 1	
FIRE I Flammability = 1           FRE         Frammability = 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: 639089-54-6 Tozasertib	
4 First-aid measures	
4 First-aid measures Description of first aid measures	
Description of first aid measures After inhalation	
<b>Description of first aid measures</b> After inhalation Supply fresh air. If required, provide artificial respiration. Keep patient warm. Seek immediate medical advice.	
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.	
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.	
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	
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.	
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.	
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	
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 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	
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 eve 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	
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 Immediate medical advice. After eye contact Rinse opened eye for several minutes under running water. Then consult a doctor. After eye contact Rinse opened eye for several minutes under running water. Then consult a doctor. 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)	
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 eye contact Rinse opened eye for several minutes under running water. Then consult a doctor. After eye contact Rinse opened eye for several minutes under running water. Then consult a doctor. After eye contact Rinse opened eye for several minutes under running water. Then consult a doctor. After eye contact Rinse opened eye for several minutes under running water. Then consult a doctor. After eye contact Rinse opened eye for several minutes under running water. Then consult a doctor. After eye contact Rinse opened eye for several minutes under running water. Then consult a doctor. After eye contact Rinse opened eye for several minutes under running water. Then consult a doctor. After eye contact Rinse opened eye for several minutes under running water. Then consult a doctor. After eye contact Rinse opened eye for several minutes under running water. Then consult a doctor. After eye contact Rinse opened eye for several minutes under running water. Then consult a doctor. After eye contact Rinse opened eye for several minutes under running water. Then consult a doctor. 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. Seek immediate medical acutes 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	
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 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. S 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 (SOX) Nitrogen oxides (SOX) Advice for firefighters Protective equipment: Wear self-contained respirator.	
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.         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 (NOx)         Advice for firefighters         Protective equipment:         Wear self-contained respirator.         Wear self-contained respirator.	
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) Advice for firefighters Protective equipment: Wear self-contained respirator. Wear fully protective impervious suit.         6 Accidental release 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 symploms and effects, both acute and delayed No further relevant information available.         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.         Indication of any immediate medical attention and special treatment needed No further relevant information available.         Indication of any immediate medical attention and special treatment needed No further relevant information available.         Indication of any immediate medical attention and special treatment needed No further relevant information available.         Indication of any immediate medical attention and special treatment needed No further relevant information available.         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 monoxides (SOX)         Nitrogen oxides (NOx)	
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 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.         Indication of any immediate medical attention and special treatment needed No further relevant information available.         Indication of any immediate medical attention and special treatment needed No further relevant information available.         Suitable extinguishing 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         Suffice for firefighters         Protective equipment:         Wear self-contained respirator.         Wear self-contalined respirator.	
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 Suifue 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. Wear self-contained respirator. Wear fully protective impervious suit.         6 Accidental release measures Personal 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.	
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 Suifur oxides (SOX)         Nitrogen oxides (NOX) Advice for firefighters Protective equipment: Wear fully protective impervious suit.         6 Accidental release measures 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 use Protective indervious.	.(Contd. on page 2)

Product name: Tozasertib

See Section 8 for information on person See Section 13 for disposal information.	al protection equipment.	(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: Store in freezer (-20 °C).			
Information about storage in one con Protect from heat	nmon storage facility:		
Store away from oxidizing agents. Further information about storage co	nditions: Keep container tightly sealed.		
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 for h The usual precautionary measures for h Keep away from foodstuffs, beverages a	sures andling chemicals should be followed.		
Remove all soiled and contaminated clo	thing immediately.		
Wash hands before breaks and at the e Maintain an ergonomically appropriate v	vorking environment.		
Protection of hands: Impervious gloves	spirator when high concentrations are present.		
Check protective gloves prior to each us 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 Eye protection: Safety glasses	minutes) Not determined		
Body protection: Protective work cloth	ing.		
9 Physical and chemical properties			
Information on basic physical and ch General Information Appearance:	emical properties		
Form: Color:	Powder White to off-white		
Odor: Odor threshold:	Not determined Not determined		
pH-value:	Not applicable.		
Change in condition Melting point/Melting range:	245-260 °C (473-500 °F)		
Boiling point/Boiling range: Sublimation temperature / start:	Not determined Not determined		
Flammability (solid, gaseous) Ignition temperature:	Not determined. Not determined		
Decomposition temperature: Auto igniting:	Not determined Not determined.		
Danger of explosion: Explosion limits:	Not determined.		
Lower:	Not determined		
Upper: Vapor pressure:	Not determined Not applicable.		
Density: Relative density	Not determined Not determined.		
Vapor density Evaporation rate	Not applicable.		
Solubility in / Miscibility with			
Water: Partition coefficient (n-octanol/water)	Not determined : Not determined.		
Viscosity: dynamic: kinematic:	Not applicable. Not applicable.		
Other information	No applicable. 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: Oxidizing agents			
Heat Hazardous decomposition products:			
Carbon monoxide and carbon dioxide Sulfur oxides (SOx)			
		(Contd. on page 3)	

Product name: Tozasertib

(Contd. of page 2)

Nitrogen oxides	(Contd. of page 2)	
11 Toxicological information		
11 Toxicological information Information on toxicological effects Acute toxicity: No effects known. LD/L C50 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 material is available from the EPA, IARC, NTP, OSHA or ACGIH. Reproductive toxicity: No effects known. Specific target organ system toxicity - single exposure: No effects known. Specific target organ system toxicity - single exposure: 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 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.	course or sewage system.	
13 Disposal considerations		
Waste treatment methods Recommendation Consult state, local or national regulations to ensure proper Uncleaned packagings: Recommendation: Disposal must be made according to official regulations.	disposal.	
14 Transport information		
UN-Number	N=4 === li== li=	
DOT, ADN, IMDG, IATA UN proper shipping name	Not applicable	
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 Cod	e Not applicable.	
Transport/Additional information:		
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 Hazard Statements Not applicable National regulations 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. 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. Prop 65 - Chemicals known to cause cancer Substance is not listed. Prop 65 - Developmental toxicity, female Substance is not listed. Prop 65 - Developmental toxicity, female Substance is not listed. Prop 65 - Developmental toxicity, near Substance is not listed. Prop 65 - Developmental toxicity, near Substance is not listed. Prop 65 - Developmental toxicity, the Substance is not listed. Prop 65 - Developmental toxicity, 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. 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.		
	USA USA (Contd. on page 4)	

## Product name: Tozasertib

(Contd. of page 3)

Printing date 11/24/2015 Reviewed on 07/25/2013

Page 4/4

USA

## 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 CAS: Chemical Abstracts Service, (division of the American Chemical Society) HMIS: 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) NTP: National Toxicology Program (USA) IAPC: International Zafety and Health Administration (USA) NTP: National Toxicology Program (USA) IAPC: International Agency for Research on Cancer EPA: Environmental Protection Agency (USA)