

SAFETY DATA SHEETS

According to the UN GHS revision 8

Version: 1.0 Creation Date: July 15, 2019 Revision Date: July 15, 2019

SEC	TION 1: Identification			
1.1	GHS Product identifier			
Product name		Vericiguat		
1.2	Other means of identific	ation		
Othe	rnames			
1.3	Recommended use of t	he chemical and restrictions on use		
	Identified uses	Industrial and scientific research uses.		
	Uses advised against	no data available		
1.4	Supplier's details			
	Company	Shanghai Tachizaki Biomedical Research Center		
	Address	Building C, 888 Huanhu West Second Road, Lingang New Area, China (Shanghai) Pilot		
		Free Trade Zone		
	Tel/Email	+86-18014399201/sales@chemlab-tachizaki.com		
1.5	Emergency phone number			
	Emergency phone number	+86-180 14399 201		
SEC	TION 2: Hazard identifi	cation		
2.1				
	Acute toxicity - Category 4, Oral			
2.2	GHS label elements, including precautionary statements			
	Pictogram(s)			
	····· ································			
	Signal word	Warning		
	Hazard statement(s)	H302 Harmful if swallowed		
	Precautionary statement(s)			
	Prevention	P264 Wash thoroughly after handling.		
	_	P270 Do not eat, drink or smoke when using this product.		
	Response	P301+P317 IF SWALLOWED: Get medical help.		
	•	P330 Rinse mouth.		
	Storage	none		
	Disposal	P501 Dispose of contents/container to an appropriate treatment and disposal facility in		

accordance with applicable laws and regulations, and product characteristics at time of

disposal. Other hazards which do not result in classification

2.3

SECTION 3: Composition/information on ingredients

3.1 Substances

Chemical name	Common names and synonyms	CAS number		Concentration
methyl N-[4,6-diamino-2-[5-fluoro-1-[(2-	methyl N-[4,6-diamino-2-[5-fluoro-1-[(2-	1350653-		
fluorophenyl)methyl]pyrazolo[3,4-b]pyridin-3-	fluorophenyl)methyl]pyrazolo[3,4-b]pyridin-3-	20-1	- "	100%
yl]pyrimidin-5-yl]carbamate	yl]pyrimidin-5-yl]carbamate			

SECTION 4: First-aid measures

4.1 Description of necessary first-aid measures

If inhaled

Move the victim into fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration and consult a doctor immediately. Do not use mouth to mouth resuscitation if the victim ingested or inhaled the chemical.

Following skin contact

Take off contaminated clothing immediately. Wash off with soap and plenty of water. Consult a doctor.

Following eye contact

Rinse with pure water for at least 15 minutes. Consult a doctor.

Following ingestion

Rinse mouth with water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Call a doctor or Poison Control Center immediately.

4.2 Most important symptoms/effects, acute and delayed

no data available

4.3 Indication of immediate medical attention and special treatment needed, if necessary

no data available

SECTION 5: Fire-fighting measures

5.1 Suitable extinguishing media

Use dry chemical, carbon dioxide or alcohol-resistant foam.

5.2 Specific hazards arising from the chemical

no data available

5.3 Special protective actions for fire-fighters

Wear self-contained breathing apparatus for firefighting if necessary.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid dust formation. Avoid breathing mist, gas or vapours. Avoid contacting with skin and eye. Use personal protective equipment. Wear chemical impermeable gloves. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

6.2 Environmental precautions

Prevent further spillage or leakage if it is safe to do so. Do not let the chemical enter drains. Discharge into the environment must be avoided.

6.3 Methods and materials for containment and cleaning up

Collect and arrange disposal. Keep the chemical in suitable and closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment. Adhered or collected material should be promptly disposed of, in

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Handling in a well ventilated place. Wear suitable protective clothing. Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Use non-sparking tools. Prevent fire caused by electrostatic discharge steam.

7.2 Conditions for safe storage, including any incompatibilities

Store the container tightly closed in a dry, cool and well-ventilated place. Store apart from foodstuff containers or incompatible materials.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure limit values

no data available

Biological limit values

no data available

8.2 Appropriate engineering controls

Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Set up emergency exits and the risk-elimination area.

8.3 Individual protection measures, such as personal protective equipment (PPE)

Eye/face protection

Wear tightly fitting safety goggles with side-shields conforming to EN 166(EU) or NIOSH (US).

Skin protection

Wear fire/flame resistant and impervious clothing. Handle with gloves. Gloves must be inspected prior to use. Wash and dry hands. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Respiratory protection

If the exposure limits are exceeded, irritation or other symptoms are experienced, use a full-face respirator.

Thermal hazards

no data available

SECTION 9: Physical and chemical properties and safety characteristics

Physical state	no data available			
Colour	no data available			
Odour	no data available			
Melting point/freezing point	no data available			
Boiling point or initial boiling poin	t no data available			
and boiling range				
Flammability	no data available			
Lower and upper explosion	no data available			
limit/flammability limit				
Flash point	no data available			
Auto-ignition temperature	no data available			
Decomposition temperature	no data available			
рН	no data available			
Kinematic viscosity	no data available			
Solubility	no data available			

Partition coefficient n-	no data available		
octanol/water			
Vapour pressure	no data available		
Density and/or relative density	no data available		
Relative vapour density	no data available		
Particle characteristics	no data available		

SECTION 10: Stability and reactivity

10.1 Reactivity

no data available

10.2 Chemical stability

no data available

10.3 Possibility of hazardous reactions

no data available

10.4 Conditions to avoid

no data available

10.5 Incompatible materials

no data available

10.6 Hazardous decomposition products

no data available

SECTION 11: Toxicological information

Acute toxicity

- Oral: no data available
- Inhalation: no data available
- Dermal: no data available

Skin corrosion/irritation

no data available

Serious eye damage/irritation

no data available

Respiratory or skin sensitization

no data available

Germ cell mutagenicity

no data available

Carcinogenicity

no data available

Reproductive toxicity

no data available

STOT-single exposure

no data available

STOT-repeated exposure

no data available

Aspiration hazard

SECTION 12: Ecological information

12.1 Toxicity

- Toxicity to fish: no data available
- Toxicity to daphnia and other aquatic invertebrates: no data available
- Toxicity to algae: no data available
- · Toxicity to microorganisms: no data available

12.2 Persistence and degradability

no data available

12.3 Bioaccumulative potential

no data available

12.4 Mobility in soil

no data available

12.5 Other adverse effects

no data available

SECTION 13: Disposal considerations

13.1 Disposal methods

Product

The material can be disposed of by removal to a licensed chemical destruction plant or by controlled incineration with flue gas scrubbing. Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Do not discharge to sewer systems.

Contaminated packaging

Containers can be triply rinsed (or equivalent) and offered for recycling or reconditioning. Alternatively, the packaging can be punctured to make it unusable for other purposes and then be disposed of in a sanitary landfill. Controlled incineration with flue gas scrubbing is possible for combustible packaging materials.

SECTION 14: Transport information

14.1	UN Number		
	ADR/RID: no data available	IMDG: no data available	IATA: no data available
14.2	UN Proper Shipping Name		
	ADR/RID: no data available	IMDG: no data available	IATA: no data available
14.3	Transport hazard class(es)		
	ADR/RID: no data available	IMDG: no data available	IATA: no data available
14.4	Packing group, if applicable		
	ADR/RID: no data available	IMDG: no data available	IATA: no data available
14.5	Environmental hazards		
	ADR/RID: No	IMDG: No	IATA: No
14.6	Special precautions for user		
	no data available		
14.7	Transport in bulk according to IM	O instruments	
	no data available		

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations specific for the product in question

Chemical name	Common names and synonyms	CAS number	EC number
methyl N-[4,6-diamino-2-[5-fluoro-1-[(2- fluorophenyl)methyl]pyrazolo[3,4-b]pyridin-3- yl]pyrimidin-5-yl]carbamate	methyl N-[4,6-diamino-2-[5-fluoro-1-[(2- fluorophenyl)methyl]pyrazolo[3,4-b]pyridin-3- yl]pyrimidin-5-yl]carbamate	1350653- 20-1	-
European Inventory of Existing Commercial Chemical Substances (EINECS)			Not Listed.
EC Inventory			Not Listed.
United States Toxic Substances Control Act (TSCA) Inventory			Not Listed.
China Catalog of Hazardous chemicals 2015			Not Listed.
New Zealand Inventory of Chemicals (NZIoC)			Not Listed.
Philippines Inventory of Chemicals and Chemical Substances (PICCS)			Not Listed.
Vietnam National Chemical Inventory			Not Listed.
Chinese Chemical Inventory of Existing Chemical Substances (China IECSC)			Not Listed.
Korea Existing Chemicals List (KECL)			Not Listed.

SECTION 16: Other information

Information on revision

Creation Date	July 15, 2019
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Abbreviations and acronyms

- CAS: Chemical Abstracts Service
- ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
- RID: Regulation concerning the International Carriage of Dangerous Goods by Rail
- IMDG: International Maritime Dangerous Goods
- IATA: International Air Transportation Association
- TWA: Time Weighted Average
- STEL: Short term exposure limit
- LC50: Lethal Concentration 50%
- LD50: Lethal Dose 50%
- EC50: Effective Concentration 50%

References

- IPCS The International Chemical Safety Cards (ICSC), website: http://www.ilo.org/dyn/icsc/showcard.home
- HSDB Hazardous Substances Data Bank, website: https://toxnet.nlm.nih.gov/newtoxnet/hsdb.htm
- IARC International Agency for Research on Cancer, website: http://www.iarc.fr/
- eChemPortal The Global Portal to Information on Chemical Substances by OECD, website: http://www.echemportal.org/echemportal/index?pageID=0&request_locale=en
- CAMEO Chemicals, website: http://cameochemicals.noaa.gov/search/simple
- ChemlDplus, website: http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp
- ERG Emergency Response Guidebook by U.S. Department of Transportation, website: http://www.phmsa.dot.gov/hazmat/library/erg
- Germany GESTIS-database on hazard substance, website: http://www.dguv.de/ifa/gestis/gestis-stoffdatenbank/index-2.jsp
- ECHA European Chemicals Agency, website: https://echa.europa.eu/

Disclaimer: The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. We as supplier shall not be held liable for any damage resulting from handling or from contact with the above product.