## **Material Safety Data Sheet**

Section 1 : Chemical Product Company Identification	
Product Name	5,10-Diformyltetrahydrofolic acid
CAS No.	98814-60-9
Identified uses	Pharmaceutical Reference Standard
Details of the Supplier Company	SynZeal Research Pvt Ltd Plot No. F, Ganesh Industrial Estate 423/24/8, MahagujaratInd Estate Sarkhej-Bavla Road, Ahmedabad-382 213. Gujarat, India.
Telephone	+91-7969225400

Section 2 : Chemical Information	
Chemical Name (4-(N-((2-Amino-5-formyl-4-oxo-1,4,5,6,7,8-hexahydropteridin-6 methyl)formamido)benzoyl)-L-glutamic acid	
CAS No.	98814-60-9
Synonyms	Folinic Acid Impurity B
Molecular Weight	501.5
Molecular Formula	C21H23N7O8

Section 3: Hazards Identification		
Emergency Overview:		
Appearance	Light Yellow Hygroscopic Solid	
Target Organs	NA	
Potential Health Effects:		
Eye	NIL	
Skin	NIL	
Ingestion	NIL	
Inhalation	NIL	
Chronic	NIL	

Hazard Statement:	
H302:Harmful if swallowed.	

H312:Harmful in contact with skin.		
H315:Causes skin irritation.		
H319:Causes serious eye irritation.		
H332:Harmful if inhaled.		
H335:May cause respiratory irritation.		
Precautionary Statement:		
P261:Avoid breathing dust/fume/gas/mist/vapours/spray.		
P262:Do not get in eyes, on skin, or on clothing.		
P271:Use only outdoors or in a well-ventilated area.		
P280:Wear protective gloves/protective clothing/eye protection/face p	protection.	
P302 + P352:IF ON SKIN: Wash with plenty of water		
P304 + P340:IF INHALED: Remove person to fresh air and keep comfor	table for breathing.	
P305 + P351 +P338:IF IN EYES: Rinse cautiously with water for severa rinsing.	I minutes. Remove contact lenses, if present and easy to do. Continue	
P308 + P313:IF exposed or concerned: Get medical advice/attention.		
Section 4: First Aid Measures		
Eye	Wash with plenty of water	
Skin	Wash with plenty of water	
Ingestion	Medical assistance for gastric lavage.	
Inhalation	Remove to fresh air, artificial respiration or oxygen if necessary.	
Notes to Physician	5,10-Diformyltetrahydrofolic acid can be washed with plenty of water in case of any exposure	
Section 5: Firefighting Measures		
Extinguishing Media	Carbon dioxide, dry chemical powder, foam, water.	
Unusual Fire and Explosion Hazards	None indicated	
Section 6 : Accidental Release Measures		
Personal Precautions	Wear self-contained breathing apparatus, avoid dust formation.	
Spills/Leaks	Wash with plenty of water, provide adequate ventilation.	
Section 7: Handlings and Storage		
Handling	Wear surgical gloves	

Section 9 : Exposure Controls, Personal Protection  Respiratory Protection  Exposure Limits  NA  Eye Protection  Wear safety goggles  Other Protective Equipment  Protective Equipment  Protective Equipment  Section 2 : Physical and Chemical Properties  Appearance  Light Yellow Hygroscopic Solid  Odor  Odor less  Melting Point  NA  Passic  Vapor Pressure  NA  NA  Vapor Density  NA  Supportation Rate  NA  NA  Decomposition Temp  NA  Auto ignition Temp  NA  NA  NPA Rating  Explosion Limits  Lower  NA  Solubility  Section 10 : Stability and Reactivity  Chemical Stability  Section 10 : Stability and Reactivity  Chemical Stability  Self-contained breathing apparatus  NA  Self-contained breathing apparatus  Self-contained breathing apparatus  NA  Light Yellow Hygroscopic Solid  Odor Incomposition Solid  NA  NA  NA  NA  NA  NA  NA  NA  NA  N	Storage		
Respiratory Protection Self-contained breathing apparatus  Exposure Limits NA  Eye Protection Wear safety goggles  Other Protective Equipment Protective Equ			
Exposure Limits NA Eye Protection Wear safety goggles Other Protective Equipment Protective Eduthing Skin Full sleeves apron Clothing Cotton  Section 9 : Physical and Chemical Properties  Section 9 : Physical and Chemical Properties  Appearance Light Yellow Hygroscopic Solid Odor Odor less  Melting Point NA pH Basic Vapor Pressure NA Vapor Density NA Evaporation Rate NA Viscosity NA Boiling Point NA Boiling Point NA Boiling Point NA NA Viscosity NA Soliding Point NA NA Decomposition Temp NA Auto ignition Temp, NA Auto ignition Temp, NA Cupper NA Seplosion Limits  Explosion Limits  Explosion Limits  Explosion Limits  Section 10 : Stability and Reactivity	Section 8: Exposure Controls, Personal Protection		
Ever Protection Wear safety goggles Other Protective Equipment Protective Cothing Skin Full sleeves apron Clothing Cotton  Section 9 : Physical and Chemical Properties  Section 9 : Physical and Chemical Properties  Appearance Light Yellow Hygroscopic Solid Odor Odor less Melting Point NA PH Basic Vapor Pressure NA Vapor Pressure NA Vapor Density NA Evaporation Rate NA Wiscosity NA Boiling Point NA Boiling Point NA Boiling Point NA Cuto ignition Temp NA Auto ignition Temp NA Auto ignition Temp NA Explosion Limit  Explosion Limit  Explosion Limit  Lower NA Selubility NA Selubility Ochorform, Methanol Specific Gravity/Density NA Section 10 : Stability and Reactivity	Respiratory Protection	Self-contained breathing apparatus	
Other Protective Equipment     Protective clothing       Skin     Full sleeves apron       Clothing     Cotton       Section 9 : Physical and Chemical Properties       Section 9 : Physical and Chemical Properties       Appearance     Light Yellow Hygroscopic Solid       Odor     Odor less       Melting Point     NA       Vapor Pressure     NA       Vapor Density     NA       Evaporation Rate     NA       Viscosity     NA       Boiling Point     NA       Auto ignition Temp     NA       Flash Point     NA       NFPA Rating     NA       Explosion Limits       Lower     NA       Upper     NA       Solubility     Chloroform, Methanol       Specific Gravity/Density     NA	Exposure Limits	NA	
Skin Full sleeves apron Clothing Cotton  Section 9 : Physical and Chemical Properties  Appearance Light Yellow Hygroscopic Solid Odor Odor less Melting Point NA PH Basic Vapor Pressure NA Vapor Density NA  Evaporation Rate NA Viscosity NA Boiling Point NA Boiling Point NA Locomposition Temp NA Auto ignition Temp NA Auto ignition Temp. NA  Flash Point NA  Explosion Limits  Lower NA Upper NA Solubility Chloroform, Methanol Specific Gravity/Density NA  Section 10 : Stability and Reactivity	Eye Protection	Wear safety goggles	
Section 9 : Physical and Chemical Properties  Appearance Light Yellow Hygroscopic Solid  Odor Odor less  Melting Point NA  pH Basic  Vapor Pressure NA  Vapor Pressure NA  Viscosity NA  Boiling Point NA  Decomposition Temp NA  Auto ignition Temp. NA  Flash Point NA  Frash Point NA  Sexplosion Limits  Lower NA  Solubility Chiloroform, Methanol  Specific Gravity/Density NA  Section 10 : Stability and Reactivity	Other Protective Equipment	Protective clothing	
Section 9 : Physical and Chemical Properties  Appearance Light Yellow Hygroscopic Solid  Odor Odor less  Melting Point NA  pH Basic  Vapor Pressure NA  Vapor Pressure NA  Viscosity NA  Evaporation Rate NA  Viscosity NA  Boiling Point NA  Auto ignition Temp NA  Auto ignition Temp. NA  Flash Point NA  Franking NA  Explosion Limits  Lower NA  Solubility Chloroform, Methanol  Specific Gravity/Density NA  Section 10 : Stability and Reactivity	Skin	Full sleeves apron	
Appearance Light Yellow Hygroscopic Solid Odor Odor less Melting Point NA pH Basic Vapor Pressure NA Vapor Density NA Evaporation Rate NA Viscosity NA Boiling Point NA Auto ignition Temp. NA Flash Point NA Flash Point NA Setplosion Limits Lower NA Solubility Chloroform, Methanol Specific Gravity/Density NA Section 10 : Stability and Reactivity	Clothing	Cotton	
Appearance Light Yellow Hygroscopic Solid Odor Odor less Melting Point NA  pH Basic Vapor Pressure NA Vapor Density NA Evaporation Rate NA Viscosity NA Boiling Point NA Decomposition Temp NA Auto ignition Temp. NA NFPA Rating NA  Explosion Limits Lower NA Solubility Chloroform, Methanol Specific Gravity/Density NA Section 10 : Stability and Reactivity			
Odor     Odor less       Melting Point     NA       pH     Basic       Vapor Pressure     NA       Vapor Density     NA       Evaporation Rate     NA       Viscosity     NA       Boiling Point     NA       Decomposition Temp     NA       Auto ignition Temp.     NA       Flash Point     NA       NFPA Rating     NA       Explosion Limits       Lower     NA       Upper     NA       Solubility     Chloroform, Methanol       Specific Gravity/Density     NA	Section 9: Physical and Chemical Properties		
Melting Point  pH Basic  Vapor Pressure NA  Vapor Density NA  Evaporation Rate NA  Viscosity NA  Boiling Point NA  Decomposition Temp NA  Auto ignition Temp. NA  NA  Flash Point NA  NA  Explosion Limits  Lower NA  Solubility  Sherific Gravity/Density NA  Section 10 : Stability and Reactivity	Appearance	Light Yellow Hygroscopic Solid	
PH Basic Vapor Pressure NA Vapor Density NA Evaporation Rate NA Viscosity NA Boiling Point NA Decomposition Temp NA Auto ignition Temp. NA Flash Point NA FPA Rating NA Explosion Limits Lower NA Upper NA Solubility Chloroform, Methanol Specific Gravity/Density NA Section 10 : Stability and Reactivity	Odor	Odor less	
Vapor Pressure NA Vapor Density NA Evaporation Rate NA Viscosity NA Boiling Point NA Decomposition Temp NA Auto ignition Temp. NA NFPA Rating NA Explosion Limits Lower NA Solubility Specific Gravity/Density NA Section 10 : Stability and Reactivity	Melting Point	NA	
Vapor Density  Evaporation Rate  NA  Viscosity  NA  Boiling Point  NA  Auto ignition Temp  NA  Auto ignition Temp.  NA  NFPA Rating  NA  Explosion Limits  Lower  NA  Solubility  Solubility  Specific Gravity/Density  NA  NA  NA  Section 10 : Stability and Reactivity	рН	Basic	
Evaporation Rate NA  Viscosity NA  Boiling Point NA  Decomposition Temp NA  Auto ignition Temp. NA  Flash Point NA  NFPA Rating NA  Explosion Limits  Lower NA  Solubility Chloroform, Methanol Specific Gravity/Density NA  Section 10 : Stability and Reactivity	Vapor Pressure	NA	
Viscosity NA  Boiling Point NA  Decomposition Temp NA  Auto ignition Temp. NA  Flash Point NA  NFPA Rating NA  Explosion Limits  Lower NA  Upper NA  Solubility Chloroform, Methanol  Specific Gravity/Density NA  Section 10 : Stability and Reactivity	Vapor Density	NA	
Boiling Point NA  Decomposition Temp NA  Auto ignition Temp. NA  Flash Point NA  NFPA Rating NA  Explosion Limits  Lower NA  Upper NA  Solubility Chloroform, Methanol  Specific Gravity/Density NA  Section 10 : Stability and Reactivity	Evaporation Rate	NA	
Decomposition Temp NA Auto ignition Temp. NA Flash Point NA NFPA Rating NA  Explosion Limits Lower NA Upper NA Solubility Chloroform, Methanol Specific Gravity/Density NA  Section 10 : Stability and Reactivity	Viscosity	NA	
Auto ignition Temp.  Flash Point  NA  NFPA Rating  NA  Explosion Limits  Lower  NA  Upper  NA  Solubility  Chloroform, Methanol  Specific Gravity/Density  NA  Section 10 : Stability and Reactivity	Boiling Point	NA	
Flash Point NA  NFPA Rating NA  Explosion Limits  Lower NA  Upper NA  Solubility Chloroform, Methanol  Specific Gravity/Density NA  Section 10 : Stability and Reactivity	Decomposition Temp	NA	
NFPA Rating  Explosion Limits  Lower  NA  Upper  NA  Solubility  Chloroform, Methanol  Specific Gravity/Density  NA  Section 10 : Stability and Reactivity	Auto ignition Temp.	NA	
Explosion Limits  Lower NA  Upper NA  Solubility Chloroform, Methanol  Specific Gravity/Density NA  Section 10 : Stability and Reactivity	Flash Point	NA	
Lower NA Upper NA Solubility Chloroform, Methanol Specific Gravity/Density NA  Section 10 : Stability and Reactivity	NFPA Rating	NA	
Upper NA Solubility Chloroform, Methanol Specific Gravity/Density NA Section 10 : Stability and Reactivity	Explosion Limits		
Solubility Chloroform, Methanol  Specific Gravity/Density NA  Section 10 : Stability and Reactivity	Lower	NA	
Specific Gravity/Density  NA  Section 10 : Stability and Reactivity	Upper	NA	
Section 10 : Stability and Reactivity	Solubility	Chloroform, Methanol	
	Specific Gravity/Density	NA	
Chemical Stability	Section 10 : Stability and Reactivity		
	Chemical Stability		

Direct contract to skin

Conditions to avoid

Incompatibilities with other Materials	Keep away	
Hazardous Decomposition Products	NIL	
Hazardous Polymerization	NIL	
Section 11 : Toxicological Information		
CAS	NA	
LD50/LC50	NA	
Carcinogenicity	NIL	
Epidemiology	NIL	
Teratogenicity	NIL	
Reproductive Effects	NIL	
Neurotoxicity	NIL	
Mutagencity	NIL	
Other Studies	NA	
Section 12 : Ecological Information  Data not available		
Section 13 : Disposal Consideration		
RCRA P-Series	Can be incinerated	
RCRA U-Series	NA	
Section 14: Transport Consideration		
UN-Number	UN-Number	
ADR/RID: IMDG: IATA:		
UN proper shipping name		
ADR/RID: Not dangerous goods IMDG: Not dangerous goods IATA: Not dangerous goods		
Transport hazard class(es)		
ADR/RID: IMDG: IATA:		
Packaging Group		
ADR/RID: IMDG: IATA:		
Environmental hazards		

ADR/RID: No	IMDG Marine pollutant: No	IATA: No
Special precauti	ons for users	
Further informa	tion	

Section 15: Regulatory Information	
TSCA	Attached the letter
Health and Safety Reporting List	No data available
Chemical Test Rules	Chemical analysis report is attached

Section 16: Additional Information

This product is not bioactive, non-radioactive. It is for R and D use only. Not for drug, household or other uses.

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. It does not represent any guarantee of the product.