福建沃尔法化学科技有限公司
Fujian Wolfa Chemical Technology Co., Ltd

DESIGN REPORT OF SAFETY DATA SHEET

Revision Date: Aug.14,2025

Name of the sample	Pentakis(dimethylamino)tantalum
Applicant	Fujian Wolfa Chemical Technology Co., Ltd.
Supplier	Fujian Wolfa Chemical Technology Co., Ltd.
Composition of the sample	Pentakis(dimethylamino)tantalum: ≥99%
Warranty of Design	GLOBALLY HARMONIZED SYSTEM OF CLASSIFICATION AND LABELLING OF CHEMICALS (GHS) Eleventh revised edition
Design Result of SDS please see next page.	

Notes:This SDS is valid before the implementation of the Twelfth revised edition GHS.

SAFETY DATA SHEET

SDS

Section 1 Product and Company Identification

> Product Identifier

Product Name	Pentakis(dimethylamino)tantalum
Synonyms	——
CAS No.	19824-59-0
EC No.	/
Molecular Formula	$C_{10}H_{30}N_5Ta$

> Relevant Identified Uses of the Substance or Mixture and Uses Advised Against

Relevant Identified Uses	Please consult manufacturer.
Uses Advised Against	Please consult manufacturer.

> Details of the Supplier of the Safety Data Sheet

Applicant Name	Fujian Wolfa Chemical Technology Co., Ltd.
Application Address	Room 2620, Building 18, Xingguang Plaza, No.970 Anji South Road, Fengze District, Quanzhou City, Fujian Province
Applicant Post Code	362000
Applicant Telephone	+86-17854166533
Applicant Fax	——
Applicant E-mail	——
Supplier Name	Fujian Wolfa Chemical Technology Co., Ltd.
Supplier Address	Room 2620, Building 18, Xingguang Plaza, No.970 Anji South Road, Fengze District, Quanzhou City, Fujian Province
Supplier Post Code	362000
Supplier Telephone	+86-17854166533
Supplier Fax	——
Supplier E-mail	——

> Emergency Phone Number

Emergency Phone Number	+86-17854166533

Section 2 Hazards Identification

Hazard class and label elements of the product according to GHS (the eleventh revised edition):

> GHS Hazard Class

Flammable solids (Category 1), H228

Substances and mixtures which in contact with water emit flammable gases (Category 1), H260

Skin corrosion/irritation (Category 1B), H314

Serious eye damage/eye irritation (Category 1), H318

> GHS Label Elements

Pictogram



Signal Word Danger

> Hazard Statements

H228	Flammable solid
H260	In contact with water releases flammable gases which may ignite spontaneously.
H314	Causes severe skin burns and eye damage.

> Precautionary Statements

Prevention

P210	Keep away from heat/sparks/open flames/hot surfaces. — No smoking.
P223	Keep away from any possible contact with water, because of violent reaction and possible flash fire.
P231+P232	Handle under inert gas. Protect from moisture.
P240	Ground/bond container and receiving equipment.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P264	Wash hands thoroughly after handling.
P280	Wear protective gloves/protective clothing/eye protection/face protection.

Response

P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353	IF ON SKIN (or hair): Remove/Take off Immediately all contaminated clothing. Rinse SKIN with water/shower.
P304+P340+P310	IF INHALED: Remove victim to fresh air and Keep at rest in a position comfortable for breathing.Immediately call a POISON CENTER or doctor/physician.
P305+P351+P338+P310	IF IN EYES:Rinse cautiously with water for several minutes.Remove contact lenses, if present and easy to do. Continue rinsing.Immediately call a POISON CENTER or doctor/physician.
P335+P334	Brush off loose particles from skin. Immerse in cool water/wrap in wet bandages.
P363	Wash contaminated clothing before reuse.
P370+P378	In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

Storage

P402+P404	Store in a dry place. Store in a closed container.
P405	Store locked up.

Disposal

P501	Dispose of contents/ container to an approved waste disposal plant.

> Physical and chemical hazards

H228	Flammable solid
H260	In contact with water releases flammable gases which may ignite spontaneously.

> Health hazards

H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.

> Environmental hazards

Referring to current information, no environmental hazard.

Section 3 Composition/Information on Ingredients

Component	CAS No.	EC No.	Concentration (weight percent, %)
Pentakis(dimethylamino)tantalum	19824-59-0	/	≥99

Section 4 First Aid Measures

> Description of First Aid Measures

General Advice	First aiders need to protect themselves. Show this material safety data sheet to the doctor in attendance.
If inhaled	After inhalation: fresh air. Call in physician.
In case of skin contact	In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Call a physician immediately.
In case of eye contact	After eye contact: rinse out with plenty of water. Immediately call in ophthalmologist. Remove contact lenses.
If swallowed	After swallowing: make victim drink water (two glasses at most), avoid vomiting (risk of perforation). Call a physician immediately. Do not attempt to neutralise.

> Most Important Symptoms and Effects, both Acute and Delayed

The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11.

> Indication of Any Immediate Medical Attention and Special Treatment Needed

No data available

Section 5 Fire Fighting Measures

> Extinguishing Media

Suitable extinguishing media	Carbon dioxide (CO_2), Dry powder.
Unsuitable extinguishing media	Water, Foam

> Specific Hazards Arising from the Substance or Mixture

Carbon oxides

Nitrogen oxides (NOx)

Tantalum Oxides

Combustible

May not get in touch with: Water

Development of hazardous combustion gases or vapours possible in the event of fire.

> Advice for Firefighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

Prevent fire extinguishing water from contaminating surface water or the ground water system.

Section 6 Accidental Release Measure

> Personal Precautions, Protective Equipment and Emergency Procedures

Advice for non-emergency personnel: Avoid inhalation of dusts. Avoid substance contact. Ensure adequate ventilation. Keep away from heat and sources of ignition. Evacuate the danger area, observe emergency procedures, consult an expert. For personal protection see section 8.

> Environmental Precautions

Do not let product enter drains. Risk of explosion.

> Methods and Materials for Containment and Cleaning Up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.

Section 7 Handling and Storage

> Precautions for Handling

Advice on safe handling	Keep workplace dry. Do not allow product to come into contact with water.
Advice on protection against fire and explosion	Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge.
Hygiene measures	Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance. For precautions see section 2.

> Conditions for safe storage, including any incompatibilities

Storage conditions

Tightly closed. Keep away from heat and sources of ignition.

Never allow product to get in contact with water during storage.

Air sensitive. Handle and store under inert gas.

Storage class

Storage class (TRGS 510): 4.3: Hazardous materials, which set free flammable gases upon contact with water

Section 8 Exposure Controls/Personal Protection

> Control Parameters

Ingredients with workplace control parameters Contains no substances with occupational exposure limit values

> Exposure Controls

Appropriate engineering controls

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

Personal protective equipment

Eye/face protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses

Skin protection

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Full contact

Material	Nitrile rubber
Minimum layer thickness	0.11 mm
Break through time	480 min
Material tested	KCL 741 Dermatril® L.

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Splash contact

Material	Nitrile rubber
Minimum layer thickness	0.11 mm
Break through time	480 min
Material tested	KCL 741 Dermatril® L.

Body Protection

Protective clothing

Respiratory protection

Required when dusts are generated. Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

Control of environmental exposure

Do not let product enter drains.

Section 9 Physical and Chemical Properties

Appearance: Solid

Odor: Amin-like, disagreeable

Odor Threshold: No data available

pH: No data available

Melting Point/Freezing Point (℃): 100 ℃

Boiling Point(℃): No data available

Flash Point (℃)(Closed Cup): Not applicable

Evaporation Rate: No data available

Flammability: The substance or mixture is a flammable solid with the category 1.

Upper/lower explosive limits[%(v/v)]: No data available

Vapor Pressure (KPa): 50Pa at 78 ℃

Relative Vapour Density(Air=1): Not applicable

Relative Density(Water=1): No data available

Water Solubility: at 20 ℃ (decomposition)

n-Octanol/Water Partition Coefficient: No data available

Auto-Ignition Temperature(℃): No data available

Decomposition Temperature (℃): No data available

Kinematic Viscosity (mm^2/s): No data available

Particle characteristics: No data available

Critical Temperature(℃): No data available

Section 10 Stability and Reactivity

Chemical Stability	Dimethylamine is formed upon contact with water. The product is chemically stable under standard ambient conditions (room temperature).
Possibility of Hazardous Reactions	No data available
Conditions to Avoid	Do not allow water to enter container. Air Moisture.
Incompatible Materials Hazardous	Strong oxidizing agents
Decomposition Products	Under normal storage and usage conditions, no hazardous decomposition products will be generated.

Section 11 Toxicological Information

> Information on toxicological effects

Acute toxicity

Oral: No data available

Inhalation: No data available

Dermal: No data available

Skin Corrosion/Irritation

Remarks: Causes skin burns.

Serious Eye Damage/Irritation

Remarks: Causes serious eye damage.

Skin Sensitization

No data available

Respiratory Sensitization

No data available

Germ Cell Mutagenicity

No data available

Carcinogenicity

No information available

Reproductive Toxicity

No information available

Reproductive Toxicity (Additional)

No information available

STOT-Single Exposure

No data available

STOT-Repeated Exposure

No data available

Aspiration Hazard

No data available

> Additional Information

This substance causes significant damage to mucous membranes, the upper respiratory tract, eyes, and skin. Symptoms may include coughing, shortness of breath, headache, and nausea.

Section 12 Ecological Information

> Toxicity

No data available

> Persistence and degradability

No data available

> Bioaccumulative potential

No data available

> Mobility in soil

No data available

> Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

> Endocrine disrupting properties

No data available

> Other adverse effects

No data available

Section 13 Disposal Considerations

> Waste treatment methods

Waste Products	Waste is classified as hazardous. Dispose of in accordance with the European Directives on waste and hazardous waste. Dispose of in accordance with local regulations.
Contaminated Packaging	Dispose of this container to hazardous or special waste collection point. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep product and empty container away from heat and sources of ignition.
Other Information	Do not flush to sewer. Waste codes should be assigned by the user based on the application for which the product was used. Can be landfilled or incinerated, when in compliance with local regulations. Do not let this chemical enter the environment. Do not empty into drains.

Section 14 Transport Information

Transporting Label



Marine Pollutant	No
UN Number	3132
Proper Shipping Name	WATER- REACTIVE SOLID， FLAMMABLE， N. O. S.
Hazard Class	4.3
Subsidiary Hazard Class	4.1
Packing Group	I
Packaging Method	Follow the packaging instructions recommended by the manufacturer.

Section 15 Regulatory Information

> Regulatory Information

Component	EINECS	TSCA	DSL	IECSC	NZIoC	PICCS	KECL	AIIC	ENCS
Pentakis(dimethylamino) tantalum	×	×	×	×	×	×	×	×	×

【EINECS】 European Inventory of Existing Commercial Chemical Substances

【TSCA】	Toxic Substances Control Act Inventory (United States)
【DSL】	Domestic Substances List (Canada)
【IECSC】	Inventory of Existing Chemical Substances in China
【NZIoC】	New Zealand Inventory of Chemicals
【PICCS】	Philippines Inventory of Chemicals and Chemical Substances
【KECL】	Korean Existing Chemicals List
【AIIC】	Australian Inventory of Industrial Chemicals
【ENCS】	Existing and New Chemical Substances (Japan)

Note

"√" Indicates that the substance included in the regulations

"×" That no data or included in the regulations

Section 16 Additional Information

Preparation Date	Dec.1, 2022
Revision Date	Aug.14, 2025
Revision Reason	SDS Update Section

Disclaimer

The information provided in this Safety Data Sheet is correct based on the latest knowledge, information and concepts available to us. The information provided is intended only as a guide for safe operation, use, processing, storage, transportation, disposal and discharge and is not intended as a guarantee or specification of quality. This information is only used for the specific substance specified and may not be suitable for mixing with any other substance or in all cases, unless otherwise specified in the context.