

SAFETY DATA SHEET

Creation Date 10-February-2015 Revision Date 28-February-2025 Revision Number 7

1. Identification

Product Name Tungstosilicic acid hydrate

Cat No.: 39651

CAS-No 12027-43-9 **Synonyms** None

Recommended Use Laboratory chemicals.

Uses advised against Food, drug, pesticide or biocidal product use.

Details of the supplier of the safety data sheet

Company

Importer/Distributor

Fisher Scientific 112 Colonnade Road, Ottawa, ON K2E 7L6,

Canada

Tel: 1-800-234-7437

Emergency Telephone Number

For information **US** call: 001-800-227-6701 / **Europe** call: +32 14 57 52 11 Emergency Number **US**:001-201-796-7100 / **Europe**: +32 14 57 52 99 **CHEMTREC** Tel. No. **US**:001-800-424-9300 / **Europe**:001-703-527-3887

2. Hazard(s) identification

Classification

WHMIS 2015 Classification Classified as hazardous under the Hazardous Products Regulations (SOR/2015-17)

Skin Corrosion/IrritationCategory 1 CSerious Eye Damage/Eye IrritationCategory 1Specific target organ toxicity (single exposure)Category 3

Target Organs - Respiratory system.

Label Elements

Signal Word

Danger

Hazard Statements

Causes severe skin burns and eye damage May cause respiratory irritation



Precautionary Statements

Prevention

Do not breathe dust/fumes/gas/mist/vapours/spray

Wash face, hands and any exposed skin thoroughly after handling

Use only outdoors or in a well-ventilated area

Wear protective gloves/protective clothing/eye protection/face protection

Response

Wash contaminated clothing before reuse

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower

IF INHALED: Remove person to fresh air and keep comfortable for breathing

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/doctor

Storage

Store locked up

Store in a well-ventilated place. Keep container tightly closed

Disposal

Dispose of contents/container to an approved waste disposal plant

Other Hazards

Harmful to aquatic life with long lasting effects

3. Composition/Information on Ingredients

Component	CAS-No	Weight %
Tungstate(4-),	12027-43-9	100
[.mu.12-(orthosilicato(4-)-O:O:O:O:O:O:O:O:O:O:O:O		
O)]tetracosamuoxododecaoxododeca-,		
tetrahydrogen, hydrate		
Tungstate(4-),	12027-38-2	0
[.mu.12-[orthosilicato(4-)-O:O:O:O:O:O:O:O:O:O:O:O		
O]]tetracosamuoxododecaoxododeca-,		
tetrahydrogen		

4. First-aid measures

General Advice Show this safety data sheet to the doctor in attendance. Immediate medical attention is

required.

Eye Contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get

medical attention.

Skin Contact Wash off immediately with plenty of water for at least 15 minutes. Get medical attention

immediately if symptoms occur.

Inhalation Remove to fresh air. Get medical attention immediately if symptoms occur.

Ingestion Clean mouth with water and drink afterwards plenty of water. Get medical attention if

symptoms occur.

Most important symptoms/effects

None reasonably foreseeable. Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and

danger of perforation Treat symptomatically

Notes to Physician

5. Fire-fighting measures

Suitable Extinguishing Media CO₂, dry chemical, dry sand, alcohol-resistant foam.

Unsuitable Extinguishing Media No information available

Flash Point Not applicable

Method - No information available

Autoignition Temperature

Explosion Limits

No information available

Upper No data available
Lower No data available
Sensitivity to Mechanical Impact No information available
Sensitivity to Static Discharge No information available

Specific Hazards Arising from the Chemical

The product causes burns of eyes, skin and mucous membranes.

Hazardous Combustion Products

Silicon dioxide. Tungsten oxides.

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

NFPA

Health	Flammability	Instability	Physical hazards
0	0	0	N/A

6. Accidental release measures

Personal Precautions Ensure adequate ventilation. Use personal protective equipment as required. Avoid dust

formation.

Environmental Precautions Should not be released into the environment.

Methods for Containment and Clean Sweep up and shovel into suitable containers for disposal. Avoid dust formation. **Up**

7. Handling and storage

Handling Wear personal protective equipment/face protection. Ensure adequate ventilation. Avoid

contact with skin, eyes or clothing. Avoid ingestion and inhalation. Avoid dust formation.

Storage. Corrosives area. Keep containers tightly closed in a dry, cool and well-ventilated place.

Incompatible Materials. Strong bases.

8. Exposure controls / personal protection

Exposure Guidelines

Component	Alberta	British Columbia	Ontario TWAEV	Quebec	ACGIH TLV	OSHA PEL	NIOSH
Tungstate(4-),	TWA: 5 mg/m ³	TWA: 3 mg/m ³	TWA: 3 mg/m ³	TWA: 5 mg/m ³	TWA: 3 mg/m ³	(Vacated) TWA:	$REL = 5 \text{ mg/m}^3$
[.mu.12-(orthosilicato(4-)	STEL: 10 mg/m ³	STEL: 10 mg/m ³		STEL: 10 mg/m ³	_	5 mg/m ³	(TWA)
-0:0:0:0:0:0:0:0:0:0:0						(Vacated) STEL:	STEL: 10 mg/m ³

0:0						10 mg/m ³	
)]tetracosamuoxodod							
ecaoxododeca-,							
tetrahydrogen, hydrate							
Tungstate(4-),	TWA: 5 mg/m ³	TWA: 3 mg/m ³	TWA: 3 mg/m ³	TWA: 5 mg/m ³	TWA: 3 mg/m ³	(Vacated) TWA:	$REL = 5 \text{ mg/m}^3$
[.mu.12-[orthosilicato(4-)	STEL: 10 mg/m ³	STEL: 10 mg/m ³		STEL: 10 mg/m ³		5 mg/m ³	(TWA)
-0:0:0:0:0:0:0:0:0:0:						(Vacated) STEL:	STEL: 10 mg/m ³
O:O]]tetracosamuoxo						10 mg/m ³	
dodecaoxododeca-,						_	
tetrahydrogen							

Legend

ACGIH - American Conference of Governmental Industrial Hygienists

OSHA - Occupational Safety and Health Administration

NIOSH: NIOSH - National Institute for Occupational Safety and Health

Engineering Measures None under normal use conditions.

Personal protective equipment

Eye Protection Goggles

Hand Protection Wear appropriate protective gloves and clothing to prevent skin exposure.

Glove material	Breakthrough time	Glove thickness	Glove comments
Natural rubber	See manufacturers	-	Splash protection only
Nitrile rubber	recommendations		
Neoprene			
PVC			

Inspect gloves before use. observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information) gloves are suitable for the task: Chemical compatability, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, gloves with care avoiding skin contamination.

Respiratory Protection

No protective equipment is needed under normal use conditions.

Recommended Filter type: Particle filter

Environmental exposure controls

Prevent product from entering drains.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash hands before breaks and after work.

9. Physical and chemical properties

Physical StateSolidAppearanceLight yellowOdorOdorless

Odor Threshold No information available

pH 1.98 Acidic **Melting Point/Range** 25 °C / 77 °F

Boiling Point/Range No information available Flash Point Not applicable

Flash Point Not applicable Evaporation Rate Not applicable

Flammability (solid,gas) No information available

Flammability or explosive limits

UpperNo data availableLowerNo data availableVapor PressureNo information available

Vapor Density Not applicable

Specific Gravity 4.5

Solubility
Partition coefficient; n-octanol/water
Autoignition Temperature
Decomposition Temperature
Viscosity

Soluble in water
No data available
No information available
No information available
No applicable

Molecular Formula H4-O4O-Si-W12
Molecular Weight 2878.2895

10. Stability and reactivity

Reactive Hazard None known, based on information available

Stability Stable under normal conditions.

Conditions to Avoid Incompatible products.

Incompatible Materials Strong bases

Hazardous Decomposition Products Silicon dioxide, Tungsten oxides

Hazardous Polymerization Hazardous polymerization does not occur.

Hazardous ReactionsNone under normal processing.

11. Toxicological information

Acute Toxicity

Product Information

Oral LD50Based on ATE data, the classification criteria are not met. ATE > 2000 mg/kg.Dermal LD50Based on ATE data, the classification criteria are not met. ATE > 2000 mg/kg.Mist LC50Based on ATE data, the classification criteria are not met. ATE > 5 mg/l.

Component Information

Toxicologically Synergistic No information available

Products

Delayed and immediate effects as well as chronic effects from short and long-term exposure

IrritationNo information availableSensitizationNo information available

Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

Component	CAS-No	IARC	NTP	ACGIH	OSHA	Mexico
Tungstate(4-),	12027-43-9	Not listed				
[.mu.12-(orthosilicato(4						
-)-0:0:0:0:0:0:0:0						
:0:0:0						
)]tetracosamuoxodo						
decaoxododeca-,						
tetrahydrogen, hydrate						
Tungstate(4-),	12027-38-2	Not listed				
[.mu.12-[orthosilicato(4						
-)-0:0:0:0:0:0:0:0						
:O:O:O]]tetracosamu.						
-oxododecaoxododeca						

-, tetrahydrogen

No information available **Mutagenic Effects**

Reproductive Effects No information available.

No information available. **Developmental Effects**

Teratogenicity No information available.

Respiratory system STOT - single exposure

STOT - repeated exposure None known

Aspiration hazard No information available

delayed

Symptoms / effects,both acute and Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes

severe swelling, severe damage to the delicate tissue and danger of perforation

No information available **Endocrine Disruptor Information**

Other Adverse Effects The toxicological properties have not been fully investigated.

12. Ecological information

Ecotoxicity

May cause long-term adverse effects in the environment. Do not allow material to contaminate ground water system. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. The product contains following substances which are hazardous for the environment.

Persistence and Degradability May persist based on information available.

Bioaccumulation/ Accumulation No information available.

Mobility Will likely be mobile in the environment due to its water solubility.

13. Disposal considerations

Waste Disposal Methods

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

14. Transport information

DOT

UN3260 **UN-No**

Proper Shipping Name Corrosive solid, acidic, inorganic, n.o.s.

Tungstate(4-), [.mu.12-(orthosilicato(4-)-O:O:O:O':O':O':O':O":O":O":O":O":O **Technical Name**

")]tetracosa-.mu.-oxododecaoxododeca-, tetrahydrogen, hydrate

Hazard Class Ш **Packing Group**

TDG

UN3260

UN-No Proper Shipping Name Corrosive solid, acidic, inorganic, n.o.s.

Hazard Class Packing Group Ш

IATA

UN3260 **UN-No**

Proper Shipping Name Corrosive solid, acidic, inorganic, n.o.s.

Hazard Class Packing Group

Ш

IMDG/IMO

UN3260 **UN-No**

Proper Shipping Name Corrosive solid, acidic, inorganic, n.o.s.

Hazard Class 8
Packing Group III

15. Regulatory information

All of the components in the product are on the following Inventory lists: X = listed Australia U.S.A. (TSCA) Canada (DSL/NDSL) Europe (EINECS/ELINCS/NLP) Australia (AICS) Korea (KECL) China (IECSC) Japan (ENCS) Philippines (PICCS)

International Inventories

Component	CAS-No	DSL	NDSL	TSCA	TSCA Inventory notification - Active-Inactive	EINECS	ELINCS	NLP
Tungstate(4-), [.mu.12-(orthosilicato(4-)-O:O:O:O:O O:O:O:O:O:O:O)]tetracosamuoxododecaoxodo deca-, tetrahydrogen, hydrate	12027-43-9	1	•	1	•	-	1	1
Tungstate(4-), [.mu.12-[orthosilicato(4-)-O:O:O:O:O:O:O:O:O:O:O:O]]tetracosamu oxododecaoxododeca-, tetrahydrogen		Х	-	X	ACTIVE	234-719-8	-	

Component	CAS-No	IECSC	KECL	ENCS	ISHL	TCSI	AICS	NZIoC	PICCS
Tungstate(4-),	12027-43-9	=	-	-	-	X	Х	-	-
[.mu.12-(orthosilicato(4-)-O:O:O:O:									
0:0:0:0:0:0:0									
)]tetracosamuoxododecaoxodo									
deca-, tetrahydrogen, hydrate									
Tungstate(4-),	12027-38-2	X	KE-35415	X	X	X	X	X	X
[.mu.12-[orthosilicato(4-)-O:O:O:O:									
O:O:O:O:O:O:O)]tetracosamu									
oxododecaoxododeca-,									
tetrahydrogen									

Legend:

X - Listed '-' - Not Listed

KECL - NIER number or KE number (http://ncis.nier.go.kr/en/main.do)

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

IECSC - Chinese Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

ENCS - Japanese Existing and New Chemical Substances

AICS - Australian Inventory of Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

Canada

SDS in compliance with provisions of information as set out in Canadian Standard - Part 4, Schedule 1 and 2 of the Hazardous Products Regulations (HPR) and meets the requirements of the HPR (Paragraph 13(1)(a) of the Hazardous Products Act (HPA)).

Other International Regulations

Authorisation/Restrictions according to EU REACH Not applicable

Safety, health and environmental regulations/legislation specific for the substance or mixture

Component	CAS-No	OECD HPV	Persistent Organic	Ozone Depletion	Restriction of

			Pollutant	Potential	Hazardous Substances (RoHS)
Tungstate(4-), [.mu.12-(orthosilicato(4-)-O:O: O:O:O:O:O:O:O:O:O:O)] jtetracosamuoxododecaox ododeca-, tetrahydrogen, hydrate	12027-43-9	Not applicable	Not applicable	Not applicable	Not applicable
Tungstate(4-), [.mu.12-[orthosilicato(4-)-O:O:O:O:O:O:O:O:O:O:O:O]]tetrac osamuoxododecaoxododec a-, tetrahydrogen	12027-38-2	Not applicable	Not applicable	Not applicable	Not applicable

Component	CAS-No	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements	Rotterdam Convention (PIC)	Basel Convention (Hazardous Waste)
Tungstate(4-), [.mu.12-(orthosilicato(4-)-O:O: O:O:O:O:O:O:O:O:O:O)]tetracosamuoxododecaox ododeca-, tetrahydrogen, hydrate	12027-43-9	Not applicable	Not applicable	Not applicable	Not applicable
Tungstate(4-), [.mu.12-[orthosilicato(4-)-O:O: O:O:O:O:O:O:O:O:O:O]]tetrac osamuoxododecaoxododec a-, tetrahydrogen		Not applicable	Not applicable	Not applicable	Not applicable

Prepared By Product Safety Department

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Revision Summary This document has been updated to comply with the requirements of WHMIS 2015 to align

with the Globally Harmonised System (GHS) for the Classification and Labelling of

Chemicals. SDS sections updated. 2.

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

End of SDS