

SAFETY DATA SHEET

Creation Date 10-Feb-2015

Revision Date 28-Feb-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

Thermo Fisher Scientific Chemicals, Inc.
30 Bond Street
Ward Hill, MA 01835-8099
Tel: 800-343-0660
Fax: 800-322-4757

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

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Skin Corrosion/Irritation	Category 1 C
Serious Eye Damage/Eye Irritation	Category 1
Specific 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/fume/gas/mist/vapors/spray
 Wash face, hands and any exposed skin thoroughly after handling
 Wear protective gloves/protective clothing/eye protection/face protection
 Use only outdoors or in a well-ventilated area

Response

Immediately call a POISON CENTER or doctor/physician

Inhalation

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

Skin

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

Eyes

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

Ingestion

IF SWALLOWED: Rinse mouth. DO NOT induce vomiting

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

Hazards not otherwise classified (HNOC)

Harmful to aquatic life with long lasting effects

3. Composition/information on Ingredients

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

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 and 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
Notes to Physician	Treat symptomatically

5. Fire-fighting measures

Suitable Extinguishing Media	CO ₂ , dry chemical, dry sand, alcohol-resistant foam.
Unsuitable Extinguishing Media	No information available
Flash Point	Not applicable
Method -	No information available
Autoignition Temperature	No information available
Explosion Limits	
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 Up Sweep up and shovel into suitable containers for disposal. Avoid dust formation.

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	ACGIH TLV	OSHA PEL	NIOSH	Mexico OEL (TWA)
Tungstate(4-), [.mu.12-(orthosilicato(4-)-O: O:O:O':O':O':O':O':O':O' ":O ""))tetracosa-.mu.-oxododeca oxododeca-, tetrahydrogen, hydrate	TWA: 3 mg/m ³	(Vacated) TWA: 5 mg/m ³ (Vacated) STEL: 10 mg/m ³	REL = 5 mg/m ³ (TWA) STEL: 10 mg/m ³	TWA: 5 mg/m ³ STEL: 10 mg/m ³
Tungstate(4-), [.mu.12-[orthosilicato(4-)-O: O:O:O':O':O':O':O':O':O' ":O""))tetracosa-.mu.-oxodod ecaododeca-, tetrahydrogen	TWA: 3 mg/m ³	(Vacated) TWA: 5 mg/m ³ (Vacated) STEL: 10 mg/m ³	REL = 5 mg/m ³ (TWA) STEL: 10 mg/m ³	TWA: 5 mg/m ³ STEL: 10 mg/m ³

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/face Protection**

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin and body protection

Wear appropriate protective gloves and clothing to prevent skin exposure.

Respiratory Protection

No protective equipment is needed under normal use conditions.

Recommended Filter type:

Particle filter.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

Physical State	Solid
Appearance	Light yellow
Odor	Odorless
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
Evaporation Rate	Not applicable
Flammability (solid,gas)	No information available
Flammability or explosive limits	
Upper	No data available
Lower	No data available
Vapor Pressure	No information available
Vapor Density	Not applicable
Specific Gravity	4.5
Solubility	Soluble in water
Partition coefficient; n-octanol/water	No data available
Autoignition Temperature	No information available
Decomposition Temperature	No information available
Viscosity	Not applicable
Molecular Formula	H4-O4O-Si-W12

2878.2895

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 Reactions	None under normal processing.

Acute Toxicity

Oral LD50	Based on ATE data, the classification criteria are not met. ATE > 2000 mg/kg.
Dermal LD50	Based on ATE data, the classification criteria are not met. ATE > 2000 mg/kg.
Mist LC50	Based on ATE data, the classification criteria are not met. ATE > 5 mg/l.

Toxicologically Synergistic Products	No information available
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Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization	No information available
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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-), [.mu.12-(orthosilicato(4-)-O:O:O:O':O':O':O' ' :O":O"" :O"" :O "")]]tetracosa-.mu.-oxod odecaoxododeca-, tetrahydrogen, hydrate	12027-43-9	Not listed	Not listed	Not listed	Not listed	Not listed
Tungstate(4-), [.mu.12-(orthosilicato(4-)-O:O:O:O':O':O":O ":O":O"" :O"" :O"")]]tetrac osa-.mu.-oxododecaox ododeca-, tetrahydrogen	12027-38-2	Not listed	Not listed	Not listed	Not listed	Not listed

Teratogenicity	No information available.
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STOT - single exposure
STOT - repeated exposure

12. Ecological information

13. Disposal considerations

14. Transport information

UN-No	UN3260
Proper Shipping Name	Corrosive solid, acidic, inorganic, n.o.s.
Hazard Class	8
Packing Group	III

15. Regulatory Information

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[.mu.12-(orthosilicato(4-)-O:O:O'O':O':O':O':O':O':O':O')])tetracosa-.mu.-oxododecaoxododeca-, tetrahydrogen, hydrate				
Tungstate(4-), [.mu.12-(orthosilicato(4-)-O:O:O'O':O':O':O':O':O':O':O')])tetracosa-.mu.-oxododecaoxododeca-, tetrahydrogen	12027-38-2	X	ACTIVE	-

Legend:

TSCA US EPA (TSCA) - Toxic Substances Control Act, (40 CFR Part 710)

X - Listed

- - Not Listed

TSCA - Per 40 CFR 751, Regulation of Certain Chemical Substances & Mixtures, Under TSCA Section 6(h) (PBT)

Not applicable

TSCA 12(b) - Notices of Export

Not applicable

International Inventories

X = listed, Australia, U.S.A. (TSCA), Canada (DSL/NDSL), Europe (EINECS/ELINCS/NLP), Australia (AICS), Korea (KECL), China (IECSC), Japan (ENCS), Philippines (PICCS).

Component	CAS No	DSL	NDSL	EINECS	PICCS	ENCS	ISHL	AICS	IECSC	KECL
Tungstate(4-), [.mu.12-(orthosilicato(4-)-O:O:O'O':O':O':O':O':O':O':O')])tetracosa-.mu.-oxododecaoxododeca-, tetrahydrogen, hydrate	12027-43-9	-	-	-	-	-		X	-	-
Tungstate(4-), [.mu.12-(orthosilicato(4-)-O:O:O'O':O':O':O':O':O':O':O')])tetracosa-.mu.-oxododecaoxododeca-, tetrahydrogen	12027-38-2	X	-	234-719-8	X	X	X	X	X	KE-35415

KECL - NIER number or KE number (<http://ncis.nier.go.kr/en/main.do>)**U.S. Federal Regulations****SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

CWA (Clean Water Act)

Not applicable

Clean Air Act

Not applicable

OSHA - Occupational Safety and Health Administration

Not applicable

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

California Proposition 65 This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations Not applicable

U.S. Department of Transportation

Reportable Quantity (RQ): N

DOT Marine Pollutant N

DOT Severe Marine Pollutant N

U.S. Department of Homeland Security This product does not contain any DHS chemicals.

Other International Regulations

Mexico - Grade No information available

Authorisation/Restrictions according to EU REACH Not applicable

Component	CAS No	REACH (1907/2006) - Annex XIV - Substances Subject to Authorization	REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances	REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC)
Tungstate(4-), [.mu.12-(orthosilicato(4-)-O:O:O:O': O':O':O':O':O':O':O':O':O':O' "')]tetracosa-.mu.-oxododecaoxododeca-, tetrahydrogen, hydrate	12027-43-9	-	-	-
Tungstate(4-), [.mu.12-[orthosilicato(4-)-O:O:O:O': O':O':O':O':O':O':O':O':O':O' "']]tetracosa-.mu.-oxododecaoxododeca-, tetrahydrogen	12027-38-2	-	-	-

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

Component	CAS No	OECD HPV	Persistent Organic Pollutant	Ozone Depletion Potential	Restriction of Hazardous Substances (RoHS)
Tungstate(4-), [.mu.12-(orthosilicato(4-)-O:O:O:O': O':O':O':O':O':O':O':O':O':O' "')]tetracosa-.mu.-oxododecaoxododeca-, 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':O':O' "']]tetracosa-.mu.-oxododecaoxododeca-, tetrahydrogen	12027-38-2	Not applicable	Not applicable	Not applicable	Not applicable

Contains component(s) that meet a 'definition' of per & poly fluoroalkyl substance (PFAS)?

Not applicable

Other International Regulations

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":O":O'")])tetracosa-.mu.-oxododecao xododeca-, 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":O":O'")])tetracosa-.mu.-oxododecao xododeca-, tetrahydrogen	12027-38-2	Not applicable	Not applicable	Not applicable	Not applicable

16. Other Information

Prepared By

Health, Safety and Environmental Department
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10-Feb-2015

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28-Feb-2025

Revision Summary

This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS). 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