

Cobalt Tungstate		Pricing >
Linear Formula	CoWO ₄	
Pubchem CID	165812	
MDL Number	N/A	
EC No.	233-254-8	
IUPAC Name	cobalt(2+); oxygen(2-); tungsten	
Beilstein/Reaxys No.	N/A	
SMILES	[Co+2].[O-][W]([O-])(=O)=O	
Inchl Identifier	InChI=1S/Co.4O.W/q+2;;;2*-1;	
Inchl Key	KLNIPFWTZXANST-UHFFFAOYSA-N	
Signal Word	N/A	
Hazard Statements	N/A	
Hazard Codes	N/A	
Risk Codes	N/A	
Safety Statements	N/A	
Transport Information	N/A	

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SAFETY DATA SHEET

Date Accessed: 05/19/2024

Date Revised: 01/15/2022

SECTION 1. IDENTIFICATION

Product Identifiers: All applicable American Elements product codes for CAS #10101-58-3

Relevant identified uses of the substance:
Scientific research and development

Supplier details:
American Elements
10884 Weyburn Ave.
Los Angeles, CA 90024
Tel: +1 310-208-0551
Fax: +1 310-208-0351

Emergency telephone number:

SECTION 2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

The substance is not classified according to the Globally Harmonized System (GHS).

GHS label elements not applicable

Hazard pictograms not applicable

Signal word not applicable

Hazard statements not applicable

Precautionary statements

P262 Do not get in eyes, on skin, or on clothing.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Classification system:

NFPA ratings (scale 0 - 4)

0

0

0

Health = 0

Fire = 0

Reactivity = 0

HMIS-ratings (scale 0 - 4)

HEALTH

FIRE

REACTIVITY

0 *

0

0

Health = *0

Fire = 0

Reactivity = 0

Other hazards

Results of PBT and vPvB assessment

PBT: N/A

vPvB: N/A

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substances

CAS # / Substance Name

10101-58-3 Cobalt(II) tungstate (99.9%-Co)

SECTION 4. FIRST AID MEASURES

Description of first aid measures

General information: No special measures required.

If inhaled: Supply fresh air; consult doctor in case of complaints.

In case of skin contact: Generally the product does not irritate the skin.

In case of eye contact: Rinse opened eye for several minutes under running water.

If swallowed: If symptoms persist consult doctor.

Most important symptoms and effects, both acute and delayed:

No data available

Indication of any immediate medical attention and special treatment needed

No data available

SECTION 5. FIREFIGHTING MEASURES

Extinguishing media

Suitable extinguishing agents:

CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

Special hazards arising from the substance or mixture

No data available

Advice for firefighters

Protective equipment: No special measures required.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures Not required.

Environmental precautions: No special measures required.

Methods and materials for containment and cleanup:

Pick up mechanically.

Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

SECTION 7. HANDLING AND STORAGE

Precautions for safe handling No special measures required.

Information about protection against explosions and fires: No special measures required.

Conditions for safe storage, including any incompatibilities:

Requirements to be met by storerooms and receptacles: No special requirements.

Information about storage in one common storage facility: Not required.

Further information about storage conditions: None.

Specific end use(s) No data available

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Additional information about design of technical systems: No further data; see item 7.

Control parameters

Components with limit values that require monitoring at the workplace: Not required.

Additional information: The lists that were valid during the creation were used as basis.

Exposure controls

Personal protective equipment:

General protective and hygienic measures:

The usual precautionary measures for handling chemicals should be followed.

Breathing equipment: Not required.

Protection of hands:

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the

chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and

varies from manufacturer to manufacturer.

Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be

observed.
Eye protection: Safety glasses

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance:

Form: Powder

Color: Grey

Odor: Odorless

Odor threshold: No data available.

pH: N/A

Melting point/Melting range: no data °C

Boiling point/Boiling range: Undetermined.

Flash point: N/A

Flammability (solid, gas): Product is not flammable.

Ignition temperature:

Decomposition temperature: No data available.

Autoignition: No data available.

Danger of explosion: Product does not present an explosion hazard.

Explosion limits:

Lower: No data available.

Upper: No data available.

Vapor pressure: no data hPa

Density at 20 °C (68 °F): 8.42 g/cm³ (70.265 lbs/gal)

Relative density No data available.

Vapor density N/A

Evaporation rate N/A

Solubility in / Miscibility with

Water: Insoluble.

Partition coefficient (n-octanol/water): No data available.

Viscosity:

Dynamic: N/A

Kinematic: N/A

Organic solvents: 0.0 %

Solids content: 100.0 %

Other information No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity

Chemical stability

Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.

Possibility of hazardous reactions No dangerous reactions known.

Conditions to avoid No data available

Incompatible materials: No data available

Hazardous decomposition products: No dangerous decomposition products known.

SECTION 11. TOXICOLOGICAL INFORMATION

Information on toxicological effects

Acute toxicity:

Primary irritant effect:

on the skin: No irritant effect.

on the eye: No irritating effect.

Sensitization: No sensitizing effects known.

Additional toxicological information:

When used and handled according to specifications, the product does not have any harmful effects according to

our experience and the information provided to us.

The substance is not subject to classification.

Carcinogenic categories

IARC (International Agency for Research on Cancer)

10101-58-3 Cobalt(II) tungstate (99.9%-Co) 2B

NTP (National Toxicology Program)

Substance is not listed.

OSHA-Ca (Occupational Safety & Health Administration)

Substance is not listed.

SECTION 12. ECOLOGICAL INFORMATION

Toxicity

Aquatic toxicity: No data available

Persistence and degradability No data available

Bioaccumulative potential No data available

Mobility in soil No data available

Additional ecological information: Not known to be hazardous to water.

Results of PBT and vPvB assessment

PBT: N/A

vPvB: N/A

Other adverse effects No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Recommendation: Disposal must be made according to official regulations.

Uncleaned packagings:

Recommendation: Disposal must be made according to official regulations.

SECTION 14. TRANSPORT INFORMATION

UN-Number
DOT, ADN, IMDG, IATA not regulated
UN proper shipping name
DOT, ADN, IMDG, IATA not regulated
Transport hazard class(es)
DOT, ADN, IMDG, IATA
Class not regulated
Packing group
DOT, IMDG, IATA not regulated
Environmental hazards:
Marine pollutant: No
Special precautions for user N/A
Transport in bulk according to Annex II of
MARPOL73/78 and the IBC Code N/A
UN "Model Regulation": -

SECTION 15. REGULATORY INFORMATION

Safety, health and environmental
regulations/legislation specific for the substance or
mixture
Sara
Section 355 (extremely hazardous substances):
Substance is not listed.
Section 313 (Specific toxic chemical listings):
Substance is listed.
TSCA (Toxic Substances Control Act):
Substance is listed.
Proposition 65
Chemicals known to cause cancer:
Substance is not listed.
Chemicals known to cause reproductive toxicity for
females:
Substance is not listed.
Chemicals known to cause reproductive toxicity for
males:
Substance is not listed.
Chemicals known to cause developmental toxicity:
Substance is not listed.
Carcinogenic categories
EPA (Environmental Protection Agency)
Substance is not listed.
TLV (Threshold Limit Value established by ACGIH)
Substance is not listed.
NIOSH-Ca (National Institute for Occupational Safety
and Health)
Substance is not listed.
GHS label elements not applicable

Hazard pictograms not applicable
Signal word not applicable
Hazard statements not applicable
Precautionary statements
P262 Do not get in eyes, on skin, or on clothing.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P403+P233 Store in a well-ventilated place. Keep container tightly closed.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16. OTHER INFORMATION

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH). 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. American Elements shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. COPYRIGHT 1997-2022 AMERICAN ELEMENTS. LICENSED GRANTED TO MAKE UNLIMITED PAPER COPIES FOR INTERNAL USE ONLY.

Research

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- Compton profiles and Mulliken's populations of cobalt, nickel and

copper tungstates: Experiment and theory. B. S. Meena, N. L. Heda, Kishor Kumar, Samir Bhatt, B. L. Ahuja. *Physica B: Condensed Matter*, Volume 484, 1 March 2016, Pages 1-6.

- Decoration of nitrogen-doped reduced graphene oxide with cobalt tungstate nanoparticles for use in high-performance supercapacitors. Hamid Reza Naderi, Ali Sobhani-Nasab, Mehdi Rahimi-Nasrabadi, Mohammad Reza Ganjali. *Applied Surface Science*, Volume 423, 30 November 2017, Pages 1025-1034.
- In situ electrochemically generated composite-type CoOx/WOx in self-activated cobalt tungstate nanostructures: implication for highly enhanced electrocatalytic oxygen evolution. Tian Tian, Jing Jiang, Lunhong Ai. *Electrochimica Acta*, Volume 224, 10 January 2017, Pages 551-560.
- Synthesis and ammonolysis of nickel and cobalt tungstates and their characterisation. J. L. Rico, M. Albiter, J. Espino, J. S. J. Hargreaves, K. Wilson. *Journal of Saudi Chemical Society*, Volume 20, Issue 4, July 2016, Pages 405-410.
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- Facile chemical synthesis of cobalt tungstates nanoparticles as high performance supercapacitor. Adib K, Rahimi-Nasrabadi M, Rezvani Z, Pourmortazavi SM, Ahmadi F, Naderi HR, Ganjali MR. *Journal of Materials Science: Materials in Electronics*. 2016 May 1;27(5):4541-50.
- Solvothermal synthesis of cobalt tungstate microrings for enhanced nonenzymatic glucose sensor. Zhang J, Xu C, Zhang R, Guo X, Wang J, Zhang X, Zhang D, Yuan B. *Materials Letters*. 2018 Jan 1;210:291-4.
- A non-noble cobalt tungstate catalyst for effective electrocatalytic oxidation of borohydride. Tiwari A, Singh V, Nagaiah TC. *ACS Applied Materials & Interfaces*. 2019 Jun 4.