

<a href="#">Cobalt Acetate</a>		<a href="#">Pricing &gt;</a>
Linear Formula	Co(C <sub>2</sub> H <sub>3</sub> O <sub>2</sub> ) <sub>2</sub>	
Pubchem CID	517042	
MDL Number	MFCD00008689	
EC No.	200-755-8	
IUPAC Name	cobalt(2+); diacetate	
Beilstein/Reaxys No.	N/A	
SMILES	F[Al-](F)(F)F.[Cs+]	
InchI Identifier	InChI=1S/2C2H4O2.Co/c2*1-2(3)4;/h2*1H3,(H,3,4);/q;+2/p-2	
InchI Key	QAHREYKOYSIQPH-UHFFFAOYSA-L	
Signal Word	Danger	
Hazard Statements	H302-H334-H317-H341-H350-H360	
Hazard Codes	N/A	
Precautionary Statements	P201-P273-P308+P313-P501a	
Risk Codes	N/A	
Safety Statements	N/A	
RTECS Number	AG3150000	
Transport Information	UN3077 9/PG III	

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## SAFETY DATA SHEET

Date Accessed: 03/29/2024

Date Revised: 01/15/2022

### SECTION 1. IDENTIFICATION

**Product Identifiers:** All applicable American Elements product codes for CAS #71-48-7

**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:  
Domestic, North America +1 800-424-9300  
International +1 703-527-3887

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## SECTION 2. HAZARDS IDENTIFICATION

Classification of the substance or mixture in  
accordance with 29 CFR 1910 (OSHA HCS)

GHS08 Health hazard

Resp. Sens. 1 H334 May cause allergy or asthma  
symptoms or breathing difficulties if inhaled.

Muta. 2

H341 Suspected of causing genetic defects.

Carc. 1B

H350 May cause cancer.

Repr. 1B

H360 May damage fertility or the unborn child.

GHS07

Acute Tox. 4

H302 Harmful if swallowed.

Skin Sens. 1

H317 May cause an allergic skin reaction.

Hazards not otherwise classified

No data available

GHS label elements

GHS label elements, including precautionary  
statements

Hazard pictograms



GHS07 GHS08

Signal word

Danger

Hazard statements

H302 Harmful if swallowed.

H334 May cause allergy or asthma symptoms or  
breathing difficulties if inhaled.

H317 May cause an allergic skin reaction.

H341 Suspected of causing genetic defects.

H350 May cause cancer.

H360 May damage fertility or the unborn child.

Precautionary statements

P273

Avoid release to the environment.

P201

Obtain special instructions before use.

P308+P313 IF exposed or concerned: Get medical  
advice/attention.

P501

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

WHMIS classification

D2A - Very toxic material causing other toxic effects

Classification system

HMIS ratings (scale 0-4)

(Hazardous Materials Identification System)

Health (acute effects) = 2

Flammability = 1

Physical Hazard = 1

Other hazards

Results of PBT and vPvB assessment

PBT:

N/A

vPvB:

N/A

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### **SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Substances

CAS No. / Substance Name:

71-48-7 Cobalt(II) acetate

Identification number(s):

EC number: 200-755-8

Index number: 027-006-00-6

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### **SECTION 4. FIRST AID MEASURES**

Description of first aid measures

If inhaled:

Supply patient with fresh air. If not breathing, provide artificial respiration. Keep patient warm.

Seek immediate medical advice.

In case of skin contact:

Immediately wash with soap and water; rinse thoroughly.

Seek immediate medical advice.

In case of eye contact:

Rinse opened eye for several minutes under running water. Consult a physician.

If swallowed:

Seek medical treatment.

Information for 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

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## **SECTION 5. FIREFIGHTING MEASURES**

Extinguishing media

Suitable extinguishing agents

Carbon dioxide, extinguishing powder or water spray.

Fight larger fires with water spray or alcohol resistant foam.

Special hazards arising from the substance or mixture

If this product is involved in a fire, the following can be released:

Carbon monoxide and carbon dioxide

Cobalt oxides

Advice for firefighters

Protective equipment:

Wear self-contained respirator.

Wear fully protective impervious suit.

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## **SECTION 6. ACCIDENTAL RELEASE MEASURES**

Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

Environmental precautions:

Do not allow material to be released to the environment without official permits.

Methods and materials for containment and cleanup:

Dispose of contaminated material as waste according to section 13.

Ensure adequate ventilation.

Prevention of secondary hazards:

No special measures required.

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.

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## **SECTION 7. HANDLING AND STORAGE**

Handling

Precautions for safe handling

Handle under dry protective gas.

Keep container tightly sealed.

Store in cool, dry place in tightly closed containers.

Ensure good ventilation at the workplace.

Open and handle container with care.

Information about protection against explosions and

fires:

No data available

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:

Store away from water/moisture.

Store away from oxidizing agents.

Further information about storage conditions:

Store under dry inert gas.

This product is hygroscopic.

Keep container tightly sealed.

Store in cool, dry conditions in well-sealed containers.

Protect from humidity and water.

Specific end use(s)

No data available

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## **SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

Additional information about design of technical systems:

Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.

Control parameters

Components with limit values that require monitoring at the workplace:

71-48-7 Cobalt(II) acetate (100.0%)

PEL (USA) Long-term value:  $0.1^* \text{ mg/m}^3$   
as Co; \*for metal dust and fume

REL (USA) Long-term value:  $0.05 \text{ mg/m}^3$   
as Co; metal dust & fume

TLV (USA) Long-term value:  $0.02 \text{ mg/m}^3$   
as Co, BEI

Additional information:

No data

Exposure controls

Personal protective equipment

Follow typical protective and hygienic practices for handling chemicals.

Keep away from foodstuffs, beverages and feed.

Remove all soiled and contaminated clothing immediately.

Wash hands before breaks and at the end of work.

Store protective clothing separately.

Maintain an ergonomically appropriate working environment.

Breathing equipment:

Use suitable respirator when high concentrations are present.

Recommended filter device for short term use:

Use a respirator with type P100 (USA) or P3 (EN 143) cartridges as a backup to engineering controls. Risk assessment should be performed to determine if air-purifying respirators are appropriate. Only use equipment tested and approved under appropriate government standards.

Protection of hands:

Impervious gloves

Inspect gloves prior to use.

Suitability of gloves should be determined both by material and quality, the latter of which may vary by manufacturer.

Penetration time of glove material (in minutes)

No data available

Eye protection:

Safety glasses

Body protection:

Protective work clothing.

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## **SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

Information on basic physical and chemical properties

Appearance:

Form: Powder

Color: Pale pink to purple

Odor: Odorless

Odor threshold: No data available.

pH: N/A

Melting point/Melting range: 298 °C (568 °F) (dec)

Boiling point/Boiling range: No data available

Sublimation temperature / start: No data available

Flammability (solid, gas)

No data available.

Ignition temperature: No data available

Decomposition temperature: No data available

Autoignition: No data available.

Danger of explosion: No data available.

Explosion limits:

Lower: No data available

Upper: No data available

Vapor pressure: N/A

Density: No data available

Relative density

No data available.

Vapor density

N/A

Evaporation rate

N/A

Solubility in Water (H<sub>2</sub>O): Soluble

Partition coefficient (n-octanol/water): No data available.  
Viscosity:  
Dynamic: N/A  
Kinematic: N/A  
Other information  
No data available

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## **SECTION 10. STABILITY AND REACTIVITY**

Reactivity  
No data available  
Chemical stability  
Stable under recommended storage conditions.  
Thermal decomposition / conditions to be avoided:  
Decomposition will not occur if used and stored according to specifications.  
Possibility of hazardous reactions  
Reacts with strong oxidizing agents  
Conditions to avoid  
No data available  
Incompatible materials:  
Water/moisture  
Oxidizing agents  
Hazardous decomposition products:  
Carbon monoxide and carbon dioxide  
Cobalt oxides

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## **SECTION 11. TOXICOLOGICAL INFORMATION**

Information on toxicological effects  
Acute toxicity:  
The Registry of Toxic Effects of Chemical Substances (RTECS) contains acute toxicity data for this substance.  
LD/LC50 values that are relevant for classification:  
Oral LD50 503 mg/kg (rat)  
Skin irritation or corrosion:  
May cause irritation  
Eye irritation or corrosion:  
May cause irritation  
Sensitization:  
May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
May cause an allergic skin reaction.  
Germ cell mutagenicity:  
Suspected of causing genetic defects.  
The Registry of Toxic Effects of Chemical Substances (RTECS) contains mutation data for this substance.  
Carcinogenicity:

May cause cancer.

IARC-2B: Possibly carcinogenic to humans: limited evidence in humans in the absence of sufficient evidence in experimental animals.

ACGIH A3: Animal carcinogen: Agent is carcinogenic in experimental animals at a relatively high dose, by route(s) of administration, at site(s), of histologic type(s), or by mechanism(s) not considered relevant to worker exposure. Available epidemiologic studies do not confirm an increased risk of cancer in exposed humans.

Available evidence suggests that the agent is not likely to cause cancer in humans except under uncommon or unlikely routes or levels of exposure.

Reproductive toxicity:

May damage fertility or the unborn child.

Specific target organ system toxicity - repeated exposure:

No effects known.

Specific target organ system toxicity - single exposure:

No effects known.

Aspiration hazard:

No effects known.

Subacute to chronic toxicity:

The Registry of Toxic Effects of Chemical Substances (RTECS) contains multiple dose toxicity data for this substance.

Additional toxicological information:

To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

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## 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

Ecotoxicological effects:

Remark:

Very toxic for aquatic organisms

Additional ecological information:

Do not allow material to be released to the environment without official permits.

Do not allow product to reach groundwater, water courses, or sewage systems, even in small quantities.

Danger to drinking water if even extremely small quantities leak into the ground.

Also poisonous for fish and plankton in water bodies.  
May cause long lasting harmful effects to aquatic life.  
Avoid transfer into the environment.  
Very toxic for aquatic organisms  
Results of PBT and vPvB assessment  
PBT:  
N/A  
vPvB:  
N/A  
Other adverse effects  
No data available

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## **SECTION 13. DISPOSAL CONSIDERATIONS**

Waste treatment methods  
Recommendation  
Consult official regulations to ensure proper disposal.  
Uncleaned packagings:  
Recommendation:  
Disposal must be made according to official  
regulations.  
Recommended cleansing agent:  
Water, if necessary with cleansing agents.

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## **SECTION 14. TRANSPORT INFORMATION**

UN-Number  
DOT, IMDG, IATA  
UN3077  
UN proper shipping name  
DOT  
Environmentally hazardous substances, solid, n.o.s.  
(Cobalt(II) acetate)  
IMDG  
ENVIRONMENTALLY HAZARDOUS SUBSTANCE,  
SOLID, N.O.S. (Cobalt(II) acetate), MARINE  
POLLUTANT  
IATA  
ENVIRONMENTALLY HAZARDOUS SUBSTANCE,  
SOLID, N.O.S. (Cobalt(II) acetate)  
Transport hazard class(es)  
DOT, IMDG, IATA  
Class  
9 Miscellaneous dangerous substances and articles.  
Label  
9  
Class  
9 (M7) Miscellaneous dangerous substances and  
articles  
Label

9  
Packing group  
DOT, IMDG, IATA  
III  
Environmental hazards:  
Marine pollutant (IMDG):  
Symbol (fish and tree)  
Special marking (ADR):  
Symbol (fish and tree)  
Special marking (IATA):  
Symbol (fish and tree)  
Special precautions for user  
Warning: Miscellaneous dangerous substances and articles  
EMS Number: F-A,S-F  
Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code  
N/A  
Transport/Additional information:  
DOT  
Marine Pollutant (DOT):  
No  
Remarks:  
Special marking with the symbol (fish and tree).  
UN "Model Regulation":  
UN3077, Environmentally hazardous substances, solid, n.o.s. (Cobalt(II) acetate), 9, III

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## **SECTION 15. REGULATORY INFORMATION**

Safety, health and environmental regulations/legislation specific for the substance or mixture  
GHS GHS label elements, including precautionary statements  
Hazard pictograms  
GHS07  
GHS08  
Signal word  
Danger  
Hazard statements  
H302 Harmful if swallowed.  
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
H317 May cause an allergic skin reaction.  
H341 Suspected of causing genetic defects.  
H350 May cause cancer.  
H360 May damage fertility or the unborn child.  
Precautionary statements  
P273  
Avoid release to the environment.  
P201

Obtain special instructions before use.  
P308+P313 IF exposed or concerned: Get medical advice/attention.  
P501  
Dispose of contents/container in accordance with local/regional/national/international regulations.  
National regulations  
All components of this product are listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical substance Inventory.  
All components of this product are listed on the Canadian Domestic Substances List (DSL).  
SARA Section 313 (specific toxic chemical listings)  
71-48-7 Cobalt(II) acetate  
California Proposition 65  
Prop 65 - Chemicals known to cause cancer  
Substance is not listed.  
Prop 65 - Developmental toxicity  
Substance is not listed.  
Prop 65 - Developmental toxicity, female  
Substance is not listed.  
Prop 65 - Developmental toxicity, male  
Substance is not listed.  
Information about limitation of use:  
For use only by technically qualified individuals.  
Other regulations, limitations and prohibitive regulations  
Substance of Very High Concern (SVHC) according to the REACH Regulations (EC) No. 1907/2006.  
This substance is included in the Candidate List of Substances of Very High Concern (SVHC) according to Regulation (EC) No. 1907/2006 (REACH).  
The conditions of restrictions according to Article 67 and Annex XVII of the Regulation (EC) No 1907/2006 (REACH) for the manufacturing, placing on the market and use must be observed.  
Substance is not listed.  
Annex XIV of the REACH Regulations (requiring Authorisation for use)  
Substance is not listed.  
Chemical safety assessment:  
A Chemical Safety Assessment has not been carried out.

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## **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.

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## Research

- The chemistry of cobalt acetate. X. The preparations of the mixed ligand cobalt oligomers, comparisons with homoleptic cobalt acetate dimers and trimers. Arati Kaza, Paul Jensen, Jack Clegg, Anthony F. Masters, Alex K. L. Yuen. *Polyhedron*, Volume 52, 22 March 2013, Pages 909-916.
- Highly efficient (CoOx-N@C, PANI) nanopowder derived from pyrolysis of polyaniline grafted cobalt acetate for oxidative methyl esterification of benzyl alcohols. Vineeta Panwar, Siddarth S. Ray, Suman L. Jain. *Molecular Catalysis*, Volume 427, February 2017, Pages 31-38.
- Oral administration of cobalt acetate alters milk fatty acid composition, consistent with an inhibition of stearoyl-coenzyme A desaturase in lactating ewes. P. Frutos, P. G. Toral, E. Ramos-Morales, K. J. Shingfield, G. Hervás. *Journal of Dairy Science*, Volume 97, Issue 2, February 2014, Pages 1036-1046.
- Reductions in milk  $\Delta 9$ -desaturation ratios to oral dosing of cobalt-acetate are accompanied by the downregulation of SCD1 in lactating ewes. P. G. Toral, G. Hervás, P. Frutos. *Journal of Dairy Science*, Volume 98, Issue 3, March 2015, Pages 1961-1971.
- Computational and structural studies on the complexation of cobalt(II) acetate by water and pyridine. Henning Henschel, Jan-Peter Klöckner, Ian A. Nicholls, Marc H. Prosenc. *Journal of Molecular Structure*, Volume 1007, 11 January 2012, Pages 45-51.
- Ultrathin Layered Hydroxide Cobalt Acetate Nanoplates Face-to-Face Anchored to Graphene Nanosheets for High-Efficiency Lithium Storage. Su L, Hei J, Wu X, Wang L, Zhou Z. *Advanced Functional Materials*. 2017 Mar;27(10):1605544.
- In situ synthesis of cobalt and cobalt carbide nanostructures using decomposition of cobalt acetate. Kamal SK, Kumar AP, Vimala J, Rao NR, Majumdar B, Ghosal P, Durai L. *Journal of Alloys and Compounds*. 2018 Jun 5;748:814-7.
- Highly conformal deposition of an ultrathin cobalt acetate on bismuth vanadate nanostructure for solar water splitting. Vo TG, Liu HM, Chiang CY. *Catalysis Science & Technology*. 2019.
- Selective Aerobic Oxidation of Methylarenes to Benzaldehydes Catalyzed by N-Hydroxyphthalimide and Cobalt (II) Acetate in Hexafluoropropan-2-ol. Gaster E, Kozuch S, Pappo D. *Angewandte*

Chemie International Edition. 2017 May 15;56(21):5912-5.

- Effect of PVP on the morphology of cobalt nanoparticles prepared by thermal decomposition of cobalt acetate. Huiping Shao, Yuqiang Huang, HyoSook Lee, Yong Jae Suh, Chong Oh Kim. Current Applied Physics, Volume 6, Supplement 1, August 2006, Pages e195-e197.