

Revision: 2.0
(Replaces revision 1.1 of 16 April 2021)Revision date: 20 April 2021
Date printed: 12 August 2023**Section 1. Identification****1.1 Product Identifier** 0988Product Name COBALT (II) NITRATE 6H₂O pure

CAS Number 10026-22-9

REACH Registration No 01-2119542530-49-XXXX

Molecular Formula $\text{Co}(\text{NO}_3)_2 \cdot 6\text{H}_2\text{O} = 291.03$ **1.2 Relevant identified uses of the substance or mixture & uses advised against**

Uses of Material Chemical for industrial and laboratory use. Not suitable for domestic use.

1.3 Supplier Vickers Laboratories LtdGrangefield Industrial Estate
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Pudsey
West Yorkshire
LS28 6QW
UNITED KINGDOMPhone 44 0113 2362811
Fax +44(0)113 2362703
Email safety@viclabs.co.uk
Website www.viclabs.co.uk**1.4 Emergency Telephone** (08:00-16:30) +44(0) 113 2362811
(24hr) 112
(Have this document to hand)**Section 2. Hazards Identification****2.1 Classification of the substance or mixture****Classification according to regulation 1272/2008/EC**

Oxidising solid, category 2

Acute toxicity, category 4 (oral)

Serious eye damage/irritation, category 1

Respiratory sensitization, category 1

Skin sensitization, category 1

Germ cell mutagenicity, category 2

Carcinogenicity, category 1B

Reproductive toxicity, category 1B

Hazard to aquatic environment, category 1

Hazard to aquatic environment, category 1

H272: May intensify fire; oxidizer.

H302: Harmful if swallowed.

H318: Causes serious eye damage.

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.

H400: Very toxic to aquatic life.

H410: Very toxic to aquatic life with long lasting effects.

2.2 Label elements**Labelling according to regulation 1272/2008/EC**

Signal word Danger

Hazard Pictograms



Hazard Statements May intensify fire; oxidizer. Harmful if swallowed. Causes serious eye damage. May cause cancer. Suspected of causing genetic defects. May damage fertility or the unborn child. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction. Very toxic to aquatic life with long lasting effects.

Precautionary Statements Obtain special instructions before use. Avoid release to the environment. Wear protective gloves / protective clothing / eye protection / face protection. IF exposed or concerned: Get medical advice/attention. IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. IF ON SKIN: Wash with plenty of soap and water.

Section 3. Composition

3.1 Substances

Component	CAS No.	EEC No.	REACH No.	Conc w/w	CLP Classification (1272/2008/CE)
Cobalt II Nitrate	10026-22-9	233-402-1	01-2119542530-49-XXXX	<=100%	Ox. Sol. 2, Acute Tox. 4 (O), Eye Dam. 1, Resp. Sens. 1, Skin Sens. 1, Muta. 2, Carc. 1B, Repr. 1B, Aquatic Acute 1, Aquatic Chronic 1

Section 4. First Aid

4.1 Description of first aid measures

Eyes	Irrigate thoroughly with plenty of water for at least 10 minutes, holding the eye open. If discomfort persists OBTAIN MEDICAL ATTENTION.
Skin	Wash off skin thoroughly with water. Remove contaminated clothing immediately and wash before re-use.
Inhalation	Remove from exposure.
Ingestion	If conscious give plenty of water to drink. Keep warm and at rest. If there is difficulty in breathing give oxygen if available. If breathing stops or shows signs of failing, apply artificial resuscitation. OBTAIN MEDICAL ATTENTION URGENTLY.
Personal protection for first aiders	Wear protective gloves / eye protection.

4.2 Most important symptoms and effects, both acute & delayed.

No further relevant information available.

4.3 Indication of any immediate medical attention and special treatment needed.

No further relevant information available.

Section 5. Fire Fighting

5.1 Extinguishing media

Extinguishing Media	Water spray.
Unsuitable Media	Nothing specified.

5.2 Special hazards arising from the substance or mixture

Hazards	May evolve toxic fumes if involved in a fire. Mixtures with combustible materials are flammable. May cause or intensify fire; oxidizer.
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5.3 Advice for firefighters

Advice for firefighters	Evacuate area immediately. Keep up wind. Avoid exposure to toxic vapours and fumes. Fire-fighters should wear protective clothing and breathing apparatus.
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Section 6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal Protection Presents no major hazards.

6.2 Environmental precautions

Environmental Keep material out of sewers, storm drains, surface waters and soil. Notify the Environmental Agency and local Environmental Health Officer if major spillage occurs.

6.3 Methods and material for containment and cleaning up

Major Spillage Shovel/sweep up into container for removal Wash area down with copious amounts of water.
Minor Spillage Wash area down with copious amounts of water.

6.4 Reference to other sections

See section 8.2 for information on protective equipment and section 13 for information on disposal.

Section 7. Storage & Handling

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Do not breath dust. Do not allow to contaminate clothing.

7.2 Conditions for safe storage, including any incompatibilities

Well ventilated, cool, dry storage . Store in a suitable area for oxidising agents. Keep well separated from combustibile materials.

7.3 Specific end use(s)

See section 1.2.

Section 8. Workplace Exposure & Personal Protection

8.1 Control parameters

Component	CAS No	Concentration	Workplace Exposure Limits			
			Long Term (8hr TWA)		Short Term 15min period	
Cobalt II Nitrate	10026-22-9	<=100%	-	-	0.1 ppm	-

Exposure data source(s) IOELV: Indicative Occupational Exposure Limit Value.

8.2 Exposure controls

Respiratory Protection If process creates significant amounts of dust use L.E.V. or wear suitable dust mask.
Hand Protection Wear gloves.
Eye Protection Use tightly fitting chemical splash proof glasses or goggles.
Skin Protection Avoid contact with skin. If skin contact or contamination of clothing is likely, protective clothing must be worn.
Special Hazards No special precautions required.

Section 9. Physical & Chemical Properties

9.1 Information on basic physical and chemical properties

Appearance Red-brown powder.
Odour No specific odour.
pH 4 @20 °C (10% Solution)
Boiling Point Not available
Melting Point 55 °C
Flash Point Not applicable
Upper Flammable Limit Not applicable
Lower Flammable Limit Not applicable
Auto Ignition Not applicable
Explosive Properties No.
Oxidising Properties A strong oxidising agent.

Vapour Pressure	Not applicable
Relative Density	1.8800
Water Solubility	Very soluble in water.

9.2 Other information

No data available.

Section 10. Stability & Reactivity

10.1 Reactivity	No data available.
10.2 Chemical Stability	Stable under normal conditions
10.3 Possibility of hazardous reactions	No data available.
10.4 Conditions to Avoid	No specific conditions.
10.5 Incompatible Materials	Combustible materials. Many organic compounds.
10.6 Hazardous Decomposition Products	Not flammable but will assist a fire, producing irritant and toxic fumes of oxides of nitrogen.

Section 11. Toxicological Information

11.1 Information on toxicological effects

Eyes	Causes serious eye damage.
Skin	The solid and solutions may be irritating to the skin. May cause skin sensitisation.
LD50 Skin	>2000 mg/Kg Rat
Ingestion	Harmful if swallowed.
LD50 Oral	691 mg/Kg Rat
Inhalation	Presents no significant health hazard by inhalation.
LD50 Inhalation	Not available
TCLo	Not available
Carcinogenicity	May cause cancer by inhalation.
Mutagenicity	Suspected of causing genetic defects.
Reproductive Effects	May damage fertility or the unborn child.

Section 12. Ecological

12.1 Toxicity	Low levels are readily bio-degraded in the environment. Higher levels are toxic to marine and plant life.
LC50 Algal	Not available
LC50 Crustacea	3.4mg/l Daphnia magna (48 hours)
LC50 Fish	66.8mg/l Goldfish (96 hours)
12.2 Persistence and degradability	No data available.
12.3 Bioaccumulative potential	No data available.
12.4 Mobility in soil	No data available.
12.5 Results of PBT & vPvB assessment	Assessment not required.
12.6 Other adverse effects	None known at present.

Section 13. Disposal Considerations

13.1 Waste treatment methods

Disposal Methods	Do not dispose of as domestic waste.
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Contaminated Packaging Wash out containers with water.

Section 14. Transport Information

14.1 UN Number	1477
14.2 Proper Shipping Name	Nitrates, inorganic, N.O.S.
14.3 Transport classes	
UN classification	5.1
Subsidiary hazard(s)	None
Transport category	2
ADR Hazard ID	50
Tunnel Restriction Code	E
14.4 Packing Group	II
14.5 Environment hazards	Marine pollutant.
14.6 Special precautions for user	No special precautions required.
14.7 Transport in bulk	Not transported in bulk.



Section 15. Regulatory Information

15.1 Safety, health and environment regulations specific for substance/mixture.

Classification, Labeling & Packaging of Substances & Mixtures Regulations (1272/2008/CE)

Classification Oxidising solid, category 2; Acute toxicity, category 4 (oral); Serious eye damage/irritation, category 1; Respiratory sensitization, category 1; Skin sensitization, category 1; Germ cell mutagenicity, category 2; Carcinogenicity, category 1B; Reproductive toxicity, category 1B; Hazard to aquatic environment, category 1; Hazard to aquatic environment, category 1

Signal word Danger

Hazard Pictograms



Hazard Statements H272, H302, H318, H350, H341, H360, H334, H317, H410
May intensify fire; oxidizer. Harmful if swallowed. Causes serious eye damage. May cause cancer. Suspected of causing genetic defects. May damage fertility or the unborn child. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction. Very toxic to aquatic life with long lasting effects.

Precautionary Statements P201, P273, P280, P308+P313, P304+P341, P302+P352
Obtain special instructions before use. Avoid release to the environment. Wear protective gloves / protective clothing / eye protection / face protection. IF exposed or concerned: Get medical advice/attention. IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. IF ON SKIN: Wash with plenty of soap and water.

15.2 Chemical safety assessment

Assessment not required.

Section 16. Other Information

The information contained in this document only covers the hazards presented by this material, it DOES NOT constitute a workplace risk assessment. See sections 11 for toxicological information and section 12 for ecological information.

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