Safety data sheet

according to Regulation (EC) No 1907/2006, Article 31

Printing date 05.05.2026 *Version number 4 (replaces version 3)* *Revision: 05.05.2026*

SECTION 1: Identification of the substance/mixture and of the company/undertaking

· **1.1 Product identifier**

· **Trade name: Cobalt (Co) - 1 g/l in diluted HNO3 for AAS (A012.2NP)**

· **Registration number**

A registration number is not available for this substance as the substance or its uses are exempted for registration, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

· **1.2 Relevant identified uses of the substance or mixture and uses advised against**

For Laboratory and R&D use only!

· **Application of the substance / the mixture** *Laboratory Reagent*

· **1.3 Details of the supplier of the safety data sheet**

· **Manufacturer/Supplier:**

CPAchem Ltd.
2 Ivanka Terzieva Str.
Bogomilovo 6065
Stara Zagora, BULGARIA
info@cpachem.com
+359 42952901

· **Further information obtainable from:** *Product safety department*

· **1.4 Emergency telephone number:**

EMERGENCY HEALTH INFORMATION:
Austria +43 1 31304 5620, Belgium +32022649636, Bulgaria +359 2 9154 409, Croatia +38514686910, Cyprus +3572240561, Czech Republic +420267082257, Denmark +45 72 54 40 00, Estonia +3726943384, Finland +358 5052 000, France +33 3 85 21 92, Germany +49-30-18412-0, Greece +302106479250, Hungary +34 (1) 476 1136, Ireland +35318092566, Italy +390649906140, Latvia +371 67032600, Lithuania +370 70662008, Luxembourg +352 24785551, Netherland +31 88 75 585 61, Norway +47 21 07 70 00, Poland +48 42 2530 400, Portugal +351 800250250, Romania +40213183606, Slovakia +421 2 5465 2307, Slovenia +38614006039, Spain +34 917689800, Sweden +46104566750, United Kingdom (England or Wales) 0845 46 47 or Scotland 08454 24 24 24 (UK only).

SECTION 2: Hazards identification

· **2.1 Classification of the substance or mixture**

· **Classification according to Regulation (EC) No 1272/2008**



GHS08 health hazard

Carc. 1B *H350i May cause cancer by inhalation.*
Repr. 1B *H360F May damage fertility.*



GHS09 environment

Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.



GHS07

Skin Irrit. 2 *H315 Causes skin irritation.*
Eye Irrit. 2 *H319 Causes serious eye irritation.*

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· ***2.2 Label elements***
· ***Labelling according to Regulation (EC) No 1272/2008***
The product is classified and labelled according to the CLP regulation.
· ***Hazard pictograms***



GHS07 GHS08 GHS09

· ***Signal word*** *Danger*

· ***Hazard-determining components of labelling:***
cobalt dinitrate
· ***Hazard statements***
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H350i May cause cancer by inhalation.
H360F May damage fertility.
H411 Toxic to aquatic life with long lasting effects.
· ***Precautionary statements***
P273 Avoid release to the environment.
P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing 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.
P308+P313 IF exposed or concerned: Get medical advice/attention.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
· ***Additional information:***
EUH208 Contains cobalt dinitrate. May produce an allergic reaction.
Product contains: Reportable explosives precursors. Making available, introduction, possession and use according to Regulation (EU) 2019/1148, Article 9.
· ***2.3 Other hazards***
· ***Results of PBT and vPvB assessment***
· ***PBT:*** *Not applicable*
· ***vPvB:*** *Not applicable*

SECTION 3: Composition/information on ingredients

· ***3.2 Mixtures***
· ***Description:*** *Mixture: consisting of the following components.*

· ***Dangerous components:***

CAS: 7697-37-2 *EINECS: 231-714-2* *Index number: 007-030-00-3* *Reg.nr.: 01-2119487297-23*	*nitric acid* *Ox. Liq. 3, H272; Acute Tox. 3, H331; Skin Corr. 1A, H314; Eye Dam. 1, H318, EUH071* *ATE: LC50/4 h inhalative: > 20 mg/l* *Specific concentration limits: Skin Corr. 1A; H314: C ≥ 20 %* *Skin Corr. 1B; H314: 5 % ≤ C < 20 %* *Ox. Liq. 3; H272: C ≥ 65 %*	*2.0%*
CAS: 10141-05-6 *EINECS: 233-402-1* *Index number: 027-009-00-2*	*cobalt dinitrate* *Resp. Sens. 1, H334; Muta. 2, H341; Carc. 1B, H350i; Repr. 1B, H360F; Aquatic Acute 1, H400 (M=10); Aquatic Chronic 1, H410 (M=10); Skin Sens. 1, H317* *Specific concentration limit: Carc. 1B; H350i: C ≥ 0.01 %*	*0.31%*

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· **SVHC**	
10141-05-6	cobalt dinitrate

· **Additional information:** For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

· **4.1 Description of first aid measures**
· **After inhalation:** Supply fresh air; consult doctor in case of complaints.
· **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
· **After eye contact:** Rinse opened eye for several minutes under running water.
· **After swallowing:** If symptoms persist consult doctor.
· **4.2 Most important symptoms and effects, both acute and delayed**
The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11
· **4.3 Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

SECTION 5: Firefighting measures

· **5.1 Extinguishing media**
· **Suitable extinguishing agents:** Use fire extinguishing methods suitable to surrounding conditions.
· **For safety reasons unsuitable extinguishing agents:**
For this substance/mixture no limitations of extinguishing agents are given.
· **5.2 Special hazards arising from the substance or mixture** No further relevant information available.
· **5.3 Advice for firefighters**
· **Protective equipment:** No special measures required.

SECTION 6: Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures** Not required
· **6.2 Environmental precautions:**
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.
· **6.3 Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to section 13.
Ensure adequate ventilation.
· **6.4 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

· **7.1 Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.
Prevent formation of aerosols.
· **Information about fire - and explosion protection:** Keep respiratory protective device available.

· **7.2 Conditions for safe storage, including any incompatibilities**
· **Storage:**
· **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.

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· **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

· **8.1 Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:**	
7697-37-2 nitric acid	
IOELV	Short-term value: 2.6 mg/m³, 1 ppm

· **Additional information:** The lists valid during the making were used as basis.

· **8.2 Exposure controls**
· **Appropriate engineering controls** No further data; see section 7.
· **Individual protection measures, such as personal protective equipment**
· **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Store protective clothing separately.
· **Respiratory protection:**
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
· **Hand protection**
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. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
· **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/face protection** Goggles recommended during refilling

SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**
· **General Information**

· **Physical state**	Liquid
· **Colour:**	According to product specification
· **Odour:**	Characteristic
· **Odour threshold:**	Not determined
· **Melting point/freezing point:**	0 °C
· **Boiling point or initial boiling point and boiling range**	100 °C (7732-18-5 water, distilled, conductivity or of similar purity)
· **Flammability**	Not applicable
· **Lower and upper explosion limit**	
· **Lower:**	Not determined
· **Upper:**	Not determined
· **Flash point:**	Not applicable
· **Decomposition temperature:**	Not determined

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· **pH**	Not determined
· **Viscosity:**	
· **Kinematic viscosity**	Not determined
· **Dynamic at 20 °C:**	0.952 mPas
· **Solubility**	
· **water:**	Not miscible or difficult to mix.
· **Partition coefficient n-octanol/water (log value)**	Not determined
· **Vapour pressure at 20 °C:**	23 hPa
· **Density and/or relative density**	
· **Density at 20 °C:**	~ 1.01099 g/cm³
· **Relative density**	Not determined
· **Vapour density**	Not determined

· **9.2 Other information**	
· **Appearance:**	
· **Form:**	Fluid
· **Important information on protection of health and environment, and on safety.**	
· **Ignition temperature:**	Product is not selfigniting.
· **Explosive properties:**	Product does not present an explosion hazard.
· **Solvent content:**	
· **Solids content:**	0.3 %
· **Molecular weight**	18.02 g/mol
· **Change in condition**	
· **Evaporation rate**	Not determined

· **Information with regard to physical hazard classes**	
· **Explosives**	Void
· **Flammable gases**	Void
· **Aerosols**	Void
· **Oxidising gases**	Void
· **Gases under pressure**	Void
· **Flammable liquids**	Void
· **Flammable solids**	Void
· **Self-reactive substances and mixtures**	Void
· **Pyrophoric liquids**	Void
· **Pyrophoric solids**	Void
· **Self-heating substances and mixtures**	Void
· **Substances and mixtures, which emit flammable gases in contact with water**	Void
· **Oxidising liquids**	Void
· **Oxidising solids**	Void
· **Organic peroxides**	Void
· **Corrosive to metals**	Void
· **Desensitised explosives**	Void

SECTION 10: Stability and reactivity

· **10.1 Reactivity** No further relevant information available.
· **10.2 Chemical stability**
· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
· **10.3 Possibility of hazardous reactions** No dangerous reactions known.
· **10.4 Conditions to avoid** No further relevant information available.
· **10.5 Incompatible materials:** No further relevant information available.
· **10.6 Hazardous decomposition products:** No dangerous decomposition products known.

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SECTION 11: Toxicological information

· ***11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008***
· ***Acute toxicity*** *Based on available data, the classification criteria are not met.*
· ***Primary irritant effect:***
· ***Skin corrosion/irritation*** *Causes skin irritation.*
· ***Serious eye damage/irritation*** *Causes serious eye irritation.*
· ***Respiratory or skin sensitisation*** *Based on available data, the classification criteria are not met.*
· ***Germ cell mutagenicity*** *Based on available data, the classification criteria are not met.*
· ***Carcinogenicity*** *May cause cancer by inhalation.*
· ***Reproductive toxicity*** *May damage fertility.*
· ***STOT-single exposure*** *Based on available data, the classification criteria are not met.*
· ***STOT-repeated exposure*** *Based on available data, the classification criteria are not met.*
· ***Aspiration hazard*** *Based on available data, the classification criteria are not met.*
· ***11.2 Information on other hazards***

· ***Endocrine disrupting properties***

None of the ingredients is listed.

SECTION 12: Ecological information

· ***12.1 Toxicity***
· ***Aquatic toxicity:*** *No further relevant information available.*
· ***12.2 Persistence and degradability*** *No further relevant information available.*
· ***12.3 Bioaccumulative potential*** *No further relevant information available.*
· ***12.4 Mobility in soil*** *No further relevant information available.*
· ***12.5 Results of PBT and vPvB assessment***
· ***PBT:*** *Not applicable*
· ***vPvB:*** *Not applicable*
· ***12.6 Endocrine disrupting properties***
The product does not contain substances with endocrine disrupting properties.
· ***12.7 Other adverse effects***
· ***Remark:*** *Toxic for fish*
· ***Additional ecological information:***
· ***General notes:***
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
Also poisonous for fish and plankton in water bodies.
Toxic for aquatic organisms

SECTION 13: Disposal considerations

· ***13.1 Waste treatment methods***
· ***Recommendation***
Must not be disposed together with household garbage. Do not allow product to reach sewage system.

· ***Uncleaned packaging:***
· ***Recommendation:*** *Disposal must be made according to official regulations.*

SECTION 14: Transport information

· ***14.1 UN number or ID number***
· ***ADR, IMDG, IATA*** *UN1760*

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· **14.2 UN proper shipping name**	
· **ADR**	1760 CORROSIVE LIQUID, N.O.S. (NITRIC ACID), ENVIRONMENTALLY HAZARDOUS
· **IMDG**	CORROSIVE LIQUID, N.O.S. (NITRIC ACID, cobalt dinitrate), MARINE POLLUTANT
· **IATA**	CORROSIVE LIQUID, N.O.S. (NITRIC ACID)
· **14.3 Transport hazard class(es)**	
· **ADR, IMDG**	
· **Class**	8 Corrosive substances.
· **Label**	8
· **IATA**	
· **Class**	8 Corrosive substances.
· **Label**	8
· **14.4 Packing group**	
· **ADR, IMDG, IATA**	III
· **14.5 Environmental hazards:**	Product contains environmentally hazardous substances: cobalt dinitrate
· **Marine pollutant:**	Yes Symbol (fish and tree)
· **Special marking (ADR):**	Symbol (fish and tree)
· **14.6 Special precautions for user**	Warning: Corrosive substances.
· **Hazard identification number (Kemler code):**	80
· **EMS Number:**	F-A,S-B
· **Segregation groups**	(SGG1) Acids
· **Stowage Category**	A
· **Stowage Code**	SW2 Clear of living quarters.
· **14.7 Maritime transport in bulk according to IMO instruments**	Not applicable
· **Transport/Additional information:**	
· **ADR**	
· **Limited quantities (LQ)**	5L
· **Excepted quantities (EQ)**	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· **Transport category**	3
· **Tunnel restriction code**	E
· **IMDG**	
· **Limited quantities (LQ)**	5L
· **Excepted quantities (EQ)**	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml

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· ***UN "Model Regulation":*** *UN 1760 CORROSIVE LIQUID, N.O.S. (NITRIC ACID), 8, III, ENVIRONMENTALLY HAZARDOUS*

SECTION 15: Regulatory information

· ***15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture***
· ***Labelling according to Regulation (EC) No 1272/2008***
The product is classified and labelled according to the CLP regulation.
· ***Hazard pictograms***



GHS07 GHS08 GHS09

· ***Signal word*** *Danger*

· ***Hazard-determining components of labelling:***
cobalt dinitrate
· ***Hazard statements***
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H350i May cause cancer by inhalation.
H360F May damage fertility.
H411 Toxic to aquatic life with long lasting effects.
· ***Precautionary statements***

P273	*Avoid release to the environment.*
P280	*Wear protective gloves/protective clothing/eye protection/face protection/hearing 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.*
P308+P313	*IF exposed or concerned: Get medical advice/attention.*
P405	*Store locked up.*
P501	*Dispose of contents/container in accordance with local/regional/national/international regulations.*

· ***Directive 2012/18/EU***
· ***Named dangerous substances - ANNEX I*** *None of the ingredients is listed.*
· ***Seveso category*** *E2 Hazardous to the Aquatic Environment*
· ***Qualifying quantity (tonnes) for the application of lower-tier requirements*** *200 t*
· ***Qualifying quantity (tonnes) for the application of upper-tier requirements*** *500 t*

· ***LIST OF SUBSTANCES SUBJECT TO AUTHORISATION (ANNEX XIV)***
None of the ingredients is listed.

· ***REGULATION (EC) No 1907/2006 ANNEX XVII*** *Conditions of restriction: 3, 28, 30*

· ***DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II***
None of the ingredients is listed.

· ***REGULATION (EU) 2019/1148***

· ***Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))***
None of the ingredients is listed.

· ***Annex II - REPORTABLE EXPLOSIVES PRECURSORS***
None of the ingredients is listed.

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· ***Regulation (EC) No 273/2004 on drug precursors***

None of the ingredients is listed.

· ***Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors***

None of the ingredients is listed.

· ***National regulations:***

· ***Other regulations, limitations and prohibitive regulations***

· ***Substances of very high concern (SVHC) according to REACH, Article 57***

10141-05-6	*cobalt dinitrate*

· ***15.2 Chemical safety assessment:*** *A Chemical Safety Assessment has not been carried out.*

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.
This Safety Data Sheets is in compliance with Regulation (EC) No 1907/2006, Article 31 as amended by Regulation (EU) 2020/878.

· ***Relevant phrases***
H272 May intensify fire; oxidiser.
H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H331 Toxic if inhaled.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H341 Suspected of causing genetic defects.
H350i May cause cancer by inhalation.
H360F May damage fertility.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.
EUH071 Corrosive to the respiratory tract.

· ***Department issuing SDS:*** *Product safety department*
· ***Contact:*** *Mrs. Taralova*
· ***Date of previous version:*** *20.08.2018*
· ***Version number of previous version:*** *3*
· ***Abbreviations and acronyms:***
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
ICAO: International Civil Aviation Organisation
ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
PBT: Persistent, Bioaccumulative and Toxic
SVHC: Substances of Very High Concern
vPvB: very Persistent and very Bioaccumulative
ATE: Acute toxicity estimate values
Ox. Liq. 3: Oxidizing liquids – Category 3
Acute Tox. 3: Acute toxicity – Category 3
Skin Corr. 1A: Skin corrosion/irritation – Category 1A
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Dam. 1: Serious eye damage/eye irritation – Category 1
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
Resp. Sens. 1: Respiratory sensitisation – Category 1
Skin Sens. 1: Skin sensitisation – Category 1
Muta. 2: Germ cell mutagenicity – Category 2

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Carc. 1B: Carcinogenicity – Category 1B
Repr. 1B: Reproductive toxicity – Category 1B
Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1
Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2