

### MATERIAL SAFETY DATA SHEET (MSDS)

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

##### 1.1. Product identifier

Product form	: Substance
	:
CAS No	: 10026-22-9
Product code	: 02896
Chemical structure	: $\text{Co}(\text{NO}_3)_2 \cdot 6\text{H}_2\text{O}$
Synonyms	: Cobaltous nitrate

##### 1.2. Relevant identified uses of the substance or mixture and uses advised against

###### 1.2.1. Relevant identified uses

Use of the substance/mixture : Industrial. For professional use only

###### 1.2.2. Uses advised against

No additional information available

##### 1.3. Details of the supplier of the safety data sheet

CHEMIECALL  
Jl. Diklat Pemda, Dukuh Pinang No. 24 RT.001/003  
Kel. Bojong Nangka Kec. Kelapa Dua Tangerang 15821  
Contact: +62(21) 54210228  
[info@chemiecall.com](mailto:info@chemiecall.com) [www.chemiecall.com](http://www.chemiecall.com)

#### SECTION 2: Hazards identification

##### 2.1. Classification of the substance or mixture

###### Classification according to Regulation (EC) No. 1272/2008 [CLP]

Sensitisation —	H334
Respiratory, category 1	
Sensitisation — Skin,	H317
category 1	
Germ cell mutagenicity,	H341
Category 2	
Carcinogenicity	H350i
(inhalation) Category 1B	
Reproductive toxicity,	H360F
Category 1B	
Hazardous to the aquatic	H410
environment — Chronic	
Hazard, Category 1	

Full text of classification categories and H statements : see section 16

# COBALT (II) NITRATE HEXAHYDRATE AR/ACS

## Safety Data Sheet

### Classification according to Directive 67/548/EEC or 1999/45/EC

Carc.Cat.3; R40

Muta.Cat.3; R68

O; R9

Xn; R22

R43

N; R50/53

Full text of R-phrases: see section 16

### Adverse physicochemical, human health and environmental effects

No additional information available

## 2.2. Label elements

### Labelling according to Regulation (EC) No. 1272/2008 [CLP] Extra labelling to display Extra classification(s) to display

Hazard pictograms (CLP)

:



GHS08



GHS09

Signal word (CLP)

: Danger

Hazard statements (CLP)

: H317 - May cause an allergic skin reaction  
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  
H410 - Very toxic to aquatic life with long lasting effects

Precautionary statements (CLP)

: P201 - Obtain special instructions before use  
P273 - Avoid release to the environment  
P280 - Wear protective gloves/protective clothing/eye protection/face protection  
P302+P352 - IF ON SKIN: Wash with plenty of water/...  
P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing  
P342+P311 - If experiencing respiratory symptoms: Call a POISON CENTER/doctor/...

## 2.3. Other hazards

No additional information available

## SECTION 3: Composition/information on ingredients

### 3.1. Substance

Name : COBALT (II) NITRATE HEXAHYDRATE AR/ACS

CAS No : 10026-22-9

Full text of R- and H-phrases: see section 16

# COBALT (II) NITRATE HEXAHYDRATE AR/ACS

## Safety Data Sheet

### 3.2. Mixture

Not applicable

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

First-aid measures after inhalation	: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
First-aid measures after skin contact	: Wash with plenty of soap and water. Get medical advice/attention. Wash contaminated clothing before reuse.
First-aid measures after eye contact	: Remove contact lenses, if present and easy to do. Continue rinsing. Rinse cautiously with water for several minutes.
First-aid measures after ingestion	: Rinse mouth. Call a POISON CENTER or doctor/physician if you feel unwell.

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

Symptoms/injuries	: May cause damage to organs. May damage fertility.
Symptoms/injuries after inhalation	: May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause cancer by inhalation.
Symptoms/injuries after skin contact	: May cause an allergic skin reaction.
Symptoms/injuries after ingestion	: Harmful if swallowed.
Chronic symptoms	: Suspected carcinogen.

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

Treat symptomatically.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media	: Carbon dioxide. Dry powder. Foam. Water spray.
Unsuitable extinguishing media	: Do not use a heavy water stream.

### 5.2. Special hazards arising from the substance or mixture

No additional information available

### 5.3. Advice for firefighters

Protection during firefighting	: Do not enter fire area without proper protective equipment, including respiratory protection.
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## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

#### 6.1.1. For non-emergency personnel

Emergency procedures	: Evacuate unnecessary personnel.
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#### 6.1.2. For emergency responders

Protective equipment	: Use personal protective equipment as required.
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### 6.2. Environmental precautions

Very toxic to aquatic life with long lasting effects.

### 6.3. Methods and material for containment and cleaning up

Methods for cleaning up	: Minimize generation of dust. On land, sweep or shovel into suitable containers.
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### 6.4. Reference to other sections

No additional information available

# COBALT (II) NITRATE HEXAHYDRATE AR/ACS

## Safety Data Sheet

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

Precautions for safe handling	: Avoid contact with skin and eyes. Avoid dust formation. Do not breathe vapours. Provide good ventilation in process area to prevent formation of vapour.
Hygiene measures	: Do not eat, drink or smoke when using this product. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

#### 7.2. Conditions for safe storage, including any incompatibilities

Storage conditions	: Store in a well-ventilated place. Keep container tightly closed. Store in original container. Store in a dry place. Protect from moisture.
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#### 7.3. Specific end use(s)

No additional information available

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

No additional information available

#### 8.2. Exposure controls

Personal protective equipment	: Wash ... thoroughly after handling.
Hand protection	: protective gloves
Eye protection	: Chemical goggles or safety glasses
Skin and body protection	: Wear fire/flammable resistant/retardant clothing
Respiratory protection	: Wear respiratory protection
Other information	: Do not breathe dust/fume/gas/mist/vapours/spray. Do not eat, drink or smoke when using this product.

### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

Physical state	: Solid
Molecular mass	: 291.03 g/mol
Colour	: Red crystals.
Odour	: odourless.
Odour threshold	: No data available
pH	: 4 at 100 g/l at 20 °C
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: 55 °C
Freezing point	: No data available
Boiling point	: 75 °C
Flash point	: No data available

# COBALT (II) NITRATE HEXAHYDRATE AR/ACS

## Safety Data Sheet

Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Density	: 1.87 g/cm <sup>3</sup>
Solubility	: Water: 134 g/100ml
Log Pow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: The substance or mixture is classified as oxidizing with the subcategory 2.
Explosive limits	: No data available

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No additional information available

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

No additional information available

### 10.4. Conditions to avoid

Direct sunlight. Air contact. Moisture.

### 10.5. Incompatible materials

No additional information available

### 10.6. Hazardous decomposition products

No additional information available

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity	: Not classified
Skin corrosion/irritation	: Not classified pH: 4 at 100 g/l at 20 °C
Serious eye damage/irritation	: Not classified pH: 4 at 100 g/l at 20 °C

# COBALT (II) NITRATE HEXAHYDRATE AR/ACS

## Safety Data Sheet

Respiratory or skin sensitisation	: 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.
Carcinogenicity	: May cause cancer by inhalation.
Reproductive toxicity	: May damage fertility.
Specific target organ toxicity (single exposure)	: Not classified
Specific target organ toxicity (repeated exposure)	: Not classified
Aspiration hazard	: Not classified
Potential adverse human health effects and symptoms	: Harmful if swallowed.

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - water : Very toxic to aquatic life with long lasting effects.

### 12.2. Persistence and degradability

#### COBALT (II) NITRATE HEXAHYDRATE AR/ACS (10026-22-9)

Persistence and degradability	May cause long-term adverse effects in the environment.
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### 12.3. Bioaccumulative potential

No additional information available

### 12.4. Mobility in soil

No additional information available

### 12.5. Results of PBT and vPvB assessment

No additional information available

### 12.6. Other adverse effects

No additional information available

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Product/Packaging disposal recommendations : Dispose of contents/container to ...

## SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

# COBALT (II) NITRATE HEXAHYDRATE AR/ACS

## Safety Data Sheet

### 14.1. UN number

UN-No. (ADR)	: 3077
UN-No. (IMDG)	: 3077
UN-No.(IATA)	: 3077
UN-No.(ADN)	: 3077
UN-No. (RID)	: 3077

### 14.2. UN proper shipping name

Proper Shipping Name (ADR)	: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
Proper Shipping Name (IMDG)	: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
Proper Shipping Name (IATA)	: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
Proper Shipping Name (ADN)	: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
Proper Shipping Name (RID)	: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
Transport document description (ADR)	: UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S., 9, III, (E)
Transport document description (IMDG)	: UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S., 9, III, MARINE POLLUTANT
Transport document description (IATA)	: UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S., 9, III
Transport document description (ADN)	: UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S., 9, III
Transport document description (RID)	: UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S., 9, III

### 14.3. Transport hazard class(es)

#### ADR

Transport hazard class(es) (ADR)	: 9
Danger labels (ADR)	: 9



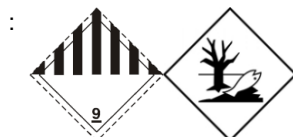
#### IMDG

Transport hazard class(es) (IMDG)	: 9
Danger labels (IMDG)	: 9



#### IATA

Transport hazard class(es) (IATA)	: 9
Hazard labels (IATA)	: 9

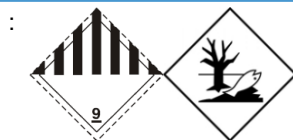


#### ADN

Transport hazard class(es) (ADN)	: 9
Danger labels (ADN)	: 9

# COBALT (II) NITRATE HEXAHYDRATE AR/ACS

## Safety Data Sheet



### RID

Transport hazard class(es) (RID) : 9

Danger labels (RID) : 9



### 14.4. Packing group

Packing group (ADR) : III

Packing group (IMDG) : III

Packing group (IATA) : III

Packing group (ADN) : III

Packing group (RID) : III

### 14.5. Environmental hazards

Dangerous for the environment : Yes

Marine pollutant : Yes

Other information : No supplementary information available

### 14.6. Special precautions for user

#### - Overland transport

Classification code (ADR) : M7

Special provision (ADR) : 274, 335, 601, 375

Limited quantities (ADR) : 5kg

Excepted quantities (ADR) : E1

Packing instructions (ADR) : P002, IBC08, LP02, R001

Special packing provisions (ADR) : PP12, B3

Mixed packing provisions (ADR) : MP10

Portable tank and bulk container instructions (ADR) : T1, BK1, BK2

Portable tank and bulk container special provisions (ADR) : TP33

Tank code (ADR) : SGAV, LGBV

Vehicle for tank carriage : AT

Transport category (ADR) : 3

Special provisions for carriage - Packages (ADR) : V13

Special provisions for carriage - Bulk (ADR) : VC1, VC2

Special provisions for carriage - Loading, unloading and handling (ADR) : CV13

Hazard identification number (Kemler No.) : 90

Orange plates :





# COBALT (II) NITRATE HEXAHYDRATE AR/ACS

## Safety Data Sheet

Tunnel restriction code (ADR) : E  
EAC code : 2Z

### - Transport by sea

Special provision (IMDG) : 274, 335, 966, 967, 969  
Limited quantities (IMDG) : 5 kg  
Excepted quantities (IMDG) : E1  
Packing instructions (IMDG) : P002, LP02  
Packing provisions (IMDG) : PP12  
IBC packing instructions (IMDG) : IBC08  
IBC special provisions (IMDG) : B3  
Tank instructions (IMDG) : T1, BK1, BK2, BK3  
Tank special provisions (IMDG) : TP33  
EmS-No. (Fire) : F-A  
EmS-No. (Spillage) : S-F  
Stowage category (IMDG) : A  
Stowage and handling (IMDG) : SW23  
MFAG-No : 140

### - Air transport

PCA Excepted quantities (IATA) : E1  
PCA Limited quantities (IATA) : Y956  
PCA limited quantity max net quantity (IATA) : 30kgG  
PCA packing instructions (IATA) : 956  
PCA max net quantity (IATA) : 400kg  
CAO packing instructions (IATA) : 956  
CAO max net quantity (IATA) : 400kg  
Special provision (IATA) : A97, A158, A179, A197  
ERG code (IATA) : 9L

### - Inland waterway transport

Classification code (ADN) : M7  
Special provisions (ADN) : 274, 335, 375, 601  
Limited quantities (ADN) : 5 kg  
Excepted quantities (ADN) : E1  
Carriage permitted (ADN) : T\* B\*\*  
Equipment required (ADN) : PP, A  
Number of blue cones/lights (ADN) : 0

### - Rail transport

Classification code (RID) : M7  
Special provision (RID) : 274, 335, 375, 601  
Limited quantities (RID) : 5kg  
Excepted quantities (RID) : E1  
Packing instructions (RID) : P002, IBC08, LP02, R001  
Special packing provisions (RID) : PP12, B3  
Mixed packing provisions (RID) : MP10  
Portable tank and bulk container instructions (RID) : T1, BK1, BK2  
Portable tank and bulk container special provisions (RID) : TP33  
Tank codes for RID tanks (RID) : SGAV, LGBV  
Transport category (RID) : 3  
Special provisions for carriage – Packages (RID) : W13

# COBALT (II) NITRATE HEXAHYDRATE AR/ACS

## Safety Data Sheet

Special provisions for carriage – Bulk (RID)	: VC1, VC2
Special provisions for carriage – Loading and unloading (RID)	: CW13, CW31
Colis express (express parcels) (RID)	: CE11
Hazard identification number (RID)	: 90

### 14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

## SECTION 15: Regulatory information

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

#### 15.1.1. EU-Regulations

No REACH Annex XVII restrictions

COBALT (II) NITRATE HEXAHYDRATE AR/ACS is not on the REACH Candidate List

COBALT (II) NITRATE HEXAHYDRATE AR/ACS is not on the REACH Annex XIV List

#### 15.1.2. National regulations

##### Germany

12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

##### Denmark

Recommendations Danish Regulation : Young people below the age of 18 years are not allowed to use the product  
Pregnant/breastfeeding women working with the product must not be in direct contact with the product  
The requirements from the Danish Working Environment Authorities regarding work with carcinogens must be followed during use and disposal

### 15.2. Chemical safety assessment

No additional information available

## SECTION 16: Other information

Full text of R-, H- and EUH-phrases:

Aquatic Chronic 1	Hazardous to the aquatic environment — Chronic Hazard, Category 1
Carc. 1B	Carcinogenicity (inhalation) Category 1B
Muta. 2	Germ cell mutagenicity, Category 2
Repr. 1B	Reproductive toxicity, Category 1B

# COBALT (II) NITRATE HEXAHYDRATE AR/ACS

## Safety Data Sheet

Resp. Sens. 1	Sensitisation — Respiratory, category 1
Skin Sens. 1	Sensitisation — Skin, category 1
H317	May cause an allergic skin reaction
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
H410	Very toxic to aquatic life with long lasting effects
R22	Harmful if swallowed
R40	Limited evidence of a carcinogenic effect
R43	May cause sensitisation by skin contact
R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
R68	Possible risk of irreversible effects
R9	Explosive when mixed with combustible material
N	Dangerous for the environment
O	Oxidising
Xn	Harmful

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product*