

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**1414-10 Color Standard Solution**

Revision date: 04.05.2017

Product code: 141410

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**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

1414-10 Color Standard Solution

**1.2. Relevant identified uses of the substance or mixture and uses advised against****Use of the substance/mixture**

Water analysis

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

Company name: HACH LANGE GmbH  
Street: Willstätterstr. 11  
Place: D-40549 Düsseldorf  
Telephone: +49 (0)211 5288-383  
e-mail: SDS@hach.com  
Internet: www.de.hach.com  
Responsible Department: HACH LANGE Ltd.  
5, Pacific Way  
Salford Manchester M50 1DL - United Kingdom  
Tel. +44 (0) 161 872 1487 \* Fax +44 (0) 161 848 7324  
e-Mail: info-uk@hach.com

HACH LANGE Ltd.  
Unit 1, Chestnut Road Western Industrial Estate  
IRL-Dublin 12  
Tel. +353 (0)1 4602522  
e-Mail: info-ie@hach.com

**1.4. Emergency telephone number:**

Poison Control Center Mainz: Tel: +49 (0) 6131 19240 - 24 hour emergency service -

**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****Regulation (EC) No. 1272/2008**

Hazard categories:

Substance or mixture corrosive to metals: Met. Corr. 1

Skin corrosion/irritation: Skin Corr. 1

Serious eye damage/eye irritation: Eye Dam. 1

Respiratory or skin sensitisation: Skin Sens. 1

Respiratory or skin sensitisation: Resp. Sens. 1A

Carcinogenicity: Carc. 1B

Reproductive toxicity: Repr. 1B

Hazard Statements:

May be corrosive to metals.

Causes severe skin burns and eye damage.

Causes serious eye damage.

May cause an allergic skin reaction.

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

May cause cancer by inhalation.

May damage fertility or the unborn child.

**2.2. Label elements****Regulation (EC) No. 1272/2008**

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#### Hazard components for labelling

hydrochloric acid ... %

cobalt dichloride

**Signal word:** Danger**Pictograms:**

#### Hazard statements

- |       |  |
|-------|--|
| H290  | May be corrosive to metals.                        |
| H314  | Causes severe skin burns and eye damage.           |
| H317  | May cause an allergic skin reaction.               |
| H350i | May cause cancer by inhalation.                    |
| H360  | May damage fertility or the unborn child.          |
| H412  | Harmful to aquatic life with long lasting effects. |

#### Precautionary statements

- |                |  |
|----------------|--|
| P201           | Obtain special instructions before use.  |
| P280           | Wear protective gloves/protective clothing/eye protection/face protection.   |
| P301+P330+P331 | IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.   |
| P303+P361+P353 | IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.                           |
| P304+P340      | IF INHALED: Remove person to fresh air and keep comfortable for breathing.   |
| P305+P351+P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P310           | Immediately call a POISON CENTER/doctor.   |

#### Special labelling of certain mixtures

Restricted to professional users.

#### Additional advice on labelling

The product is classified as dangerous in accordance with Regulation (EC) No. 1272/2008.

#### 2.3. Other hazards

None known.

### SECTION 3: Composition/information on ingredients

#### 3.2. Mixtures

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#### Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification according to Regulation (EC) No. 1272/2008 [CLP]			
7732-18-5	Water			90-100 %
	231-791-2			
-	hydrochloric acid ... %			1-5 %
	231-595-7	017-002-01-X		
	Skin Corr. 1B, STOT SE 3; H314 H335			
16921-30-5	dipotassium hexachloroplatinate			0,1 -1 %
	240-979-3	078-007-00-3		
	Acute Tox. 3, Eye Dam. 1, Resp. Sens. 1, Skin Sens. 1; H301 H318 H334 H317			
7646-79-9	cobalt dichloride			0,1-1 %
	231-589-4	027-004-00-5		
	Carc. 1B, Muta. 2, Repr. 1B, Acute Tox. 4, Resp. Sens. 1, Skin Sens. 1, Aquatic Acute 1 (M-Factor = 10), Aquatic Chronic 1 (M-Factor = 10); H350i H341 H360F H302 H334 H317 H400 H410			

Full text of H and EUH statements: see section 16.

#### Further Information

This product contains substances of very high concern (Regulation (EC) No 1907/2006 (REACH), Article 57).  
(cobalt dichloride)

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

#### General information

Take off contaminated clothing and shoes immediately.  
Show this safety data sheet to the doctor in attendance.  
The product itself does not burn.

#### After inhalation

Move to fresh air.  
Consult a physician. Show this safety data sheet to the doctor in attendance.

#### After contact with skin

Wash off immediately with plenty of water for at least 15 minutes.  
Take off all contaminated clothing immediately.  
If skin irritation persists, call a physician.

#### After contact with eyes

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Show this safety data sheet to the doctor in attendance.

#### After ingestion

Clean mouth with water and drink afterwards plenty of water. Do NOT induce vomiting.  
Consult a physician. Show this safety data sheet to the doctor in attendance.

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

Irritation and corrosion

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

Treat symptomatically.

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## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

#### **Suitable extinguishing media**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. The product itself does not burn.

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

Fire may liberate hazardous vapours.

### 5.3. Advice for firefighters

In order to avoid contact with skin, keep a safety distance and wear suitable protective clothing.

In the case of respirable dust and/or fumes, use self-contained breathing apparatus and dust impervious protective suit.

#### **Additional information**

Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

## SECTION 6: Accidental release measures

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

Use personal protective equipment. Only qualified personnel equipped with suitable protective equipment may intervene. Immediately evacuate personnel to safe areas.

Do not breathe vapours, mist or gas. Ensure adequate ventilation.

### 6.2. Environmental precautions

Do not flush into surface water or sanitary sewer system.

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

Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local/national regulations (see section 13).

### 6.4. Reference to other sections

13. Disposal considerations

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

#### **Advice on safe handling**

Use only in well-ventilated areas.

Avoid contact with skin and eyes.

Do not breathe vapours/dust.

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

#### **Requirements for storage rooms and vessels**

Keep tightly closed in a dry, cool and well-ventilated place. Protect against light. Accessible only for authorized persons.

### 7.3. Specific end use(s)

Reagent for analysis

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

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**Exposure limits (EH40)**

CAS No	Substance	ppm	mg/m <sup>3</sup>	fibres/ml	Category	Origin
-	Cobalt and cobalt compounds (as Co)	-	0.1		TWA (8 h)	WEL
7647-01-0	Hydrogen chloride (gas and aerosol mists)	1	2		TWA (8 h)	WEL
		5	8		STEL (15 min)	WEL

**Additional advice on limit values**

Limit values in other countries:

 Poland: Exposure limit(s) Co 0,2 mg/m<sup>3</sup>
**8.2. Exposure controls**
**Appropriate engineering controls**

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

**Protective and hygiene measures**

The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Wash hands before breaks and after work.

**Eye/face protection**

Safety glasses with side-shields

**Hand protection**

Use barrier skin cream.

Chemical resistant gloves made of butyl rubber or nitrile rubber category III according to EN 374. In full contact:

Gloves material: Viton, Layer thickness: 0.70 mm, Breakthrough time: &gt;480 min. In splash contact: Glove

material: nitrile rubber, Layer thickness 0.40 mm, Breakthrough time: &gt; 30 min

**Skin protection**

Remove and wash contaminated clothing before re-use.

**Respiratory protection**

Breathing apparatus only if aerosol or dust is formed.

Recommended Filter type: ABEK-filter

**Environmental exposure controls**

Do not flush into surface water or sanitary sewer system.

**SECTION 9: Physical and chemical properties**
**9.1. Information on basic physical and chemical properties**

Physical state:	liquid
Colour:	orange yellow
Odour:	odourless
pH-Value (at 20 °C):	1

**Changes in the physical state**

Melting point:	6 °C
Initial boiling point and boiling range:	102 °C
Sublimation point:	no data available
Softening point:	no data available
Pour point:	not applicable
:	no data available
Flash point:	not applicable
Sustaining combustion:	No data available

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**Flammability**

Solid: not applicable  
Gas: not applicable

**Explosive properties**

no data available

Lower explosion limits: not applicable

Upper explosion limits: not applicable

Ignition temperature: not applicable

**Auto-ignition temperature**

Solid: not applicable

Gas: not applicable

Decomposition temperature: no data available

**Oxidizing properties**

no data available

Vapour pressure: no data available

Vapour pressure: no data available

Density (at 20 °C): 1,02 g/cm<sup>3</sup>

Bulk density: no data available

Water solubility: completely soluble

(at 20 °C)

**Solubility in other solvents**

no data available

Partition coefficient: no data available

Viscosity / dynamic: 1,1 mPa·s

Viscosity / kinematic: 1,078 mm<sup>2</sup>/s

Flow time: no data available

Vapour density: no data available

Evaporation rate: no data available

Solvent separation test: no data available

Solvent content: no data available

**9.2. Other information**

Solid content: no data available

Corrosive in contact with metals

**SECTION 10: Stability and reactivity****10.1. Reactivity**

Corrosive to metals

**10.2. Chemical stability**

Stable under recommended storage conditions.

**10.3. Possibility of hazardous reactions**

Hazardous polymerisation does not occur.

**10.4. Conditions to avoid**

To avoid thermal decomposition, do not overheat. Above 300 °C, hazardous fumes may be released. Stable under recommended storage conditions.

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#### 10.5. Incompatible materials

Alkali metals, Metals,

#### 10.6. Hazardous decomposition products

Acid chlorides

#### Further information

This information is not available.

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

##### Toxicokinetics, metabolism and distribution

No toxicology information is available.

##### Acute toxicity

Based on available data, the classification criteria are not met.

No data is available on the product itself.

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
-	hydrochloric acid ... %				
	dermal	LD50 mg/kg	>5010		
16921-30-5	dipotassium hexachloroplatinate				
	oral	ATE mg/kg	100		
7646-79-9	cobalt dichloride				
	oral	LD50	80 mg/kg	Rat	GESTIS

##### Irritation and corrosivity

Causes severe skin burns and eye damage.

Causes skin and eye burns.

##### Sensitising effects

May cause an allergic skin reaction. (dipotassium hexachloroplatinate; cobalt dichloride)

May cause sensitisation by skin contact.

##### Carcinogenic/mutagenic/toxic effects for reproduction

May cause cancer by inhalation. (cobalt dichloride)

May damage fertility or the unborn child. (cobalt dichloride)

Germ cell mutagenicity: Based on available data, the classification criteria are not met.

May cause cancer.

H360 - May damage fertility or the unborn child.

##### STOT-single exposure

Based on available data, the classification criteria are not met.

The substance or mixture is not classified as specific target organ toxicant, single exposure.

##### STOT-repeated exposure

Based on available data, the classification criteria are not met.

None known.

##### Aspiration hazard

Based on available data, the classification criteria are not met.

No aspiration toxicity classification

##### Specific effects in experiment on an animal

No toxicology information is available.

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**Additional information on tests**

None known.

**Practical experience**
**Observations relevant to classification**

None known.

**Other observations**

None known.

**Further information**

Other dangerous properties can not be excluded. Handle in accordance with good industrial hygiene and safety practice.

**SECTION 12: Ecological information**
**12.1. Toxicity**

Do not flush into surface water or sanitary sewer system.

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h]   [d]	Species	Source	Method
-	hydrochloric acid ... %					
	Acute fish toxicity	LC50	862 mg/l	96 h	Leuciscus idus	
7646-79-9	cobalt dichloride					
	Acute fish toxicity	LC50	0,33 mg/l	96 h	Cyprinus carpio (Carp)	GESTIS
	Acute algae toxicity	ErC50	0,5 mg/l	96 h	Chlorella vulgaris (Fresh water algae)	Gestis

**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 and vPvB assessment**

no data available

**12.6. Other adverse effects**

no data available

**Further information**

no data available

**SECTION 13: Disposal considerations**
**13.1. Waste treatment methods**
**Advice on disposal**

In accordance with local and national regulations.

**Waste disposal number of waste from residues/unused products**

160506 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; laboratory chemicals, consisting of or containing hazardous substances, including mixtures of laboratory chemicals; hazardous waste

**Waste disposal number of used product**

160506 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; laboratory chemicals, consisting of or containing hazardous substances, including mixtures of laboratory chemicals; hazardous waste



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**Contaminated packaging**

Dispose of as unused product.

**SECTION 14: Transport information****Land transport (ADR/RID)**

**14.1. UN number:** UN 1789  
**14.2. UN proper shipping name:** HYDROCHLORIC ACID  
**14.3. Transport hazard class(es):** 8  
**14.4. Packing group:** III  
Hazard label: 8



Classification code: C1  
Special Provisions: 520  
Limited quantity: 5 L  
Excepted quantity: E1  
Transport category: 3  
Hazard No: 80  
Tunnel restriction code: E

**Inland waterways transport (ADN)**

**14.1. UN number:** UN 1789  
**14.2. UN proper shipping name:** HYDROCHLORIC ACID  
**14.3. Transport hazard class(es):** 8  
**14.4. Packing group:** III  
Hazard label: 8



Classification code: C1  
Special Provisions: 520  
Limited quantity: 5 L  
Excepted quantity: E1

**Other applicable information (inland waterways transport)**

Not tested

**Marine transport (IMDG)**

**14.1. UN number:** UN 1789  
**14.2. UN proper shipping name:** HYDROCHLORIC ACID  
**14.3. Transport hazard class(es):** 8  
**14.4. Packing group:** III  
Hazard label: 8



Special Provisions: 223  
Limited quantity: 5 L  
Excepted quantity: E1  
EmS: F-A, S-B

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**Air transport (ICAO-TI/IATA-DGR)**

<b>14.1. UN number:</b>	UN 1789
<b>14.2. UN proper shipping name:</b>	HYDROCHLORIC ACID
<b>14.3. Transport hazard class(es):</b>	8
<b>14.4. Packing group:</b>	III
Hazard label:	8



Special Provisions:	A3 A803
Limited quantity Passenger:	1 L
Passenger LQ:	Y841
Excepted quantity:	E1
IATA-packing instructions - Passenger:	852
IATA-max. quantity - Passenger:	5 L
IATA-packing instructions - Cargo:	856
IATA-max. quantity - Cargo:	60 L

**14.5. Environmental hazards**

ENVIRONMENTALLY HAZARDOUS: no

**14.6. Special precautions for user**

not applicable

**14.7. Transport in bulk according to Annex II of Marpol and the IBC Code**

not applicable

**Other applicable information**

Additional Information: This product may be shipped as part of a chemical kit composed of various compatible dangerous goods for analytical or testing purposes. This kit would have the following classification: Proper Shipping Name: Chemical Kit, Hazard Class: 9, UN Number 3316, Package group II, EMS Code: F-A, S-P  
These transport data apply to the entire pack

**SECTION 15: Regulatory information****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****EU regulatory information**

Authorisations (REACH, annex XIV):

Substances of very high concern, SVHC (REACH, article 59):  
cobalt dichloride

Restrictions on use (REACH, annex XVII):

Entry 28: cobalt dichloride

**National regulatory information**

Employment restrictions:

Observe restrictions to employment for juvenils according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

Water contaminating class (D):

3 - highly water contaminating

**Additional information**

professional use

**15.2. Chemical safety assessment**

For this mixture a chemical safety assessment has been carried out.

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#### SECTION 16: Other information

##### Changes

Revision Date 4.05.2017

Safety datasheet sections which have been updated: 2, 11

Revision Date 28.10.2016

Safety datasheet sections which have been updated: 2-16

Revision Date 11.04.2016

Safety datasheet sections which have been updated: 3

Revision Date 06.05.2015

Safety datasheet sections which have been updated: 2, 4, 11

Revision Date 15.01.2013

Safety datasheet sections which have been updated:8

##### Relevant H and EUH statements (number and full text)

H290	May be corrosive to metals.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.
H341	Suspected of causing genetic defects.
H350i	May cause cancer by inhalation.
H360	May damage fertility or the unborn child.
H360F	May damage fertility.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

##### Further Information

The information is based on present level of our knowledge. It does not, however, give assurances of product properties and establishes no contract legal rights.

*(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)*