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

Product name : Cobalt Standard Solution  
Product number : R-300-20STCO-01, R-100-51STCO-01, R-100-51STCO-500, R-100-51STCO-250  
Substance name : Cobalt (Co) Standard, 20ppm, 1ppm, 500ppb, and 250ppb  
REACH reg no. : This product is exempt from registration, insufficient annual volume.

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

Identified uses : Reagent for analysis

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

Company : Modern Water Monitoring Limited  
: Units 15-17 Cambridge Science Park  
: Cambridge, CB4 0FQ  
: UK  
Email : [info@modernwater.co.uk](mailto:info@modernwater.co.uk)

**1.4 Emergency telephone number**

+44 (0) 1483 696030

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**SECTION 2: Hazards identification**
**2.1 Classification of the substance or mixture****Classification according to Regulation (EC) No 1272/2008 [EU-GHS/CLP]**

Skin irritation (Category 2)

Eye irritation (Category 2)

**2.2 Label elements**

Hazard pictogram



Signal Word: Warning


Hazard statements:

H320	Causes eye irritation
H315	Causes skin irritation

Precautionary statements:

P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
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**2.3 Other hazards : Not known**

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### SECTION 3: Composition/information on ingredients

**3.1 Substance** : Not relevant, see 3.2 Mixtures

#### 3.2 Mixtures

Hazardous ingredients classification according to Regulation (EC) No. 1272/2008 CLP

Substance name	Concentration	CAS No	EC No
Nitric acid	2-3%	7697-37-2	231-714-2
H315 – causes skin irritation			
H319 – causes serious eye irritation			
Cobalt dinitrate	<0.01%	10141-05-06	233-402-1
H272 – may intensify fire; oxidiser			
H302 + H332 - Harmful if swallowed or if inhaled.			
H317 - May cause an allergic skin reaction.			
H318 - Causes serious eye damage.			
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			

### SECTION 4: First Aid measures

#### 4.1 Description of first aid measure

**General advice:** When in doubt or if symptoms observed, get medical advice. Show this safety data sheet to the doctor in attendance.

**After Inhalation:** Remove casualty to fresh air and keep warm. If breathing difficult or respiratory tract irritation get medical assistance. If not breathing, give artificial respiration and get urgent medical assistance.

**In case of skin contact:** Remove contaminated clothing. Wash off with soap and plenty of water. Get medical assistance.

**After eye contact:** Rinse thoroughly with plenty of water for at least 15 minutes. Remove contact lenses. Get urgent medical assistance.


**In case of ingestion:** If accidentally swallowed rinse mouth with plenty of water (only if person is conscious). Do not induce vomiting. Get medical attention.

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

No information available.

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

No information available.

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**SECTION 5: Fire-fighting measures.**

- 5.1 Extinguishing media:**  
**Suitable extinguishing media**  
 Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.  
**Unsuitable extinguishing media**  
 No restriction
- 5.2 Special hazards arising from the substance or mixture**  
 Possible generation of Nitrogen oxide (NO<sub>x</sub>) fumes
- 5.3 Advice for firefighters**  
 Wear self-contained breathing apparatus.
- 5.4 Additional information**  
 Do not let run-off from fire-fighting to enter drains or water courses.

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**SECTION 6: Accidental release measures.**

- 6.1 Personal precautions, protective equipment and emergency procedures**  
 Use personal protective equipment (see section 8). Avoid breathing vapours, mist or gas. Ensure adequate ventilation.
- 6.2 Environmental precautions**  
 Do not let product enter drains or surface water. Spills are to be contained. Discharge into environment must be avoided.
- 6.3 Methods and materials for containment and cleaning up**  
 Soak up with inert absorbent material. Keep in a suitable closed container for disposal. Dispose correctly, referring to local regulations.
- 6.4 References to other sections**  
 For disposal see section 13.

---

**SECTION 7: Handling and storage.**

- 7.1 Precautions for safe handling**  
 Avoid exposure to skin and eyes.
- 7.2 Conditions for safe storage, including and incompatibilities**  
 Store in a cool place, below 25°C. Keep contained upright and the cap tightly closed.
- 7.3 Specific end use(s)**  
 Apart from uses specified in section 1.2, no other specific uses.

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## SECTION 8: Exposure controls/personal protection.

### 8.1 Control parameters

Components with workplace control parameters

Component	CAS-No	Value type	Limit value	
Nitric acid	7697-37-2	STEL	1ppm (2.6mg/m <sup>3</sup> )	EU and UK EH40 WEL
Cobalt dinitrate	10141-05-06	TWA	0.1mg/m <sup>3</sup>	EU and UK EH WEL
		Cobalt dinitrate is capable of causing asthma and skin sensitisation. Where no specific short-term (STEL) exposure limit is listed, a figure three times the long-term exposure should be used		

### 8.2 Exposure controls:

#### Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at end of workday.

#### Personal protective equipment

Wear suitable protective clothing

##### Eye/face protection

Safety glasses with side-shields conforming to EN166 or equivalent standard.

##### Skin protection

Handle with gloves (PVC or nitrile)

## SECTION 9: Physical and chemical properties.

### 9.1 Information on basic physical and chemical properties

Appearance	Clear colourless Liquid
Odour	none
Odour threshold	no data available
pH	1 (approx.)
Melting point/range (°C)	no data available
Boiling point (°C):	100 (approx.)
Flash point	not flammable
Evaporation rate	no data available
Flammability (solid/gas)	not applicable
Upper/lower flammability rates	not flammable
Vapour pressure (mmHg at 20°C)	25 (approx.)
Vapour density	no data available
Relative density	1.0 (approx.)
Water solubility	completely miscible
Partition coefficient: n-octane/water	no data available
Auto ignition temperature	no data available
Decomposition temperature	no data available

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Viscosity no data available  
Explosive properties not applicable  
Oxidising properties no data available

### 9.2 Other data

Corrosion May be corrosive to metals

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## SECTION 10: Stability and reactivity.

### 10.1 Reactivity

Mildly reactive to bases.

### 10.2 Chemical stability

This product is chemically stable under standard ambient conditions (room temperature).

### 10.3 Possibility of hazardous reactions

No data available.

### 10.4 Conditions to avoid

No data available.

### 10.5 Incompatible materials

Strong bases.

### 10.6 Hazardous decomposition products

No data available

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## SECTION 11: Toxicological information.

### 11.1 Information on toxicological effects

#### Acute toxicity

No data available

#### Skin corrosion/irritation

Causes skin irritation.

#### Serious eye damage/eye irritation

Causes eye irritation


#### Respiration or skin sensitisation

Not sensitising

#### Germ cell mutagenicity

No data available

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**Carcinogenicity**

IARC: 2B - Group 2B: Possibly carcinogenic to humans (Cobalt dinitrate)

**Reproductive toxicity**

No data available

**Specific target organ exposure – single exposure**

No data available

**Specific target organ exposure – repeated exposure**

No data available

**Aspiration hazard**

Not applicable

**Other adverse effects**

No data available

**SECTION 12: Ecological information.**

**12.1 Toxicity**

No data available

**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**

This mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

**12.6 Other adverse effects**

Harmful to aquatic life with long lasting effects

**SECTION 13: Disposal considerations.**

**13.1 Waste treatment methods:**

**Product**

Dispose in accordance to local regulations, consult the local waste disposal expert.

**Contaminated packaging**

Dispose in accordance to local regulations, the same way as the product itself.



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**SECTION 14: Transport information.**

Non – Hazardous for air, road and sea transport.

**Land transport (ADR/RID)**

14.1	UN number	Not applicable
14.2	UN proper shipping name	Not applicable
14.3	Transport hazard	Not applicable
14.4	Packaging group	Not applicable
14.5	Environmental hazards	Not applicable
14.6	Special precaution for user	Not applicable

**Air transport (IATA)**

14.1	UN number	Not applicable
14.2	UN proper shipping name	Not applicable
14.3	Transport hazard	Not applicable
14.4	Packaging group	Not applicable
14.5	Environmental hazards	Not applicable
14.6	Special precaution for user	Not applicable

**SEA transport (IMDG)**

14.1	UN number	Not applicable
14.2	UN proper shipping name	Not applicable
14.3	Transport hazard	Not applicable
14.4	Packaging group	Not applicable
14.5	Environmental hazards	Not applicable
14.6	Special precaution for user	Not applicable

**SECTION 15: Regulatory information.**


**15.1 Safety, health and environmental regulation/legislation specific for the substance or mixture**

None applicable

**15.2 Chemical Safety Assessment**

No data available

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**SECTION 6: Other information.****Abbreviations and acronyms**

ADR – European Agreement Concerning the International Carriage of Dangerous Goods by Road

Co - Cobalt

IATA – International Air Transportation Association

IMDG – international Maritime Code of Dangerous Goods

STEL – Short term exposure limit

TWA – Time Weighted Average

WEL – Workplace Exposure Limit

**Symbol, R and S phrases for this mixture**

Symbol	Xi- Irritant	
R-phrases(s)	R36/38	Irritating to eyes and skin
S-phrases(s)	S26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice

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