

## Safety data sheet according to 1907/2006/EC, Article 31

Printing date 08.01.2015

Version number 1

Revision: 08.01.2015

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

· **1.1 Product identifier**

· **Trade name: 8 - Minerals and trace elements in Premix**

· **Reference number: PT-AF-08**

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

No further relevant information available.

· **Application of the substance / the mixture** Reference material for laboratory use only

· **Manufacturer/Supplier:**

LGC Limited  
Queens Road  
Teddington  
Middlesex TW11 0LY  
UNITED KINGDOM

Tel : +44 (0) 20 8943 7000  
Fax : +44 (0) 20 8943 2767  
eMail : gb@lgcstandards.com  
Web : www.lgcstandards.com

· **Further information obtainable from:**

Product safety department  
eMail : sds-request@lgcgroup.com

· **1.4 Emergency telephone number:** +44 (0) 20 8943 7000 (Monday - Friday : 8am - 5pm)

### SECTION 2: Hazards identification

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

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



GHS08 health hazard

Resp. Sens. 1      H334    May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
Muta. 2            H341    Suspected of causing genetic defects.  
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 Sens. 1        H317    May cause an allergic skin reaction.

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



T; Toxic

R49-60:    May cause cancer by inhalation. May impair fertility.



Xn; Harmful

R40-68:    Limited evidence of a carcinogenic effect. Possible risk of irreversible effects.



Xn; Sensitising

R42/43:    May cause sensitisation by inhalation and skin contact.



N; Dangerous for the environment

R51/53:    Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

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- **Information concerning particular hazards for human and environment:**  
The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.
- **Classification system:**  
The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

- **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**



GHS08 GHS09

- **Signal word** *Danger*
- **Hazard-determining components of labelling:**  
*cobalt sulphate*  
*Silicon Dioxide - Crystalline Free*
- **Hazard statements**  
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.*  
H350i *May cause cancer by inhalation.*  
H360F *May damage fertility.*  
H411 *Toxic to aquatic life with long lasting effects.*
- **Precautionary statements**  
P280 *Wear protective gloves/protective clothing/eye protection/face protection.*  
P285 *In case of inadequate ventilation wear respiratory protection.*  
P261 *Avoid breathing dust/fume/gas/mist/vapours/spray.*  
P321 *Specific treatment (see on this label).*  
P405 *Store locked up.*  
P501 *Dispose of contents/container in accordance with local/regional/national/international regulations.*
- **Additional information:**  
*Restricted to professional users.*
- **2.3 Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** *Not applicable.*
- **vPvB:** *Not applicable.*

### SECTION 3: Composition/information on ingredients

- **3.2 Chemical characterisation: Mixtures**
- **Description:** *Also contains substances at levels not considered to be hazardous.*

· **Dangerous components:**

CAS: 112926-00-8 RTECS: VV7315000	Silicon Dioxide - Crystalline Free ☒ Xn R40; ☒ Xi R36/37 ☒ Carc. 2, H351; ☒ Eye Irrit. 2, H319; STOT SE 3, H335	< 1.0%
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CAS: 7758-98-7 EINECS: 231-847-6 RTECS: GL 8800000	Copper (II) sulfate ☒ Xn R22; ☒ Xi R36/38; ☒ N R50/53 ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410; ⚠ Acute Tox. 4, H302; Skin Irrit. 2, H315; Eye Irrit. 2, H319	< 1.0%
CAS: 1313-13-9 EINECS: 215-202-6 RTECS: OP 0350000	Manganese dioxide ☒ Xn R20/22 ⚠ Acute Tox. 4, H302; Acute Tox. 4, H332	< 1.0%
CAS: 10124-43-3 EINECS: 233-334-2	cobalt sulphate ☠ T Repr. Cat. 2 R49-60; ☒ Xn R22-68; ☒ Xn R42/43; ☒ N R50/53 Carc. Cat. 2, Muta. Cat. 3 ⚠ Resp. Sens. 1, H334; Muta. 2, H341; Carc. 1B, H350i; Repr. 1B, H360F; ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410; ⚠ Acute Tox. 4, H302; Skin Sens. 1, H317	< 1.0%
CAS: 1314-13-2 EINECS: 215-222-5 RTECS: ZH 4810000	zinc oxide ☒ N R50/53 ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410	< 1.0%

· SVHC

10124-43-3 cobalt sulphate

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

### SECTION 4: First aid measures

#### · 4.1 Description of first aid measures

##### · After inhalation:

Supply fresh air and call a doctor.

In case of unconsciousness place patient in recovery position for transport.

##### · 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: Rinse mouth. Do not induce vomiting.

#### · 4.2 Most important symptoms and effects, both acute and 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: Firefighting measures

#### · 5.1 Extinguishing media

##### · Suitable extinguishing agents:

CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

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

Formation of toxic gases is possible during heating or in case of fire.

#### · 5.3 Advice for firefighters

##### · Protective equipment: Wear self-contained respiratory protective device.

### SECTION 6: Accidental release measures

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

Avoid formation of dust.

#### · 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:

Dispose of contaminated material as waste according to item 13.

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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/extraction at the workplace.

Store in cool, dry place in tightly closed receptacles.

Open and handle receptacle with care.

Prevent formation of dust.

**· 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:**

Store in a cool location.

Please refer to the manufacturer's certificate for specific storage and transport temperature conditions.

Store only in the original receptacle.

Keep container in a well-ventilated place. Keep away from sources of ignition and heat.

**· Information about storage in one common storage facility:** Store away from foodstuffs.

**· Further information about storage conditions:** None.

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

### SECTION 8: Exposure controls/personal protection

**· Additional information about design of technical facilities:** No further data; see item 7.

**· 8.1 Control parameters**

**· Ingredients with limit values that require monitoring at the workplace:**

**1313-13-9 Manganese dioxide**

WEL	Long-term value: 5 mg/m <sup>3</sup> as Mn
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**10124-43-3 cobalt sulphate**

WEL	Long-term value: 0.1 mg/m <sup>3</sup> Carc, Sen
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**· Additional information:** Lists used were valid at the time of SDS preparation.

**· 8.2 Exposure controls**

**· 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.

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced

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· **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374

· **Material of gloves** Only use chemical-protective gloves with CE-labelling of category III.

· **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 protection:** Safety glasses

**SECTION 9: Physical and chemical properties**

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

· **General Information**

· **Appearance:**

· <b>Form:</b>	Solid
· <b>Colour:</b>	Beige
· <b>Odour:</b>	Odourless
· <b>Odour threshold:</b>	Not determined.

· **pH-value:** Not applicable.

· **Change in condition**

· <b>Melting point/Melting range:</b>	Not determined.
· <b>Boiling point/Boiling range:</b>	Not determined.

· **Flash point:** Not applicable.

· **Flammability (solid, gaseous):** Not determined.

· **Ignition temperature:**

· **Decomposition temperature:** Not determined.

· **Self-igniting:** Product is not selfigniting.

· **Danger of explosion:** Not determined.

· **Explosion limits:**

· <b>Lower:</b>	Not determined.
· <b>Upper:</b>	Not determined.

· **Vapour pressure:** Not applicable.

· <b>Density:</b>	Not determined.
· <b>Relative density</b>	Not determined.
· <b>Vapour density</b>	Not applicable.
· <b>Evaporation rate</b>	Not applicable.

· **Solubility in / Miscibility with water:** Insoluble.

· **Partition coefficient (n-octanol/water):** Not determined.

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- **Viscosity:**
  - **Dynamic:** Not applicable.
  - **Kinematic:** Not applicable.
- **9.2 Other information** No further relevant information available.

### SECTION 10: Stability and reactivity

- **10.1 Reactivity** Stable under normal conditions.
- **10.2 Chemical stability** Stable under normal conditions.
- **Thermal decomposition / conditions to be avoided:**  
Formation of toxic gases is possible during heating or in case of fire.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known.
- **10.4 Conditions to avoid** Heat.
- **10.5 Incompatible materials:** Strong oxidizing agents.
- **10.6 Hazardous decomposition products:**  
Formation of toxic gases is possible during heating or in case of fire.

### SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity:**

- **LD/LC50 values relevant for classification:**

**7758-98-7 Copper (II) sulfate**

Oral LD50 300 mg/kg (rat)

**1314-13-2 zinc oxide**

Oral LD50 &gt; 5000 mg/kg (rat)

- **Primary irritant effect:**
  - **on the skin:** No irritating effect.
  - **on the eye:** No irritating effect.
- **Sensitisation:**  
Sensitisation possible through inhalation.  
Sensitisation possible through skin contact.
- **Additional toxicological information:**  
The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:  
Harmful  
Irritant  
Carcinogenic if inhaled.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**  
Muta. 2, Carc. 1B, Repr. 1B

### 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.
- **Ecotoxicological effects:**
- **Remark:** Toxic for fish

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- **Additional ecological information:**
- **General notes:**  
*Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water  
 Do not allow undiluted product to reach ground water, water course or sewage system.  
 Also poisonous for fish and plankton in water bodies.  
 Toxic for aquatic organisms*
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

### SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**  
*Must not be disposed of together with household garbage. Do not allow product to reach sewage system.*
- **European waste catalogue**  
*Waste disposal key numbers from EWC have to be assigned depending on origin and processing.*
- **Uncleaned packaging:**
- **Recommendation:** *Dispose of in accordance with national regulations.*

### SECTION 14: Transport information

- **14.1 UN-Number**
  - **ADR, IMDG, IATA**
  - **ADR**
  - **IMDG**
  - **IATA**
- UN3077  
 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE,  
 SOLID, N.O.S. (zinc oxide, cobalt sulphate)  
 ENVIRONMENTALLY HAZARDOUS SUBSTANCE,  
 SOLID, N.O.S. (zinc oxide, cobalt sulphate), MARINE  
 POLLUTANT  
 ENVIRONMENTALLY HAZARDOUS SUBSTANCE,  
 SOLID, N.O.S. (zinc oxide, cobalt sulphate)

· **14.3 Transport hazard class(es)**

· **ADR, IMDG, IATA**



- **Class**
  - **Label**
- 9 Miscellaneous dangerous substances and articles.  
 9

· **14.4 Packing group**

· **ADR, IMDG, IATA**

III

· **14.5 Environmental hazards:**

Product contains environmentally hazardous substances:  
 Copper (II) sulfate, cobalt sulphate

· **Marine pollutant:**

Yes  
 Symbol (fish and tree)

· **Special marking (ADR):**

Symbol (fish and tree)

· **Special marking (IATA):**

Symbol (fish and tree)

· **14.6 Special precautions for user**

Warning: Miscellaneous dangerous substances and articles.

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· <b>Danger code (Kemler):</b>	90
· <b>EMS Number:</b>	F-A,S-F
· <b>14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>	Not applicable.
· <b>Transport/Additional information:</b>	
· <b>ADR</b>	
· <b>Limited quantities (LQ)</b>	5 kg
· <b>Transport category</b>	3
· <b>Tunnel restriction code</b>	E
· <b>UN "Model Regulation":</b>	UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (zinc oxide, cobalt sulphate), 9, III

### SECTION 15: Regulatory information

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

· **Philippines Inventory of Chemicals and Chemical Substances**

All ingredients are listed.

· **Australian Inventory of Chemical Substances**

All ingredients are listed.

· **Standard for the Uniform Scheduling of Medicines and Poisons**

7758-98-7 Copper (II) sulfate

S5, S6

· **National regulations:**

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

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

10124-43-3 cobalt sulphate

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

### SECTION 16: Other information

The information in this safety data sheet (SDS) has been prepared with due care and is true and accurate to the best of our knowledge. The user must determine the suitability of the information for its particular purpose, ensure compliance with existing laws and regulations, and be aware that other or additional safety or performance considerations may arise when using, handling and/ or storing the material. The information in this SDS does not purport to be all inclusive or a guarantee as to the properties of the material supplied, and should be used only as a guide. LGC makes no warranties or representations as to the accuracy and completeness of the information contained herein, shall not be held responsible for the suitability of this information for the user's intended purposes or the consequences of such use, and shall not be liable for any damage or loss, howsoever arising, direct or otherwise.

· **Relevant phrases**

H302 Harmful if swallowed.

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H319 Causes serious eye irritation.

H332 Harmful if inhaled.

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H335 May cause respiratory irritation.

H341 Suspected of causing genetic defects.

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H350i May cause cancer by inhalation.

H351 Suspected of causing cancer.

H360F May damage fertility.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

R20/22 Harmful by inhalation and if swallowed.

R22 Harmful if swallowed.

R36/37 Irritating to eyes and respiratory system.

R36/38 Irritating to eyes and skin.

R40 Limited evidence of a carcinogenic effect.

R42/43 May cause sensitisation by inhalation and skin contact.

R49 May cause cancer by inhalation.

R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R60 May impair fertility.

R68 Possible risk of irreversible effects.

· **Abbreviations and acronyms:**

ADR: Accord européen sur le transport 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)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

Acute Tox. 4: Acute toxicity, Hazard Category 4

Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2

Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2

Resp. Sens. 1: Sensitisation - Respirat., Hazard Category 1

Skin Sens. 1: Sensitisation - Skin, Hazard Category 1

Muta. 2: Germ cell mutagenicity, Hazard Category 2

Carc. 1B: Carcinogenicity, Hazard Category 1B

Carc. 2: Carcinogenicity, Hazard Category 2

Repr. 1B: Reproductive toxicity, Hazard Category 1B

STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

Aquatic Acute 1: Hazardous to the aquatic environment - Acute Hazard, Category 1

Aquatic Chronic 1: Hazardous to the aquatic environment - Chronic Hazard, Category 1

Aquatic Chronic 2: Hazardous to the aquatic environment - Chronic Hazard, Category 2

· **Sources**

Tables 3.1 and 3.2 from Annex 6 of EC 1272/2008, EC 1907/2006, EH40/2005 as amended 2011, Registry of Toxic Effects of Chemical Substances (RTECS), The Dictionary of Substances and their Effects, 1st Edition, IUCLID.