



## Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 11.02.2019

Version number 1

Revision: 11.02.2019

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

#### · 1.1 Product identifier

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

· **Part 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

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

· **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.

· **2.2 Label elements**

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

The product is classified and labelled according to the CLP regulation.

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· **Hazard pictograms**



GHS08 GHS09

· **Signal word** *Danger*

· **Hazard-determining components of labelling:**

*Cobalt sulphate*

· **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**

*P261 Avoid breathing dust/fume/gas/mist/vapours/spray.*

*P280 Wear protective gloves/protective clothing/eye protection/face protection.*

*P284 [In case of inadequate ventilation] wear respiratory protection.*

*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:** Mixture: consisting of the following components.

· **Dangerous components:**

CAS: 7758-98-7 EINECS: 231-847-6 RTECS: GL 8800000	Copper (II) sulfate ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410; ⚠ Acute Tox. 4, H302; Skin Irrit. 2, H315; Eye Irrit. 2, H319	<2%
CAS: 1313-13-9 EINECS: 215-202-6 RTECS: OP 0350000	Manganese dioxide ⚠ Acute Tox. 4, H302; Acute Tox. 4, H332	<2%
CAS: 10124-43-3 EINECS: 233-334-2	Cobalt sulphate ⚠ 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	<2%

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CAS: 1314-13-2 EINECS: 215-222-5 RTECS: ZH4810000	Zinc oxide ☠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410	<2%
CAS: 112926-00-8 RTECS: VV7315000	Silicon Dioxide - Crystalline Free ⚠ Eye Irrit. 2, H319; STOT SE 3, H335	<2%

· SVHC

CAS: 10124-43-3 Cobalt sulphate

· **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**
- **General information:** Immediately remove any clothing soiled by the product.
- **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:** Use fire extinguishing methods suitable for surrounding conditions.
- **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.  
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.

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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.
- **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:**  
Please refer to the manufacturer's certificate for specific storage and transport temperature conditions.  
Store only in the original receptacle unless other advice is given on the CoA.  
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:** Keep container tightly sealed.
- **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:****CAS: 1313-13-9 Manganese dioxide**OEL Long-term value: 0.2 0.05 mg/m<sup>3</sup>  
as Mn; IOELV; inhalable respirable**CAS: 10124-43-3 Cobalt sulphate**OEL Long-term value: 0.02 mg/m<sup>3</sup>  
as Co; Sens.**CAS: 1314-13-2 Zinc oxide**OEL Short-term value: 10 mg/m<sup>3</sup>  
Long-term value: 2 mg/m<sup>3</sup>  
respirable fraction· **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.

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**· 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*

**· Protection of hands:**

*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*



Protective gloves

**· Material of gloves** Nitrile rubber, NBR

**· 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:**



Tightly sealed goggles

**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/freezing point:</b>	Not determined.
	Not determined.
<b>Initial boiling point and boiling range:</b>	Not determined.

**· Flash point:** Not applicable.

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

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· <b>Ignition temperature:</b>	Not determined
· <b>Decomposition temperature:</b>	Not determined.
· <b>Auto-ignition temperature:</b>	Product is not selfigniting.
· <b>Explosive properties:</b>	Not determined.
· <b>Explosion limits:</b> Lower:	Not determined.
Upper:	Not determined.
· <b>Vapour pressure:</b>	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.
· <b>Solubility in / Miscibility with water:</b>	Insoluble.
· <b>Partition coefficient: n-octanol/water:</b>	Not determined.
· <b>Viscosity:</b> Dynamic:	Not applicable.
Kinematic:	Not applicable.
· <b>9.2 Other information</b>	No further relevant information available.

### SECTION 10: Stability and reactivity

#### · 10.1 Reactivity

Stable under normal conditions.

No further relevant information available.

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

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**· LD/LC50 values relevant for classification:****CAS: 7758-98-7 Copper (II) sulfate**

Oral	LD50	300 mg/kg (rat)
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**CAS: 1314-13-2 Zinc oxide**

Oral	LD50	7,950 mg/kg (mouse)
Inhalative	LC50/2h	2,500 mg/m <sup>3</sup> (mouse)
	LD 50 (Intraperitoneal)	240 mg/kg (rat)

- **Primary irritant effect:**
- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation** Based on available data, the classification criteria are not met.
- **Respiratory or skin sensitisation**  
May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
May cause an allergic skin reaction.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**  
Muta. 2, Carc. 1B, Repr. 1B
- **Germ cell mutagenicity**  
Suspected of causing genetic defects.
- **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.

**SECTION 12: Ecological information****· 12.1 Toxicity****· Aquatic toxicity:****CAS: 1314-13-2 Zinc oxide**

LC50/48	0.098 mg/l (crustacean)
LC50/96 h	1.1 mg/l (fish)

- **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
- **Additional ecological information:**

**· General notes:**

Water hazard class 3 (German Regulation) (Self-assessment): extremely hazardous for water  
Do not allow product to reach ground water, water course or sewage system, even in small quantities.  
Danger to drinking water if even extremely small quantities leak into the ground.  
Also poisonous for fish and plankton in water bodies.  
Toxic for aquatic organisms

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- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

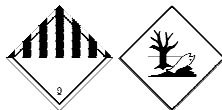
**SECTION 13: Disposal considerations**

- **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** UN3077
- **ADR, IMDG, IATA** 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Zinc oxide, Cobalt sulphate)
- **ADR**
- **IMDG** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Zinc oxide, Cobalt sulphate), MARINE POLLUTANT
- **IATA** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Zinc oxide, Cobalt sulphate)

- **14.3 Transport hazard class(es)**
- **ADR, IMDG, IATA**



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

- **14.4 Packing group** III
- **ADR, IMDG, IATA**

- **14.5 Environmental hazards:** Product contains environmentally hazardous substances: Cobalt sulphate
- **Marine pollutant:** Symbol (fish and tree)
- **Special marking (ADR):** Symbol (fish and tree)
- **Special marking (IATA):** Symbol (fish and tree)

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· <b>14.6 Special precautions for user</b>	Warning: Miscellaneous dangerous substances and articles.
· <b>Danger code (Kemler):</b>	90
· <b>EMS Number:</b>	F-A,S-F
· <b>Stowage Category</b>	A
· <b>Stowage Code</b>	SW23 When transported in BK3 bulk container, see 7.6.2.12 and 7.7.3.9.
· <b>14.7 Transport in bulk according to Annex II of Marpol and the IBC Code</b>	Not applicable.
· <b>Transport/Additional information:</b>	
· <b>ADR</b>	
· <b>Limited quantities (LQ)</b>	5 kg
· <b>Excepted quantities (EQ)</b>	Code: E1 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 1000 g
· <b>Transport category</b>	3
· <b>UN "Model Regulation":</b>	UN 3077 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**
- **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
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 28, 30
- **National regulations:**
- **Information about limitation of use:**  
Workers are not allowed to be exposed to the hazardous carcinogenic materials contained in this preparation. Exceptions can be made by the authorities in certain cases.
- **Other regulations, limitations and prohibitive regulations**
- **Substances of very high concern (SVHC) according to REACH, Article 57**  
CAS: 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

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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.
- 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.

**· 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
- PBT: Persistent, Bioaccumulative and Toxic
- SVHC: Substances of Very High Concern
- vPvB: very Persistent and very Bioaccumulative
- Acute Tox. 4: Acute toxicity – Category 4
- Skin Irrit. 2: Skin corrosion/irritation – Category 2
- 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
- Carc. 1B: Carcinogenicity – Category 1B
- Repr. 1B: Reproductive toxicity – Category 1B
- STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
- 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

**· 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.

- **Data compared to the previous version altered.** All sections have been updated.