

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

Printing date: 08.04.2019

Version number 2

Revision: 05.04.2019

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

1.1. Product identifier

Trade name: **GE Additive 17-4 PH**

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

Application of the substance / the mixture: Raw material for 3D-print

Uses advised against: Other uses than the identified uses indicated above.

1.3. Details of the supplier of the safety data sheet

Manufacturer/Supplier:

CONCEPT Laser GmbH
An der Zeil 8
96215 Lichtenfels

Tel +49 (0)9571 1679 0

Further information obtainable from: info@concept-laser.de

1.4. Emergency telephone number CHEMTREC, Tel.: +1-800-424-9300

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008:



GHS08

Carc. 2 H351 Suspected of causing cancer. Route of exposure: Inhalation.

STOT RE 2 H373 May cause damage to the respiratory system through prolonged or repeated exposure. Route of exposure: Inhalation.



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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Trade name: GE Additive 17-4 PH**Hazard pictograms:****Signal word:** Warning**Hazard-determining components of labelling:**

nickel

Hazard statements:

H317 May cause an allergic skin reaction.

H351 Suspected of causing cancer. Route of exposure: Inhalation.

H373 May cause damage to the respiratory system through prolonged or repeated exposure. Route of exposure: Inhalation.

Precautionary statements:

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

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

P308+P313 IF exposed or concerned: Get medical advice/attention.

P333+P313 If skin irritation or rash occurs: Get medical advice/attention.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

2.3. Other hazards**Results of PBT and vPvB assessment:**

The components in this formulation do not meet the criteria for classification as PBT or vPvB.

SECTION 3: Composition/information on ingredients**3.2. Mixtures****Description:** Mixture of substances listed below with nonhazardous additions.**Dangerous components:**

CAS: 7440-47-3	chromium	10-25%
EINECS: 231-157-5	substance with a community workplace exposure limit	
CAS: 7440-50-8	copper	≥2.5-<10%
EINECS: 231-159-6	substance with a community workplace exposure limit	
CAS: 7440-02-0	nickel	≥2.5-<10%
EINECS: 231-111-4	Carc. 2, H351; STOT RE 1, H372 Skin Sens. 1, H317 Aquatic Chronic 3, H412	
CAS: 7439-96-5	manganese	≥0.1-≤2.5%
EINECS: 231-105-1	substance with a community workplace exposure limit	

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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:**

Take affected persons out of danger area and lay down.
Personal protection for the First Aider.

After inhalation:

Supply fresh air.
Seek medical treatment.

After skin contact:

Immediately wash with water and soap and rinse thoroughly.
Seek medical treatment.
Take off contaminated clothing and wash before reuse.

After eye contact:

Rinse opened eye for several minutes under running water.
Remove contact lenses, if present and easy to do. Continue rinsing.
Seek medical treatment.

After swallowing:

Rinse mouth.
Seek medical treatment.

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**

First Aid, decontamination, treatment of symptoms.

SECTION 5: Firefighting measures**5.1. Extinguishing media****Suitable extinguishing agents:**

Sand
Special powder for metal fires. Do not use water.
The product is non flammable.

For safety reasons unsuitable extinguishing agents: Water**5.2. Special hazards arising from the substance or mixture**

In certain fire conditions, traces of other toxic gases cannot be excluded, e.g.:
Carbon monoxide (CO)
Metal oxide fume
Refer to section 10.6.

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5.3. Advice for firefighters**Protective equipment:** Wear self-contained respiratory protective device.**Additional information:** Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

SECTION 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures**

Ensure adequate ventilation.

Do not inhale gases / fumes / aerosols.

Be sure to clean skin thoroughly after work and before breaks.

Wear protective clothing.

Avoid formation of dust.

Keep away from foodstuffs, beverages and feed.

Ensure that washing facilities are available at the work place.

Do not eat, drink, smoke or sniff while working.

Wear protective equipment. Keep unprotected persons away.

6.2. Environmental precautions

Dumping into the environment must be prevented.

Keep contaminated washing water and dispose of appropriately.

Do not allow to enter sewers/ surface or ground water.

6.3. Methods and material for containment and cleaning up

Avoid dust formation.

Waste disposal according to official state regulations.

Remove mechanically, placing in appropriate containers for disposal.

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**

Do not eat, drink, smoke or sneeze at the workplace.

Carry out filling operations only at sites with extractors available.

Keep receptacles tightly sealed.

If technical suction or ventilation measures are not possible or insufficient, respiratory protection must be worn.

Ensure good ventilation/exhaustion at the workplace.

Prevent formation of dust.

Avoid contact with eyes or skin. Wear personal protective equipment.

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

Information about fire - and explosion protection: Keep ignition sources away - Do not smoke.

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7.2. Conditions for safe storage, including any incompatibilities**Storage:****Requirements to be met by storerooms and receptacles:** Store only in the original container.**Information about storage in one common storage facility:**

Keep away from food, drink and animal feeding stuffs.

Do not store together with:

Oxidising agents

Strong acids

strong bases

See section 10.5.

Further information about storage conditions:

Ensure that local, federal and national legislation on storage conditions are observed.

Storage class: 13 Incombustible solids**7.3. Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection**Additional information about design of technical facilities:**

Technical measures and the application of adequate working methods take priority over the use of personal protection equipment.

8.1. Control parameters**Ingredients with limit values that require monitoring at the workplace:**

CAS: 7440-47-3 chromiumWEL (Great Britain) Long-term value: 0.5 mg/m³IOELV (EU) Long-term value: 2 mg/m³
as Cr**CAS: 7440-50-8 copper**WEL (Great Britain) Short-term value: 2** mg/m³
Long-term value: 0.2* 1** mg/m³
*fume **dusts and mists (as Cu)**CAS: 7440-02-0 nickel**WEL (Great Britain) Long-term value: 0.5 mg/m³
as Ni; Sk; Carc**CAS: 7439-96-5 manganese**WEL (Great Britain) Long-term value: 0.5 mg/m³
as MnIOELV (EU) Long-term value: 0.2* 0.05** mg/m³
as Mn; *inhalable, **respirable fraction

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Regulatory information:

WEL (Great Britain): EH40/2011

IOELV (EU): (EU) 2017/164

Additional information: The lists valid during the making were used as basis.**8.2. Exposure controls****Personal protective equipment:****General protective and hygienic measures:**

Do not eat, drink, smoke or sniff while working.

Ensure that washing facilities are available at the work place.

Wash hands before breaks and at the end of work.

Store protective clothing separately.

Respiratory protection:

If technical suction or ventilation measures are not possible or are insufficient, protective breathing apparatus must be worn.

The filter class must be suitable for the maximum contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling the product. If the concentration is exceeded, a self-contained breathing apparatus must be used!

Recommendation:

Particulate filter

Filter P3

Protection of hands:

Tested protective gloves are to be worn. When handling chemical substances, chemical protective gloves must be worn with CE label including a four digit code. Type of chemical protective gloves to choose depends on the concentration and quantity of dangerous substances as well as on work place specifications. In the cases of special applications, it is recommended to check the chemical resistance with the manufacturer of the gloves.

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Material of gloves:

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

Recommendation:

Nitrile rubber, NBR

Recommended thickness of the material: ≥ 0.11 mm**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.

Penetration time: ≥ 480 min

Eye protection: Tightly sealed goggles

Body protection: Protective work clothing**Limitation and supervision of exposure into the environment:** Dumping into the environment must be prevented.

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SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

General Information

Appearance:

Form:	Solid
Colour:	Dark grey
Odour:	No information available.
Odour threshold:	Not determined.

pH-value: Not applicable.

Change in condition

Melting point/freezing point:	Undetermined.
Initial boiling point and boiling range:	Undetermined.

Flash point: Not applicable.

Flammability (solid, gas): Product is not flammable.

Ignition temperature: Not determined.

Decomposition temperature: Not determined.

Auto-ignition temperature: Product is not selfigniting.

Explosive properties: Product does not present an explosion hazard.

Explosion limits:

Lower:	Not determined.
Upper:	Not determined.

Vapour pressure: Not applicable.

Density: Not determined.

Relative density: Not determined.

Vapour density: Not applicable.

Evaporation rate: Not applicable.

Solubility in / Miscibility with water: Insoluble.

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Partition coefficient: n-octanol/water: Not determined.**Viscosity:****Dynamic:** Not applicable.**Kinematic:** Not applicable.**Solvent content:****VOC (EC)** 0.00 %**Solids content:** 100.0 %**9.2. Other information** No further relevant information available.

SECTION 10: Stability and reactivity**10.1. Reactivity** The product is stable under standard conditions (temperature, pressure) of storage and handling.**10.2. Chemical stability** The product is stable under standard conditions (temperature, pressure) of storage and handling.**10.3. Possibility of hazardous reactions** No dangerous reactions known.**10.4. Conditions to avoid** No further relevant information available.**10.5. Incompatible materials**

Strong alkalis

Strong acids

Oxidizing agents

10.6. Hazardous decomposition products

In case of fire, the following products can be released:

Metal oxid fume

SECTION 11: Toxicological information**11.1. Information on toxicological effects****Acute toxicity:** Based on available data, the classification criteria are not met.**LD/LC50 values:****CAS: 7440-02-0 nickel**

Oral LD50 9,000 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 an allergic skin reaction.

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CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction):**Germ cell mutagenicity:** Based on available data, the classification criteria are not met.**Carcinogenicity:**

Suspected of causing cancer. Route of exposure: Inhalation.

Reproductive toxicity: Based on available data, the classification criteria are not met.**STOT-single exposure:** Based on available data, the classification criteria are not met.**STOT-repeated exposure:**

May cause damage to the respiratory system through prolonged or repeated exposure. Route of exposure: Inhalation.

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

SECTION 12: Ecological information**12.1. Toxicity****Aquatic toxicity:** No 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.**General notes:**

Avoid transfer into the environment.

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.

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:** Waste disposal according to official state regulations.**Uncleaned packaging:****Recommendation:**

Empty contaminated packagings thoroughly. They may be recycled after thorough and proper cleaning.

Packagings that may not be cleansed are to be disposed of in the same manner as the product.

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SECTION 14: Transport information**14.1. UN-Number****ADR, ADN, IMDG, IATA** Void.**14.2. UN proper shipping name****ADR, ADN, IMDG, IATA** Void.**14.3. Transport hazard class(es)****ADR, ADN, IMDG, IATA****Class** Void.**14.4. Packing group****ADR, IMDG, IATA** Void.**14.5. Environmental hazards**

Not applicable.

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.

UN "Model Regulation":

Void.

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

EU-Regulations

Regulation (EC) No 1907/2006 (REACH)

Regulation (EC) No 1272/2008 (CLP)

Regulation 98/24/EC (employee health protection)

Directive 94/27/EC (Nickel Directive)

Directive 2012/18/EU**Named dangerous substances - ANNEX I:** None of the ingredients is listed.**REGULATION (EC) No 1907/2006 ANNEX XVII:** Conditions of restriction: 27**National regulations:****Information about limitation of use:**

Employment restrictions concerning juveniles must be observed.

Employment restrictions concerning pregnant and lactating women must be observed.

Employment restrictions concerning women of child-bearing age must be observed.

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Other regulations, limitations and prohibitive regulations: National legislation has to be observed!

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

SECTION 16: Other information

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

Relevant phrases:

H317 May cause an allergic skin reaction.

H351 Suspected of causing cancer. Route of exposure: Inhalation.

H372 Causes damage to the respiratory system through prolonged or repeated exposure. Route of exposure: Inhalation.

H412 Harmful to aquatic life with long lasting effects.

Training hints:

The product should only be handled by persons, who were informed sufficiently about the nature of the product and about the necessary safety precautions.

Classification according to Regulation (EC) No 1272/2008

The classification of the mixture is generally based on the calculation method using substance data according to Regulation (EC) No 1272/2008.

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)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Skin Sens. 1: Skin sensitisation – Category 1

Carc. 2: Carcinogenicity – Category 2

STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1

STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2

Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

Sources: Data arise from reference works and literature.
