

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

Printing date: 10.04.2019

Version number 2

Revision: 10.04.2019

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**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**Trade name: **GE Additive M300****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**

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

GHS08

Resp. Sens. 1     H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
Carc. 1B         H350 May cause cancer.  
Repr. 2         H361 Suspected of damaging fertility or the unborn child.  
STOT RE 1       H372 Causes damage to the respiratory system through prolonged or repeated exposure. Route of exposure:  
                         Inhalation.

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GHS07

Eye Irrit. 2       H319 Causes serious eye irritation.  
Skin Sens. 1     H317 May cause an allergic skin reaction.

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Aquatic Chronic 4 H413 May cause long lasting harmful effects to aquatic life.

**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

**Signal word:** Danger**Hazard-determining components of labelling:**cobalt  
nickel**Hazard statements:**

H319 Causes serious eye irritation.  
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
H317 May cause an allergic skin reaction.  
H350 May cause cancer.  
H361 Suspected of damaging fertility or the unborn child.  
H372 Causes damage to the respiratory system through prolonged or repeated exposure. Route of exposure: Inhalation.  
H413 May cause long lasting harmful effects to aquatic life.

**Precautionary statements:**

P260 Do not breathe 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.  
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P342+P311 If experiencing respiratory symptoms: Call a POISON CENTER/doctor.  
P405 Store locked up.

**Additional information:**

Restricted to professional users.

**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.

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

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CAS: 7440-02-0	nickel	≥10- <25%
EINECS: 231-111-4	Carc. 2, H351; STOT RE 1, H372	
Reg.no.: 01-2119438727-29-XXXX	Skin Sens. 1, H317	
	Aquatic Chronic 3, H412	

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CAS: 7440-48-4	cobalt	10%
EINECS: 231-158-0	Resp. Sens. 1B, H334; Carc. 1B, H350; Repr. 2, H361	
Reg.no.: 01-2119517392-44-XXXX	Aquatic Acute 1, H400	
	Acute Tox. 4, H302; Eye Irrit. 2, H319; Skin Sens. 1, H317	
	Aquatic Chronic 4, H413	
CAS: 7440-47-3	chromium	≥0.1-≤2.5%
EINECS: 231-157-5	substance with a community workplace exposure limit	
Reg.no.: 01-2119485652-31-XXXX		
CAS: 7439-96-5	manganese	≥0.1-≤2.5%
EINECS: 231-105-1	substance with a community workplace exposure limit	

**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:**

Call a doctor immediately.  
Take affected persons into fresh air and keep quiet.  
In case of irregular breathing or respiratory arrest provide artificial respiration.

**After skin contact:**

Take off contaminated clothing and wash before reuse.  
Immediately wash with water and soap and rinse thoroughly.  
Seek medical attention in case of problems or if problems persist.

**After eye contact:**

Protect unharmed eye.  
Rinse opened eye for several minutes under running water. Then consult a doctor.  
Remove contact lenses, if present and easy to do. Continue rinsing.

**After swallowing:**

Rinse out mouth and then drink plenty of water.  
Do not induce vomiting; call for medical help immediately.

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

Irritation  
Breathing difficulty  
Coughing

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

First Aid, decontamination, treatment of symptoms.

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## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

**Suitable extinguishing agents:**

Use fire extinguishing methods suitable to surrounding conditions.  
Special powder for metal fires. Do not use water.  
Sand

**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.:  
Metal oxide fume  
Refer to section 10.6.

### 5.3. Advice for firefighters

**Protective equipment:**

Do not inhale explosion gases or combustion gases.  
Wear self-contained respiratory protective device.

**Additional information:**

Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.  
Collect contaminated fire fighting water separately. It must not enter the sewage system.

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## SECTION 6: Accidental release measures

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

Avoid formation of dust.  
Ensure adequate ventilation.  
Avoid any contact with eyes or skin.  
Wear protective equipment. Keep unprotected persons away.

### 6.2. Environmental precautions

Dumping into the environment must be prevented.  
Do not allow to enter sewers/ surface or ground water.

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

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.

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## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Ensure that washing facilities are available at the work place.

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Keep receptacles tightly sealed.  
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.

### 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.  
See section 10.5.

**Further information about storage conditions:**

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

**Storage class:** 6.1D Incombustible toxic or chronic active substances (TRGS 510 DE)

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

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## 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: 7440-02-0 nickel**

WEL (Great Britain) Long-term value: 0.5 mg/m<sup>3</sup>  
as Ni; Sk; Carc

**CAS: 7440-48-4 cobalt**

WEL (Great Britain) Long-term value: 0.1 mg/m<sup>3</sup>  
as Co; Carc, Sen

**CAS: 7440-47-3 chromium**

WEL (Great Britain) Long-term value: 0.5 mg/m<sup>3</sup>  
IOELV (EU) Long-term value: 2 mg/m<sup>3</sup>  
as Cr

**CAS: 7439-96-5 manganese**

WEL (Great Britain) Long-term value: 0.5 mg/m<sup>3</sup>  
as Mn  
IOELV (EU) Long-term value: 0.2\* 0.05\*\* mg/m<sup>3</sup>  
as Mn; \*inhalable, \*\*respirable fraction

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**Regulatory information:**

WEL (Great Britain): EH40/2011

IOELV (EU): (EU) 2017/164

**PNECs****CAS: 7440-02-0 nickel**

PNEC 0.33 mg/l (sewage treatment plant)

PNEC 7.1 µg/l (fresh water)

8.6 µg/l (marine water)

PNEC 0.12 mg/kg (secondary poisoning)

109 mg/kg (sediment freshwater)

**CAS: 7440-48-4 cobalt**

PNEC 9.5 mg/l (sediment freshwater)

9.5 mg/l (sediment marine water)

PNEC 0.6 µg/l (fresh water)

2.36 µg/l (marine water)

370 µg/l (sewage treatment plant)

**CAS: 7439-96-5 manganese**

PNEC 0.034 mg/l (fresh water)

0.028 mg/l (intermittent release)

0.0034 mg/l (marine water)

3.3 mg/l (sediment freshwater)

0.34 mg/l (sediment marine water)

3.4 mg/l (soil)

100 mg/l (sewage treatment plant)

**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.

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**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

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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:  $\geq 0.11$  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.**SECTION 9: Physical and chemical properties****9.1. Information on basic physical and chemical properties****General Information****Appearance:**

<b>Form:</b>	Powder
<b>Colour:</b>	Light grey
<b>Odour:</b>	Odourless
<b>Odour threshold:</b>	Not determined.

**pH-value:** Not applicable.**Change in condition**

<b>Melting point/freezing point:</b>	Undetermined.
<b>Initial boiling point and boiling range:</b>	2,802 °C

**Flash point:** Not applicable.**Flammability (solid, gas):** Not determined.**Ignition temperature:** Not determined.**Decomposition temperature:** Not determined.

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<b>Auto-ignition temperature:</b>	Product is not selfigniting.
<b>Explosive properties:</b>	Product does not present an explosion hazard.
<b>Explosion limits:</b>	
<b>Lower:</b>	Not determined.
<b>Upper:</b>	Not determined.
<b>Vapour pressure:</b>	Not applicable.
<b>Density at 20 °C:</b>	8.24 g/cm <sup>3</sup>
<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>	
<b>Dynamic:</b>	Not applicable.
<b>Kinematic:</b>	Not applicable.
<b>Solvent content:</b>	
<b>VOC (EC)</b>	0.00 %
<b>Solids content:</b>	100.0 %
<b>9.2. Other information</b>	No further relevant information available.

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**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 acids  
Ammonium nitrate

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Oxidizing agents

**10.6. Hazardous decomposition products**

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

Metal oxid fume

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**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 &gt;9,000 mg/kg (rat) (OECD 401)

Inhalative NOAEC ≥10.2 mg/l (rat) (66 min)

**CAS: 7440-48-4 cobalt**

Oral LD50 550 mg/kg (rat) (OECD 425)

Inhalative LC50 ≤0.05 mg/l (rat) (4h analytical OECD 436)

**CAS: 7440-47-3 chromium**

Oral LD50 &gt;5,000 mg/kg (rat) (OECD 420)

Inhalative LC50/4h &gt;5.41 mg/l (rat) (OECD 403)

**CAS: 7439-96-5 manganese**

Oral LD50 &gt;2,000 mg/kg (rat)

Inhalative LC50/4h &gt;5.14 mg/l (rat)

**Primary irritant effect:****Skin corrosion/irritation:** Based on available data, the classification criteria are not met.**Serious eye damage/irritation:**

Causes serious eye irritation.

**Respiratory or skin sensitisation:**

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

May cause an allergic skin reaction.

**Subacute to chronic toxicity:** No data available.**CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction):****Germ cell mutagenicity:** Based on available data, the classification criteria are not met.**Carcinogenicity:**

May cause cancer.

**Reproductive toxicity:**

Suspected of damaging fertility or the unborn child.

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

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

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

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## SECTION 12: Ecological information

### 12.1. Toxicity

#### Aquatic toxicity:

**CAS: 7440-02-0 nickel**

LC50 15.3 mg/l (Oncorhynchus mykiss) (96h)

**CAS: 7440-48-4 cobalt**

NOEC 3.2 mg/l (Daphnia magna)

100 mg/l (Danio rerio)

EC50 270 µg/l (Pseudokirchneriella subcapitata)

EC50 120 mg/l (microorganisms)

LC50 1.5 mg/l (fish)

**CAS: 7439-96-5 manganese**

EC50 10,000 mg/l (activated sludge) (3h)

&gt;1.6 mg/l (Daphnia magna) (48h)

4.5 mg/l (Desmodesmus subspicatus) (72h)

LC50 &gt;3.6 mg/l (Oncorhynchus mykiss) (96h)

**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.

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.

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

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## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

**Recommendation:**

Hand over to officially registered waste disposal company.

Waste disposal according to official state regulations.

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**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**

Stowage Category

Not applicable.

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

Not applicable.

**UN "Model Regulation":**

Void.

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

Directive 94/27/EC (Nickel Directive)

EU-Regulations

Regulation (EC) No 1907/2006 (REACH)

Regulation (EC) No 1272/2008 (CLP)

Regulation 98/24/EC (employee health protection)

**Directive 2012/18/EU****Named dangerous substances - ANNEX I:** None of the ingredients is listed.**Seveso category**

H1 ACUTE TOXIC

E2 Hazardous to the Aquatic Environment

**Qualifying quantity (tonnes) for the application of lower-tier requirements** 5 t

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**Qualifying quantity (tonnes) for the application of upper-tier requirements** 20 t**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.

**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.

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**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:**

H302 Harmful if swallowed.  
H317 May cause an allergic skin reaction.  
H319 Causes serious eye irritation.  
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
H350 May cause cancer.  
H351 Suspected of causing cancer.  
H361 Suspected of damaging fertility or the unborn child.  
H372 Causes damage to the respiratory system through prolonged or repeated exposure. Route of exposure: Inhalation.  
H400 Very toxic to aquatic life.  
H412 Harmful to aquatic life with long lasting effects.  
H413 May cause long lasting harmful effects to aquatic life.

**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)

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VOC: Volatile Organic Compounds (USA, EU)  
PNEC: Predicted No-Effect Concentration (REACH)  
LC50: Lethal concentration, 50 percent  
LD50: Lethal dose, 50 percent  
PBT: Persistent, Bioaccumulative and Toxic  
vPvB: very Persistent and very Bioaccumulative  
Acute Tox. 4: Acute toxicity – Category 4  
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2  
Resp. Sens. 1: Respiratory sensitisation – Category 1  
Resp. Sens. 1B: Respiratory sensitisation – Category 1B  
Skin Sens. 1: Skin sensitisation – Category 1  
Carc. 1B: Carcinogenicity – Category 1B  
Carc. 2: Carcinogenicity – Category 2  
Repr. 2: Reproductive toxicity – Category 2  
STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1  
Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1  
Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3  
Aquatic Chronic 4: Hazardous to the aquatic environment - long-term aquatic hazard – Category 4

**Sources:** Data arise from reference works and literature.