

# Safety Data Sheet

## CMG Tech-X 100Cr6 Steel Filament



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Version number: 1.0

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

- 1.1 Product identifier** **CMG Tech-X 100Cr6 Steel Filament**
- 1.2 Relevant identified uses of the substance or mixture and uses advised against** Metal filament for 3D printing fabrication.  
Uses advised against: not available.
- 1.3 Details of the supplier of the safety data sheet** CMG Technologies Ltd,  
Building I1, Thompson Drive,  
Base Business Park,  
Rendlesham IP12 2TZ,  
United Kingdom.  
Tel: +44 (0) 1394 445 100; email: [obatka@cmgtechnologies.co.uk](mailto:obatka@cmgtechnologies.co.uk);  
[www.cmgtechnologies.co.uk](http://www.cmgtechnologies.co.uk)
- 1.4 Emergency telephone number** Tel +44 (0) 1394 445 100 (UK business hours).  
  
UK: 111 (public NHS number for less urgent medical problems). Medical professionals can contact the National Poisons Information Service (NPIS): 0344 892 0111.

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

Classification according to CLP Regulation (1272/2008) This product does not meet the criteria for classification in any hazard class according to Regulation (EC) No. 1272/2008, or GB equivalent, and it is not mandatory to supply a safety data sheet, but this document provides information and advice concerning safe handling of the product.

#### 2.2 Label elements

Pictograms None.  
Signal word None.  
Hazard statements None.  
Precautionary statements None.  
Supplemental information Not available.

**2.3 Other hazards** The product does not contain any ingredient identified as having endocrine disrupting properties.

### SECTION 3: Composition/information on ingredients

#### 3.2 Mixtures

Declarable components	Conc. (wt%)	EC No.	CAS No.	REACH Reg. No.	Classification, supplemental hazards, ATE, M-factor, and SCL
None.					

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Other components					
Chromium	0.5-10	231-157-5	7440-47-3	01-2119485652-31-0219	Not classified

### SECTION 4: First aid measures

#### 4.1 Description of first aid measures

Inhalation	For symptoms of inhalation, eg coughing, breathing difficulty, or respiratory irritation, remove exposed person to fresh air and keep warm and at rest in a position comfortable for breathing. Get medical help if symptoms persist.
Skin	For skin contamination, remove contaminated clothing and wash affected area with soap and water. If irritation, rash, or other symptom occurs, get medical help. Wash contaminated clothing before re-use.
Eye	If product or dust or vapour cause irritation, irrigate affected eye with room-temperature water or eyewash solution for several minutes, occasionally lifting eyelids. Remove any contact lenses if easy to do. Continue rinsing. Get medical help if irritation persists.
Ingestion	If in mouth, rinse mouth thoroughly with water and spit out rinsings. Water may be given to drink if product has been swallowed. If patient feels unwell or is concerned, get medical help. Do not induce vomiting, unless instructed by medical personnel.

**4.2 Most important symptoms and effects, both acute and delayed** Not available.

**4.3 Indication of any immediate medical attention and special treatment needed** Treat symptoms as they occur.

### SECTION 5: Firefighting measures

#### 5.1 Extinguishing media

Suitable	In case of fire, use extinguishing powder, sand, or water spray.
Unsuitable	Not available.

**5.2 Special hazards arising from the substance or mixture** The product is not classified as flammable, but will decompose if involved in a fire, producing smoke, and hazardous fumes and gases.

**5.3 Advice for firefighters** Remove containers from fire or cool them with water spray. For larger fires, firefighters should wear breathing apparatus and protective clothing.

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### Section 6: Accidental release measures

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| <b>6.1 Personal precautions, protective equipment and emergency procedures</b> | The product is supplied in small containers as coiled filament on a roll, which can be collected.<br>In a professional setting, wear personal protection.<br>Ventilate area. Avoid creating airborne dust. Follow prescribed procedures for responding to spills.   |
| <b>6.2 Environmental precautions</b>   | Prevent product from entering water courses or drainage system.   |
| <b>6.3 Methods and material for containment and cleaning up</b>                | Clean up spill as soon as possible.<br>For small quantities, collect pieces, and wash off any residue with detergent and water.<br>For large quantities, carefully sweep up, preventing formation of airborne dust, or collect using vacuum cleaner equipped with air filtration.<br>Collect spill, contaminated materials, and washings in a container for disposal. |
| <b>6.4 Reference to other sections</b>   | For recommended personal protective equipment, see Section 8.<br>For disposal considerations, see Section 13.   |

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### SECTION 7: Handling and storage

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|---|--|
| <b>7.1 Precautions for safe handling</b>                                | Avoid skin and eye contact with the product, and inhalation of vapours or dust. Use only in a well-ventilated area. See Section 8 for engineering controls and personal protection.<br>Wash hands after use. Do not eat, drink or smoke when using this product.<br>Upon mechanical (eg cutting, grinding or polishing), thermal, or chemical treatment the product can release hazardous dust. Do not inhale dusts when formed. Avoid generating airborne dust and keep work areas clean. Dust in sufficient concentration can result in an explosive mixture in air. Eliminate open flame and other sources of ignition. |
| <b>7.2 Conditions for safe storage, including any incompatibilities</b> | Keep packages in a cool, dry place away from direct sunlight. Keep out of reach of children.   |
| <b>7.3 Specific end use(s)</b>  | Metal filament for 3D printing fabrication.  |

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### SECTION 8: Exposure controls/personal protection

#### 8.1 Control parameters

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|-----------------------|---|
| EU limit values       | None.   |
| National limit values | UK:<br>Chromium: WELs: long-term exposure limit (8 h TWA) 0.5 mg/m <sup>3</sup> .   |
| Monitoring procedure  | BS EN 14042:2003; Workplace Atmospheres; Guide for the Application and Use of Procedures for the Assessment of Exposure to Chemical and Biological Agents, or specific national equivalent. |

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Other: human health (DNELs, DMELs) Chromium: DNELs: workers, long-term exposure, local effects, inhalation, 0.5 mg/m<sup>3</sup>.

Other: environmental (PNEC) Chromium: PNECs: freshwater, 0.0065 mg/L; freshwater sediment, 206 mg/kg dry sediment; soil, 21.1 mg/kg dry soil; oral, 0.12 mg/kg food.

### 8.2 Exposure controls

Engineering controls Use in a well-ventilated area (3 to 5 air changes/hour) is recommended. For bulk use, and for processing causing formation of dust or fumes, local exhaust ventilation is recommended.

Personal protective equipment The need for personal protective equipment should be based on a workplace risk assessment for the particular use.

Avoid skin and eye contact by wearing chemical resistant gloves (eg EN374, EN 420; nitrile rubber gloves, 0.2 mm) and eye protection (EN166). Where more extensive contact may occur, wear protective clothing (eg apron, overalls).

Additional protection from burns may be required for hot processing.

A dust mask (EN 143) may be required if the processing causes dust. For guidance on respiratory protection see HSE Guide HSG53 and BS4275.

PPE should conform to British (EN) standards, or national equivalent.

Consult PPE manufacturers concerning breakthrough times.

Environmental exposure controls Not available.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

- (a) Physical state Coiled filament on a roll
- (b) Colour Grey or dark grey
- (c) Odour Odourless
- (d) Melting/freezing point 120 to 160 °C
- (e) Boiling point or initial boiling point and boiling range Not available
- (f) Flammability Not classified as flammable
- (g) Lower and upper explosion limit Not available
- (h) Flash point Not available
- (i) Auto-ignition temp. Not available
- (j) Decomposition temp. Not available
- (k) pH Not available
- (l) Kinematic viscosity Not applicable to solid
- (m) Solubility Not soluble in water

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(n) Partition coeff. n-octanol/water (log value)	Not available
(o) Vapour pressure	Not available
(p) Density or rel. density	Metal components: 7.8
(q) Relative vapour density	Not available
(r) Particle characteristics	Filament of 1.75 or 2.85 mm diameter
<b>9.2 Other information</b>	No ingredient classified as explosive or oxidising.

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### SECTION 10: Stability and reactivity

<b>10.1 Reactivity</b>	Not available.
<b>10.2 Chemical stability</b>	Stable.
<b>10.3 Possibility of hazardous reactions</b>	Not available
<b>10.4 Conditions to avoid</b>	Open flames, strong heat
<b>10.5 Incompatible materials</b>	Strong oxidizing agents (eg hydrogen peroxide), strong acids, alkalis.
<b>10.6 Hazardous decomposition products</b>	Not available.

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### SECTION 11: Toxicological information

#### 11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

(a) Acute toxicity	Based on available data on the ingredients, the classification criteria are not met for the oral, dermal or inhalation routes of exposure. ATE <sub>mix</sub> (oral) > 2000 mg/kg; ATE <sub>mix</sub> (dermal) > 2000 mg/kg; ATE <sub>mix</sub> (inhalation, mist) > 5 mg/L.
(b) Skin corrosion/irritation	Based on available data on the ingredients, the classification criteria are not met.
(c) Serious eye damage/irritation	Based on available data on the ingredients, the classification criteria are not met.
(d) Respiratory or skin sensitisation	Based on available data on the ingredients, the classification criteria are not met. No relevant ingredient has been classified for this effect.
(e) Germ cell mutagenicity	Based on available data on the ingredients, the classification criteria are not met. No relevant ingredient has been classified for this effect.
(f) Carcinogenicity	Based on available data on the ingredients, the classification criteria are not met. No relevant ingredient has been classified for this effect.
(g) Reproductive toxicity	Based on available data on the ingredients, the classification criteria are not met.

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	No relevant ingredient has been classified for this effect.
(h) STOT-single exposure	Based on available data on the ingredients, the classification criteria are not met. No relevant ingredient has been classified for this effect.
(i) STOT-repeated exposure	Based on available data on the ingredients, the classification criteria are not met. No relevant ingredient has been classified for this effect.
(j) Aspiration hazard	Based on available data on the ingredients, the classification criteria are not met.
11.2 Information on other hazards	No ingredient has been classified with endocrine disrupting properties relevant for humans.

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### SECTION 12: Ecological information

12.1 Toxicity	Based on available data on the ingredients, the classification criteria are not met. No relevant ingredient has been classified for this effect.
12.2 Persistence and degradability	Product comprises of metal powders in a polymer, and is expected to persist in the environment.
12.3 Bioaccumulative potential	Bioaccumulation not applicable to metals.
12.4 Mobility in soil	Not available.
12.5 Results of PBT and vPvB assessment	PBT or vPvB assessment not applicable to metals.
12.6 Endocrine disrupting properties	No ingredient has been classified with endocrine disrupting properties relevant for the environment.
12.7 Other adverse effects	The mixture is not classified as hazardous to the ozone layer.

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### SECTION 13: Disposal considerations

13.1 Waste treatment methods	Product comprises metal powders in a polymer. Recycling is recommended for bulk disposal of this product. Landfill or disposal via the drains is not recommended. Disposal must be in accordance with national and local regulations. Chemical residues generally count as special waste. General EU requirements are given in Directive 2008/98/EC.
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### SECTION 14: Transport information

14.1 UN Number	Not classified as dangerous goods for transport.
14.2 UN proper shipping name	Not applicable.
14.3 Transport hazard class(es)	Not applicable.

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<b>14.4 Packing group</b>	Not applicable.
<b>14.5 Environmental hazards</b>	Not classified as marine pollutant/environmentally hazardous.
<b>14.6 Special precautions for user</b>	Not available.
<b>14.7 Maritime transport in bulk according to IMO instruments</b>	Not applicable. This product is not intended to be transported by sea in bulk containers.

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### SECTION 15: Regulatory information

<b>15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture</b>	<i>UK:</i> Control of Substances Hazardous to Health Regulations 2002 (COSHH), as amended. COSHH Essentials: Easy Steps to Control Chemicals; HSE Books 2003 (also available on the HSE web site). Workplace Exposure Limits EH40/2005 (Fourth Edition, 2020); Health and Safety Executive.
<b>15.2 Chemical safety assessment</b>	Not available.

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### SECTION 16: Other information

Revisions	This SDS is the first version in EU format (Regulation 2020/878), using classification according to the CLP Regulation (1272/2008).
Abbreviations	ATE, acute toxicity estimate; DNEL, derived no-effect level; DMEL, derived minimum effect level; PBT, persistent, bioaccumulative, and toxic; PNEC, predicted no-effect concentration; SCL, specific concentration limit; STOT RE, specific target organ toxicity repeated exposure; STOT SE, specific target organ toxicity single exposure; TWA, time-weighted average; vPvB, very persistent, very bioaccumulative; WEL, UK workplace exposure limit.
References	Search for chemicals; available at the European Chemicals Agency website: <a href="http://echa.europa.eu/">http://echa.europa.eu/</a> .
Basis of classification	The mixture is self-classified from available information on the ingredients.
List of hazard statements	None.