

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and OSHA GHS

Revision: 28 June 2019

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

· 1.1 Product identifier

· Trade name: **SG 400**

· Other means of identification:

Copper wire

CAS number: 7440-50-8

EC number: 231-159-6

Registration number: 01-2119480154-42-XXXX

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

· Application of the substance / the mixture:

Thermal spray wire

- Electrically conductive surfaces

- Carbon brushes

- Decorative purposes

· **Uses advised against:** No further relevant information available.

· 1.3 Details of the supplier of the Safety Data Sheet

· Manufacturer/Supplier:

Saint-Gobain

One New Bond Street

Worcester, MA 01615-0137

USA

508-795-5000

Ceramicmaterials@saint-gobain.com

· 1.4 Emergency telephone number:

ChemTel Inc.

(800)255-3924 (North America)

+1 (813)248-0585 (International)

1-300-954-583 (Australia)

0-800-591-6042 (Brazil)

400-120-0751 (China)

000-800-100-4086 (India)

01-800-099-0731 (Mexico)

SECTION 2: Hazards identification

· 2.1 Classification of the substance or mixture

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

The product is not classified as hazardous according to OSHA GHS regulations within the United States.

The substance is not classified as hazardous according to the CLP regulation.

· 2.2 Label elements

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

The product is not classified as hazardous according to the CLP regulation.

The product is not classified as hazardous according to OSHA GHS regulations within the United States.

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- **Hazard pictograms** Not Regulated
- **Signal word** Not Regulated
- **Hazard statements** Not Regulated.

2.3 Other hazards

Heat rays (infrared radiation) from flame or hot metal can injure eyes. Overexposure to metal fumes and gases can be hazardous. Read and understand the manufacturer's instructions, Safety Data Sheet and the precautionary labels before using this product.

Results of PBT and vPvB assessment

- **PBT:** Not applicable.
- **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

3.1 Substances

Copper

CAS number: 7440-50-8

EC number: 231-159-6

Registration number: 01-2119480154-42-XXXX

SECTION 4: First aid measures

4.1 Description of first aid measures

After inhalation:

Supply fresh air; consult doctor in case of complaints.
Provide oxygen treatment if affected person has difficulty breathing.

After skin contact:

In case of minor burns, flush with cool water.
Remove contaminated clothing and wash the skin thoroughly with soap and water. For reddened or blistered skin, or thermal burns, obtain medical assistance at once.

After eye contact:

Remove contact lenses if worn, if possible.
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

After swallowing:

Unlikely route of exposure.
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

Thermal burns.

Short-term (acute) overexposure to metal fumes may result in discomfort such as metal fume fever, dizziness, nausea, or dryness or irritation of nose, throat, or eyes. May aggravate pre-existing respiratory problems (e.g. asthma, emphysema).

Long-term (chronic) overexposure to metal fumes can lead to siderosis (iron deposits in lung), central nervous system effects, bronchitis and other pulmonary effects. Refer to Section 11 for more information.

4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.

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SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:** For metal fires: Use specific agents only.
- **For safety reasons unsuitable extinguishing agents:** For metal fires: Use specific agents only.
- **5.2 Special hazards arising from the substance or mixture**
Formation of toxic gases is possible during heating or in case of fire.
Welding arc and sparks can ignite combustibles and flammable products.
- **5.3 Advice for firefighters**
- **Protective equipment:**
Wear self-contained respiratory protective device.
Wear fully protective suit.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Ensure adequate ventilation
Avoid formation of dust.
Do not breathe dust.
- **6.2 Environmental precautions** Avoid release to the environment.
- **6.3 Methods and material for containment and cleaning up**
Sweep up and place into an appropriate container.
Dispose of the material collected according to regulations.
Send for recovery or disposal in suitable receptacles.
- **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**
Use only in well ventilated areas.
Prevent formation of dust.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Requirements to be met by storerooms and receptacles:**
Storage area should be dry and well-ventilated.
- **Information about storage in one common storage facility:** Store away from foodstuffs.
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **8.1 Control parameters**
- **Ingredients with limit values that require monitoring at the workplace:**
7440-50-8 Copper

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EL (Canada)	Long-term value: 1* 0,2** mg/m ³ *dusts and mists; **fume, as Cu
EV (Canada)	Long-term value: 0,2* 1** mg/m ³ as copper, *fume; **dust and mists
WEL (Great Britain)	Short-term value: 2** mg/m ³ Long-term value: 0,2* 1** mg/m ³ *fume **dusts and mists (as Cu)
OEL (Ireland)	Long-term value: 0,2* 1** mg/m ³ *fume **dusts and mists
PEL (USA)	Long-term value: 1* 0,1** mg/m ³ as Cu *dusts and mists **fume
REL (USA)	Long-term value: 1* 0,1** mg/m ³ as Cu *dusts and mists **fume
TLV (USA)	Long-term value: 1* 0,2** mg/m ³ *dusts and mists; **fume; as Cu

- **DNELs:** No further relevant information available.
- **PNECs:** No further relevant information available.

8.2 Exposure controls

- **Engineering measures** Provide adequate ventilation.

- **General protective and hygienic measures:**

The usual precautionary measures are to be adhered to when handling chemicals.

Keep away from foodstuffs, beverages and feed.

Avoid breathing dust.

Avoid breathing vapours.

- **Respiratory protection:**

Use respiratory protection when grinding or cutting material.

Keep your head out of fumes. Use enough ventilation and local exhaust to keep fumes and gases from your breathing zone and the general area. An approved respirator should be used unless exposure assessments are below applicable exposure limits.

- **Protection of hands:**



Thermally-protective gloves.

- **Eye protection:**

Follow relevant national guidelines concerning the use of protective eyewear.



Wear glasses or face shield with appropriate shading.

- **Body protection:** Protective work clothing

- **Limitation and supervision of exposure into the environment:**

No further relevant information available.

- **Risk management measures:** No further relevant information available.

SECTION 9: Physical and chemical properties

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· 9.1 Information on basic physical and chemical properties

· Appearance

Form:	Solid
Colour:	Copper coloured
Odour:	Odourless
Odour threshold:	Not determined.

pH-value:	Not applicable.
Melting point/freezing point:	1059 °C (1938,2 °F)
Initial boiling point and boiling range:	Not determined.

Flash point:	Not applicable.
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Flammability (solid, gas):	Not determined.
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Auto/Self-ignition temperature:	Not determined.
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Decomposition temperature:	>1071 °C (>1959,8 °F)
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Explosive properties:	Product does not present an explosion hazard.
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· Explosion limits

Lower:	Not determined.
Upper:	Not determined.

Oxidising properties	Non-oxidising.
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Vapour pressure:	Not determined.
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· Density:

Relative density:	8,78
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.
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· Viscosity

Dynamic:	Not applicable.
Kinematic:	Not applicable.

9.2 Other information	No further relevant information available.
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SECTION 10: Stability and reactivity

· **10.1 Reactivity** Reacts with strong acids.

· 10.2 Chemical stability

· **Thermal decomposition / conditions to be avoided:**

No decomposition if used and stored according to specifications.

· **10.3 Possibility of hazardous reactions** Reacts with strong acids.

· **10.4 Conditions to avoid** Prevent formation of dust.

· **10.5 Incompatible materials** No further relevant information available.

· **10.6 Hazardous decomposition products** Metal oxide smoke.

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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 relevant for classification:** None.
- **Primary irritant effect**
- **Skin corrosion/irritation:**
Based on available data, the classification criteria are not met.
Heat rays can burn skin.
- **Serious eye damage/irritation:**
Based on available data, the classification criteria are not met.
Heat rays (infrared radiation) from flame or hot metal can injure eyes.
- **Respiratory or skin sensitisation:** Based on available data, the classification criteria are not met.
- **Subacute to chronic toxicity:**
Short-term (acute) overexposure to metal fumes may result in discomfort such as metal fume fever, dizziness, nausea, or dryness or irritation of nose, throat, or eyes. May aggravate pre-existing respiratory problems (e.g. asthma, emphysema).

Long-term (chronic) overexposure to metal fumes can lead to siderosis (iron deposits in lung), central nervous system effects, bronchitis and other pulmonary effects.

· Carcinogenic categories

· IARC (International Agency for Research on Cancer):

Substance is not listed.

· Probable routes of exposure:

Inhalation.
Eye contact.
Skin contact.

- **Germ cell mutagenicity:** Based on available data, the classification criteria are not met.
- **Carcinogenicity:** Based on available data, the classification criteria are not met.
- **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:** 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:** No further relevant information available.

· 12.2 Persistence and degradability

Inorganic product, is not eliminable from water by means of biological cleaning processes.

- **12.3 Bioaccumulative potential** No further relevant information available.

- **12.4 Mobility in soil** No further relevant information available.

· 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

Contact waste processors for recycling information.

The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes.

· Uncleaned packaging:

· **Recommendation:** Disposal must be made according to official regulations.

SECTION 14: Transport information

· 14.1 UN-Number

· DOT, ADR/RID/ADN, IMDG, IATA Not Regulated

· 14.2 UN proper shipping name

· DOT, ADR/RID/ADN, IMDG, IATA Not Regulated

· 14.3 Transport hazard class(es)

· DOT, ADR/RID/ADN, IMDG, IATA

· Class Not Regulated

· Label

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· 14.4 Packing group

· DOT, ADR/RID/ADN, IMDG, IATA Not Regulated

· 14.5 Environmental hazards:

· Marine pollutant: No

· 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.

SECTION 15: Regulatory information

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

· United States (USA)

· SARA

· Section 302 (extremely hazardous substances):

Substance is not listed.

· Section 355 (extremely hazardous substances):

Substance is not listed.

· Section 313 (Specific toxic chemical listings):

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Substance is listed.

· **TSCA (Toxic Substances Control Act):**

Substance is listed

· **Proposition 65 (California):**

· **Chemicals known to cause cancer:**

Substance is not listed.

· **Chemicals known to cause developmental toxicity for females:**

Substance is not listed.

· **Chemicals known to cause developmental toxicity for males:**

Substance is not listed.

· **Chemicals known to cause developmental toxicity:**

Substance is not listed.

· **EPA (Environmental Protection Agency)**

D

· **IARC (International Agency for Research on Cancer)**

Substance is not listed.

· **Canadian Domestic Substances List (DSL)**

Substance is listed

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

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

Substance is not listed.

· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Abbreviations and acronyms:**

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

DNEL: Derived No-Effect Level (REACH)

PNEC: Predicted No-Effect Concentration (REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bio-accumulable, Toxic

SVHC: Substances of Very High Concern

vPvB: very Persistent and very Bioaccumulative

· **Sources**

Website, European Chemicals Agency (echa.europa.eu)

Website, US EPA Substance Registry Services (ofmpub.epa.gov/sor-internet/registry/substreg/home/overview/home.do)

Website, Chemical Abstracts Registry, American Chemical Society (www.cas.org)

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Patty's Industrial Hygiene, 6th ed., Rose, Vernon, ed. ISBN: 978-0-470-07488-6

Casarett and Doull's Toxicology: The Basic Science of Poisons, 8th Ed., Klaasen, Curtis D., ed., ISBN: 978-0-07-176923-5.

Safety Data Sheets, Individual Manufacturers

SDS Prepared by:

ChemTel Inc.

1305 North Florida Avenue

Tampa, Florida USA 33602-2902

Toll Free North America 1-888-255-3924 Intl. +01 813-248-0573

Website: www.chemtelinc.com