



SAFETY DATA SHEET

MATERION

1. Identification

Product identifier Copper

Other means of identification

SDS number R06

CAS number 7440-50-8

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Company name Materion Brush Inc.

Address 6070 Parkland Boulevard
Mayfield Heights, OH 44124
United States

Telephone 1.800.862.4118

Website www.materion.com

E-mail ehs@materion.com

Contact person Theodore Knudson

Emergency phone number 1.800.862.4118

2. Hazard(s) identification

Physical hazards Not classified.

Health hazards Not classified.

Environmental hazards Not classified.

OSHA defined hazards Not classified.

Label elements

Hazard symbol None.

Signal word None.

Hazard statement Not available.

Precautionary statement

Prevention Not available.

Response Not available.

Storage Not available.

Disposal Not available.

Hazard(s) not otherwise classified (HNOC) None known.

Supplemental information None.

3. Composition/information on ingredients

Substances

Chemical name	Common name and synonyms	CAS number	%
Copper		7440-50-8	100

4. First-aid measures

Inhalation Not available.

Skin contact Not available.

Eye contact Not available.

Ingestion Not available.

Most important symptoms/effects, acute and delayed Not available.

5. Fire-fighting measures

Suitable extinguishing media Not available.

Unsuitable extinguishing media Not available.

Specific hazards arising from the chemical Not applicable.

Special protective equipment and precautions for firefighters Not available.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures Not available.

Methods and materials for containment and cleaning up Not available.

Environmental precautions Not available.

7. Handling and storage

Precautions for safe handling Not available.

Conditions for safe storage, including any incompatibilities Not available.

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Material	Type	Value	Form
Copper (CAS 7440-50-8)	PEL	1 mg/m ³	Dust and mist.
		0.1 mg/m ³	Fume.

US. ACGIH Threshold Limit Values

Material	Type	Value	Form
Copper (CAS 7440-50-8)	TWA	1 mg/m ³	Dust and mist.
		0.2 mg/m ³	Fume.

US. NIOSH: Pocket Guide to Chemical Hazards

Material	Type	Value	Form
Copper (CAS 7440-50-8)	TWA	1 mg/m ³	Dust and mist.
		0.1 mg/m ³	Fume.

US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants

Material	Type	Value	Form
Copper (CAS 7440-50-8)	PEL	1 mg/m ³	Dust and mist.
		0.1 mg/m ³	Fume.

Biological limit values No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls Not available.

Individual protection measures, such as personal protective equipment

Eye/face protection Not available.

Skin protection

Hand protection Not available.

Other Not available.

Respiratory protection Not available.

Thermal hazards Not available.

9. Physical and chemical properties

Appearance

Physical state Solid.

Form Solid.

Color Copper.

Odor None.

Odor threshold Not applicable.

pH Not applicable.

Melting point/freezing point 1981.4 °F (1083 °C)

Initial boiling point and boiling range 4703 °F (2595 °C)

Flash point Not applicable.

Evaporation rate Not applicable.

Flammability (solid, gas) Not applicable.

Upper/lower flammability or explosive limits

Flammability limit - lower (%) Not applicable.

Flammability limit - upper (%) Not applicable.

Explosive limit - lower (%) Not applicable.

Explosive limit - upper (%) Not applicable.

Vapor pressure < 0.0000001 kPa (77 °F (25 °C))

Vapor density Not applicable.

Relative density Not applicable.

Solubility(ies)

Solubility (water) Insoluble

Auto-ignition temperature Not applicable.

Decomposition temperature Not applicable.

Viscosity Not applicable.

Other information

Density 8.94 g/cm³ estimated

Molecular formula Cu

Molecular weight 63.55 g/mol

Specific gravity 8.94

10. Stability and reactivity

Reactivity Not available.

Chemical stability Not available.

Possibility of hazardous reactions Not available.

Conditions to avoid Not available.

Incompatible materials Not available.

Hazardous decomposition products Not available.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Not available.
Skin contact	Not available.
Eye contact	Not available.
Ingestion	Not available.

Symptoms related to the physical, chemical and toxicological characteristics Not available.

Information on toxicological effects

Acute toxicity	Not available.
Skin corrosion/irritation	Not available.
Serious eye damage/eye irritation	Not available.
Respiratory or skin sensitization	
Respiratory sensitization	Not available.
Skin sensitization	Not available.
Germ cell mutagenicity	Not available.

Carcinogenicity

IARC Monographs. Overall Evaluation of Carcinogenicity

Not listed.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

US. National Toxicology Program (NTP) Report on Carcinogens

Not listed.

Reproductive toxicity	Not available.
Specific target organ toxicity - single exposure	Not available.
Specific target organ toxicity - repeated exposure	Not available.
Aspiration hazard	Not available.

12. Ecological information

Ecotoxicity

Product		Species	Test Results
Copper (CAS 7440-50-8)			
Aquatic			
Acute			
Crustacea	EC50	Blue crab (<i>Callinectes sapidus</i>)	0.0031 mg/l
Fish	LC50	Chinook salmon (<i>Oncorhynchus tshawytscha</i>)	0.02 mg/l, 96 hours

Persistence and degradability	Not available.
Bioaccumulative potential	Not available.
Mobility in soil	Not available.
Other adverse effects	Not available.

13. Disposal considerations

Disposal instructions	Not available.
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Waste from residues / unused products Not available.

Contaminated packaging Not available.

14. Transport information

DOT

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

15. Regulatory information

US federal regulations

Toxic Substances Control Act (TSCA)

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Copper (CAS 7440-50-8) Listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical Yes

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
Copper	7440-50-8	100

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Clean Water Act (CWA) Section 112(r) (40 CFR 68.130) Priority pollutant Toxic pollutant

Safe Drinking Water Act (SDWA) Not regulated.

US state regulations

California Proposition 65

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

Copper (CAS 7440-50-8)

16. Other information, including date of preparation or last revision

Issue date 10-19-2016

Revision date 10-19-2016

Version # 02

Further information

Transportation Emergency
Call Chemtrec at:
International: 703.741.5970
Spain: 900.868.538
Switzerland: 0800.564.402
Chemtrec's toll free, mobile-enabled number in Germany – 0800 1817059

Other information

Revised information in Section 16.

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