

SAFETY DATA SHEET

Product Identifier: Metallic Filament Brushes

Current Revision Date: 12-31-2019



1. PRODUCT AND COMPANY IDENTIFICATION

1.1 Product Identifier	Metallic Filament Brushes
1.2 General Use	Cleaning, Deburring, and Finishing Metal Components
1.3 Manufacturer	Brush Research Manufacturing 4642 Floral Dr. Los Angeles, CA 90022 (323) 261-2193 info@brushresearch.com
1.4 Emergency Number	(323) 261-2193 8:00am to 4:30pm (PST)

2. HAZARD IDENTIFICATION

2.1 Classification	This product is classified as a manufactured article per 29 CFR 1910.1200. The use of this product will not result in exposure to hazardous substances under recommended normal conditions of use.
2.2 Label Elements	
Pictogram	None
Signal Word	None
2.3 Other Hazards	Build up of dusts should be avoided
2.4 Unknown Acute Toxicity	Not applicable

3. COMPOSITION / INGREDIENT INFORMATION

Depending on part number or description one of the following filament materials may be used. Contact Brush Research Manufacturing for more detailed information on each filament material if it is required.

Brass Filament Material			
Ingredient	CAS Number	EINECS Number	Weight %
Copper	7440-50-8	231-159-6	70
Lead	7439-92-1	231-100-4	< .01
Iron	7439-89-6	231-096-4	< .01
Zinc	7440-66-6	231-175-3	> 30

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Carbon Steel Filament Material			
Ingredient	CAS Number	EINECS Number	Weight %
Iron	7439-89-6	231-096-4	95-99
Carbon	7440-44-0	231-153-3	0.01-1.1
Manganese	7439-96-5	231-105-1	0.25-1.65
Phosphorous	7723-14-0	231-768-7	0.00-0.04
Silicon	7440-21-3	231-130-8	0.15-.30
Sulfur	7704-34-9	231-722-6	0.000-0.035
Lead	7439-92-1	231-096-4	0.000-0.005
Vanadium	7440-62-2	231-171-1	0.00-0.35
Chromium	7440-47-3	231-157-5	0.0-1
Zinc Plating	7440-66-6	231-175-3	0.0-9.0

Stainless Steel Filament Material			
Ingredient	CAS Number	EINECS Number	Weight %
Carbon	7440-44-0	231-153-3	< 0.1
Manganese	7439-96-5	231-105-1	2
Phosphorous	7723-14-0	231-768-7	< 0.5
Sulfur	7704-34-9	231-722-6	< 0.5
Silicon	7440-21-3	231-130-8	1
Chromium	7440-47-3	231-157-5	17 – 19
Nickel	7440-02-0	231-111-4	8 – 10
Iron	7439-89-6	231-096-4	> 67

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4. FIRST AID MEASURES

4.1 Description of First Aid Measures

Inhalation	Remove victim from source of exposure to fresh air. If breathing is difficult administer oxygen. Seek medical attention.
Skin Contact	Wash with soap and water. Seek medical advice if skin irritation develops.
Eye Contact	Flush with water for at least 15 minutes. Seek medical advice if irritation develops.
Ingestion	Seek medical attention.

4.2 Most important symptoms and effect; Acute and Delayed

Inhalation	Prolonged breathing of dusts may affect breathing capacity
Skin Contact	Dusts may cause irritation and abrasions
Eye Contact	Long term exposure to dusts may irritate or damage the eyes.
Ingestion	None under normal use

4.3 Indication of any immediate medical needs or special treatment

No data available

5. FIREFIGHTING MEASURES

5.1 Extinguishing Media

Suitable extinguishing media	Use extinguishing media appropriate to the surrounding fire.
Unsuitable extinguishing media	None

5.2 Special hazards arising from the substance or mixture

Fire hazard	At temperatures above the melting point, fumes containing metal oxides and other alloying elements may be liberated.
Explosion hazard	None known

5.3 Special protective equipment

Wear self-contained breathing apparatus pressure-demand (MSHA/NIOSH approved or equivalent) and full protective gear.

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6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment, and emergency procedures

For non-emergency personnel	No additional information is available
For emergency responders	No additional information is available

6.2 Environmental precautions

No additional information is available

6.3 Methods and material for containment and cleaning up

No special measures required

6.4 Reference to other sections

Refer to Section 8 for personal protective equipment and Section 13 for proper disposal

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

No special measures required

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions	Store in a dry location
Incompatibilities	No additional information is available

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Permissible exposure limits

Brass Filaments		
Ingredient	OSHA / PEL	ACGIH / TLV
Copper	0.1 mg/m ³ (fumes 1mg/m ³ (dusts and mists)	0.2 mg/m ³ (fumes 1mg/m ³ (dusts and mists)
Lead	0.05 mg/m ³	0.05 mg/m ³
Iron	None established	5.0 mg/m ³ (Respirable)
Zinc	None established	None established

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Carbon Steel Filaments		
Ingredient	OSHA / PEL	ACGIH / TLV
Iron	None established	5.0 mg/m ³ (Respirable)
Carbon	15 mg/m ³	
Manganese	5 mg/m ³	0.2 mg/m ³
Phosphorous	0.1 mg/m ³	0.1 mg/m ³
Silicon	5 mg/m ³ (respirable)	5 mg/m ³ (respirable)
Sulfur	13 mg/m ³ (as SO ₂)	0.25 ppm (as SO ₂)
Lead	0.5 mg/m ³	0.5 mg/m ³
Vanadium	0.5 mg/m ³ (as V ₂ O ₅)	0.5 mg/m ³ (as V ₂ O ₅)
Chromium	1 mg/m ³	0.5 mg/m ³
Zinc Plating	5 mg/m ³ (as zinc oxide fume)	5 mg/m ³ (as zinc oxide fume)

There are no exposure limits for stainless steel. The exposure limit for iron-containing fumes has been established at 5 mg/m³ with ACGIH's TWA. The individual complex compounds within the fume may have lower exposure limits than the general fume.

Stainless Steel Filaments		
Ingredient	OSHA / PEL	ACGIH / TLV
Carbon	15 mg/m ³	
Manganese	5 mg/m ³	0.2 mg/m ³ (As inorganic Mn)
Phosphorous	0.1 mg/m ³	0.1 mg/m ³
Sulfur	13 mg/m ³ (as SO ₂)	0.25 ppm (as SO ₂)
Silicon	5 mg/m ³ (respirable)	10.0 mg/m ³ (Respirable) 3.0 mg/m ³ (Respirable)
Chromium	1 mg/m ³	0.05 mg/m ³ (Metal & Cr+3) 0.05 mg/m ³ (Cr+6 Soluble) 0.01 mg/m ³ (Cr+6 Insoluble)
Nickel	1 mg/m ³	1.5 mg/m ³ (Metal) 0.02 mg/m ³ (Insoluble) 0.01 mg/m ³ (Soluble)
Iron	None established	5.0 mg/m ³ (Respirable)

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8.2 Engineering controls

Utilize adequate ventilation to maintain the concentration of contaminants below the occupational exposure limits.

8.3 Respiratory protection

Select and use respirators in accordance with applicable regulations in areas that exceed occupational exposure limits.

8.4 Hand protection

Gloves should be worn when using this product.

8.5 Eye protection

Safety goggles or face shield over safety glasses with side shields.

8.6 Hearing protection

Select and use hearing protection in accordance with applicable regulations in areas that exceed occupational exposure limits.

8.7 Skin and body protection

Protective clothing may be required to prevent contamination of personal clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Solid	Lower Flammable Limit	No data available
Odor	Odorless	Vapor Pressure	N/A
Odor Threshold	N/A	Vapor Density	N/A
pH	N/A	Specific Gravity	>1
Melting Point	>1000° C (1706° F)	Relative vapor density at 20° C	N/A
Freezing Point	No data available	Solubility in H2O	Insoluble
Boiling Point	N/A	Partition Coefficient (n-octanol/water)	Not determined
Flash Point	N/A	Auto-Ignition Temperature	No data available
Evaporation Rate	N/A	Decomposition Temperature	No data available
Flammability	No data available	Viscosity	N/A
Upper Flammable Limit	No data available		

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10. STABILITY AND REACTIVITY

10.1 Reactivity

Stable at normal ambient temperature and pressure

10.2 Chemical stability

Stable at normal ambient temperature and pressure

10.3 Possibility of hazardous reactions

Will not occur

10.4 Conditions to avoid

No data available

10.5 Incompatible materials

Brass – Acetylene; Chlorine

Carbon Steel and Stainless Steel – Acids

10.6 Hazardous thermal decomposition products

Metal Oxide fumes

11. TOXICOLOGICAL INFORMATION

No data is available on the product itself. The product as sold is not expected to be hazardous when used under recommended normal conditions.

12. ECOLOGICAL INFORMATION

12.1 Toxicity

No additional information is available. Toxicity is expected to be low based in insolubility in water.

12.2 Persistence and degradability

No data is available. Persistence and degradability are expected to be low based in insolubility in water.

12.3 Bio-accumulative potential

No data is available. Bio-accumulative potential is expected to be low based in insolubility in water.

12.4 Mobility in soil

No data is available. Mobility in soil is expected to be low based in insolubility in water.

12.5 Other adverse effects

Effect on the ozone layer No data is available.

Effect on global warming No data is available.

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13. DISPOSAL CONSIDERATIONS

13.1 Disposal recommendations

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

14. TRANSPORT INFORMATION

14.1 DOT / ADR / IATA / IMDG Regulations

Not regulated

14.2 UN Number

N/A

14.3 UN Proper Shipping Name

N/A

14.4 Transport Class

N/A

14.5 Packing Group

N/A

14.6 Marine Pollutant

N/A

14.7 Special Precautions

N/A

15. REGULATORY INFORMATION

TSCA

In compliance with TSCA inventory requirements for commercial purposes

SARA

Section 313 All chemical components are below threshold values

Section 355 Not Listed

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State Specific Listings

Ingredient	CAS Number	Hazardous Substance List				Prop 65*
		NJ	PA	MA	MI	CA
Copper	7440-50-8	X	X	X	X	
Lead	7439-92-1	X	X	X	X	X
Zinc	7440-66-6	X		X		
Chromium	7440-47-3					X
Nickel	7440-02-0					X

* "WARNING: This product contains detectable amounts of a chemical (s) known to the State of California to cause cancer and/or birth defects or other reproductive harm."

16. OTHER INFORMATION

To the best of our knowledge, the information contained in this SDS is accurate or is obtained from sources believed to be accurate. However, no liability, expressed or implied, is assumed for the accuracy or completeness of the information contained herein. Buyer assumes liability in its use of the material.

Prepared by:

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