



Safety Data Sheet  
Date Issued – June 1<sup>ST</sup>, 2015

Osborn SDS Number: PB-04  
Power Brushes with Brass or Bronze Wire

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**Date Issued - 6/1/2015**  
**SDS Number - PB-04**

**1. PRODUCT AND COMPANY IDENTIFICATION**

*PRODUCT DESCRIPTION:*

Power Brushes with Brass or Bronze Wire

*GENERAL USE:*

Material removal, surface finishing

*MANUFACTURER ADDRESS:*

Osborn  
2350 Salisbury Road  
Richmond, Indiana 47374, U.S.A.

*CONTACT NUMBER:*

765-965-5333

*24 HOUR EMERGENCY TELEPHONE NUMBER:*

Chemtrec 800-424-9300



## **2. HAZARD IDENTIFICATION**

### *EMERGENCY OVERVIEW*

Dust may cause eye and respiratory irritation. Dust particles may cause abrasive injury to the eyes. This product contains lead which may damage fertility or the unborn child. Lead causes damage to the central nervous system, blood, and kidneys, and may be acutely toxic. This product contains arsenic which may cause cancer, liver effects, skin effects, respiratory irritation, nervous system effects, and may be acutely toxic. This product contains cadmium which may cause cancer, lung effects, kidney effects, and be acutely toxic. This product contains beryllium and nickel which are known to cause cancer. This product contains manganese which causes central nervous system effects. This product contains beryllium and cobalt which may cause allergic skin or respiratory reaction (asthma).

### *GHS Label requirements*

#### *Pictogram*

None

#### *Signal Word*

None

### *Hazard Statement*

A greater hazard, in most cases, is the exposure to the dust/fumes from the material being brushed and the potential hazard from this exposure must be evaluated.



### 3. COMPOSITION/INGREDIENT INFORMATION

<i>Ingredients</i>	<i>CAS</i>	<i>Weight %</i>
Aluminum	7429-90-5	Proprietary
Antimony	7440-36-0	Proprietary
Arsenic	7440-38-2	Proprietary
Beryllium	7440-41-7	Proprietary
Cadmium	7440-43-9	Proprietary
Carbon Black	1333-86-4	Proprietary
Chromium	7440-47-3	Proprietary
Cobalt	7440-48-4	Proprietary
Copper	7440-50-8	Proprietary
Iron	1309-37-1	Proprietary
Lead	7439-92-1	Proprietary
Manganese	7439-96-5	Proprietary
Nickel	7440-02-0	Proprietary
Phosphorous	7723-14-0	Proprietary
Silicon	7440-21-3	Proprietary
Silver	7440-22-4	Proprietary
Sulfur dioxide	7446-09-5	Proprietary
Tellurium	13494-80-9	Proprietary
Tin	7440-31-5	Proprietary
Zinc	7440-66-6	Proprietary
Zirconium	7440-67-7	Proprietary



#### **4. FIRST AID MEASURES**

##### *General Measures*

Under normal handling and use, exposure to solid forms of this material present few health hazards. Subsequent operations such as grinding, melting or welding may produce potentially hazardous dust or fumes which can be inhaled or come in contact with the skin or eyes.

See 29 CFR 1910.1025 for appropriate precautions to follow when using lead-containing products and medical surveillance required when using this product. See 29 CFR 1910.1018 for appropriate precautions to follow when using arsenic-containing products and medical surveillance required when using this product. See 29 CFR 1910.1027 for appropriate precautions to follow when using cadmium-containing products and medical surveillance required when using this product.

##### *Inhalation*

Inhalation of excessive fume or dust concentrations may result in respiratory tract irritation remove victim to fresh air and get immediate medical attention. Product contains beryllium, cobalt and nickel which may cause an allergic reaction. Get immediate medical attention if breathing is difficult.

##### *Skin Contact*

Wash dust from skin with soap and water. Launder contaminated clothing before reuse.

##### *Eye Contact*

Flush eyes thoroughly with water, holding open eyelids. Get medical attention if irritation occurs and persists.

##### *Ingestion*

If dust is swallowed, seek medical attention.

##### *Most Important Symptoms/Effect, Acute and Delayed*

Use may generate dust that may cause eye and respiratory tract irritation. Dust may be acutely toxic by inhalation and ingestion. May cause allergic skin and respiratory reaction. Lead exposure may cause reproductive system effects and harm the unborn child. Lead exposure may cause damage to the central nervous system, kidneys, and blood. Arsenic exposure may cause damage to the liver, skin, respiratory system, and central nervous system. Cadmium exposure may cause damage to the lungs and kidneys. Arsenic, nickel and cadmium may cause cancer. Lead, arsenic, and cadmium may be acutely toxic. Manganese may cause nervous system damage.

##### *Indication of Any Immediate Medical Attention and Special Treatment Needed*

Medical surveillance is required for workers working with lead-containing, arsenic-containing, and cadmium-containing products. Get immediate medical attention for acute exposure by any route.



## **5. FIRE FIGHTING MEASURES**

### *Extinguishing Media*

Use class D extinguishing media on fines, dust, or molten metal. Use coarse water spray on chips and fires. Do NOT use halogenated extinguishing agents on small chips or fines. Do NOT use water for fires involving molten metal. These fire extinguishing agents will react with burning metal.

### *Unusual Fire and Explosion Hazards*

This product is not combustible, however, consideration must be given to the potential fire/explosion hazards from the base material being processed. Many materials create flammable / explosive dusts or turnings when sanded, machined or ground. Fumes released by this product may be harmful.

### *Special Protective Equipment*

Wear an approved, positive pressure, self-contained breathing apparatus and full protective clothing.

### *Hazardous Combustion Products*

Metal fumes, copper, lead, nickel, and chromium compounds, and lead oxides.

## **6. ACCIDENTAL RELEASE MEASURES**

### *Personal Precautions, Protective Equipment and Emergency Procedures*

Minimize generation of dust. Use appropriate protective equipment to avoid inhalation and eye contact if dust is generated.

### *Environmental Precautions*

Notify authorities as required by local, state and federal regulations. Prevent product from entering drains. Do not flush into surface water or storm drains.

### *Methods for Clean Up*

Pick up, sweep up or vacuum any dust, and place in a container for disposal.

### *Reference to Other Sections*

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

## **7. HANDLING AND STORAGE**

### *Precautions for Safe Handling*

Use only with adequate ventilation. Avoid breathing dust. Wash thoroughly after handling and use, especially before eating, drinking or smoking. Consider potential exposure to components of the base materials or coatings being brushed, machined or ground. Refer to OSHA's substance specific standards for additional work practice requirements where applicable. (29 CFR 1910.1025, 29 CFR 1910.1018, and 29 CFR 1910.1029 for lead, arsenic, and cadmium).

### *Conditions for Safe Storage*

Store in a dry location. See section 10 for more information on incompatible materials.



### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

<i>Hazardous Component</i>	<i>OSHA PEL</i>	<i>ACGIH TLV</i>	<i>Ontario</i>	<i>Québec</i>
Aluminum	15 mg/m <sub>3</sub> TWA (Total Dust) 5 mg/m <sub>3</sub> TWA (Respirable)	1 mg/m <sub>3</sub> TWA (Respirable)	None Established	10 mg/m <sub>3</sub> TWA
Antimony	0.5 mg/m <sub>3</sub> TWA	0.5 mg/m <sub>3</sub> TWA	0.5 mg/m <sub>3</sub> TWA	0.5 mg/m <sub>3</sub> TWA
Arsenic	0.01 mg/m <sub>3</sub> TWA	0.01 mg/m <sub>3</sub> TWA	0.01 mg/m <sub>3</sub> TWA 0.05 mg/m <sub>3</sub> STEL	0.1 mg/m <sub>3</sub> TWA
Beryllium	0.002 mg/m <sub>3</sub> TWA 0.005 mg/m <sub>3</sub> Ceiling 0.025 mg/m <sub>3</sub> 30-min PEAK	0.00005 mg/m <sub>3</sub> TWA (Inhalation, skin)	0.002 mg/m <sub>3</sub> TWA 0.01 mg/m <sub>3</sub> STEL	0.00015 mg/m <sub>3</sub> TWA
Cadmium	0.005 mg/m <sub>3</sub> TWA	0.01 mg/m <sub>3</sub> TWA 0.002 mg/m <sub>3</sub> (Respirable)	0.01 mg/m <sub>3</sub> TWA	0.025 mg/m <sub>3</sub> TWA
Carbon Black	3.5 mg/m <sub>3</sub> TWA	3 mg/m <sub>3</sub> TWA (Inhalable)	3.5 mg/m <sub>3</sub> TWA	3.5 mg/m <sub>3</sub> TWA
Chromium	0.5 mg/m <sub>3</sub> TWA	0.5 mg/m <sub>3</sub> TWA	0.5 mg/m <sub>3</sub> TWA	0.5 ppm STEL
Cobalt	None Established	None Established	None Established	None Established
Copper	1 mg/m <sub>3</sub> TWA	1 mg/m <sub>3</sub> TWA	1 mg/m <sub>3</sub> TWA	1 mg/m <sub>3</sub> TWA
Iron	None Established	None Established	None Established	None Established
Lead	0.05 mg/m <sub>3</sub> TWA	0.05 mg/m <sub>3</sub> TWA 30 ug/ 100 mL in blood (normal workers) 10 ug/ 100 mL in blood (women of child-bearing potential)	0.05 mg/m <sub>3</sub> TWA	0.05 mg/m <sub>3</sub> TWA
Manganese	5 mg/m <sub>3</sub> Ceiling	0.02 mg/m <sub>3</sub> TWA (Respirable) 0.1 mg/m <sub>3</sub> TWA (Inhalable)	0.2 mg/m <sub>3</sub> TWA	1 mg/m <sub>3</sub> TWA 3 mg/m <sub>3</sub> STEL
Nickel	1 mg/m <sub>3</sub> TWA	1.5 mg/m <sub>3</sub> TWA (Inhalable)	1 mg/m <sub>3</sub> TWA	1 mg/m <sub>3</sub> TWA
Phosphorous	None Established	None Established	None Established	0.1 mg/m <sub>3</sub> TWA
Silicon	15 mg/m <sub>3</sub> (Total Dust) 5 mg/m <sub>3</sub> (Respirable)	None Established	10 mg/m <sub>3</sub> TWA	10 mg/m <sub>3</sub> TWA



## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION - CONTINUED

<i>Hazardous Component</i>	<i>OSHA PEL</i>	<i>ACGIH TLV</i>	<i>Ontario</i>	<i>Québec</i>
Silver	0.01 mg/m <sub>3</sub> TWA	0.1 mg/m <sub>3</sub> TWA (dust and fume)	0.1 mg/m <sub>3</sub> TWA	0.1 mg/m <sub>3</sub> TWA
Sulfur Dioxide	5 ppm TWA	0.25 ppm STEL	2 ppm TWA, 5 ppm STEL	2 ppm TWA, 5 ppm STEL
Tellurium	0.1 mg/m <sub>3</sub> TWA	0.1 mg/m <sub>3</sub> TWA	0.1 mg/m <sub>3</sub> TWA	0.1 mg/m <sub>3</sub> TWA
Tin	2 mg/m <sub>3</sub> TWA	2 mg/m <sub>3</sub> TWA	2 mg/m <sub>3</sub> TWA	2 mg/m <sub>3</sub> TWA
Zinc	None Established	None Established	None Established	None Established
Zirconium	None Established	5 mg/m <sub>3</sub> TWA 10 mg/m <sub>3</sub> STEL	5 mg/m <sub>3</sub> TWA 10 mg/m <sub>3</sub> STEL	5 mg/m <sub>3</sub> TWA 10 mg/m <sub>3</sub> STEL

Note: Consider also components of base materials and coatings being worked.

Lead, Cadmium, and Arsenic have action levels as set by OSHA. Refer to 29 CFR 1910.1025, 29 CFR 1910.1018, and 29 CFR 1910.1029 for action levels and information about specific requirements when working with Lead Cadmium, and Arsenic.

### *Engineering Controls*

Ensure adequate ventilation to maintain exposures below occupational limits. Whenever possible the use of local exhaust ventilation or other engineering controls is the preferred method of controlling exposure to airborne dust and fume to meet established occupational exposure limits. Use good housekeeping and sanitation practices. Do not use tobacco or food in work area. Wash thoroughly before eating or smoking. Do not blow dust off clothing or skin with compressed air.

### *Respiratory Protection*

Use an approved respirator if exposure limits are exceeded or where dust exposures are excessive. Consider the potential for exposure to components of the coatings or base material being ground in selecting proper respiratory protection. Refer to local regulations for specific standards where appropriate. Selection of respiratory protection depends on the contaminant type, form and concentration. Select and use respirators in accordance with applicable regulations and good industrial hygiene practice.

### *Hand Protection*

Cloth or leather gloves recommended.

### *Eye Protection*

Safety goggles or face shield over safety glasses with side shields

### *Skin Protection*

Protective clothing as needed to prevent contamination of personal clothing. Hearing protection may be required.



## 9. PHYSICAL AND CHEMICAL PROPERTIES

<i>Characteristic</i>	<i>Value</i>
Appearance	Yellow-Red solid brushes
Form	Solid in various forms
Color	Yellow-Red
Odor	Odorless
Odor Threshold	Not determined
pH	N/A
Melting Point	~1200°F – 2200°F
Boiling Point	No data
Flash Point	Non-Combustible
Evaporation Rate	N/A
Flammability	Not flammable
Upper Flammable Limit	N/A
Lower Flammable Limit	N/A
Vapor Pressure	No data
Vapor Density	N/A
Specific Gravity	7
Solubility in H <sub>2</sub> O	Insoluble
Partition Coefficient (n-octanol/water)	Not determined
Auto-Ignition Temperature	No data
Decomposition Temperature	No data
Viscosity	N/A



## 10. STABILITY AND REACTIVITY

### *Reactivity*

Not reactive

### *Chemical Stability*

Stable

### *Conditions to Avoid*

None known

### *Incompatible Materials*

None known

### *Hazardous Decomposition Products*

Dust from brushing and grinding could contain ingredients listed in Section 3 and other, potentially more hazardous components of the base material being brushed or coatings applied to the base material. Thermal decomposition may release metal fumes, copper compounds, lead oxides, and lead and chromium compounds.

### *Hazardous Polymerization*

No data



## **11. TOXICOLOGICAL INFORMATION**

### *Likely Route of Exposure*

Inhalation, skin, eyes. Product as shipped does not present an inhalation hazard; however subsequent operations may create dusts or fumes which could be inhaled.

### *Eyes*

Dust may cause eye irritation. Dust particles may cause abrasive injury to the eyes. See repeat exposure for chronic effects from ingredients of this product.

### *Skin Contact*

None expected under normal use conditions. Rubbing product across the skin may cause mechanical irritation or abrasions. May cause allergic skin reaction (sensitization). See repeat exposure for chronic effects from ingredients of this product.

### *Inhalation*

Dust may cause respiratory irritation. May be harmful by inhalation. Prolonged inhalation may cause lung damage. May cause allergic respiratory reaction (sensitization). Inhalation of fumes may cause metal fume fever, which is characterized by flu-like symptoms with metallic taste, fever, chills, chest pain, fatigue and muscle pain. Symptoms generally resolve in 24-48 hours. See repeat exposure for chronic effects from ingredients of this product.

### *Ingestion*

None expected under normal use conditions. May be harmful if swallowed. Prolonged ingestion of silver may cause skin discoloration. See repeat exposure for chronic effects from ingredients of this product.

### *Acute Toxicity*

Arsenic: Oral rat LD50 – 763 mg/kg

Cadmium: Oral rat LD50 – 1330 mg/kg; Inhalation rabbit LC50 – 8 mg/L/4 hr

Cobalt: Oral rat LD50 – 6170 mg/kg; Inhalation rat LC50 – >10 mg/L/1 hr

Manganese: Oral rat LD50 – 9 g/kg

Silicon: Oral rat LD50 – 3160 mg/kg

Nickel: Oral rat LD50 – >9000 mg/kg

Tellurium: Oral rat LD50 – 83 mg/kg; Inhalation rat LC50 – >2420 mg/m<sup>3</sup>/4 hr

Sulfur dioxide: Inhalation rat LC50 – 2500 ppm/1 hr

### *Reproductive Toxicity*

Contains lead. May cause damage to fertility or the unborn child.



## **11. TOXICOLOGICAL INFORMATION - CONTINUED**

### *Carcinogenicity*

This product contains the following ingredients that are listed OSHA carcinogens: Nickel, Lead, Cobalt, Beryllium, Cadmium, and Arsenic. The following ingredients are listed as IARC carcinogens: Nickel (Group 1), Lead (Group 2A), Cobalt (Group 2A), Beryllium (Group 1), Cadmium (Group 1), Arsenic (Group 1), and Carbon Black (Group 2B). The following ingredients are listed as NTP carcinogens: Nickel (Reasonably anticipated), Lead (Reasonably Anticipated), Beryllium (Known), Cadmium (Known), and Arsenic (Known). None of the other components of this product are listed as a carcinogen or potential carcinogen by OSHA, NTP or IARC.

### *Germ Cell Mutagenicity*

Not expected to be a mutagen

### *Repeat Exposure*

Repeated exposure may cause allergic skin and respiratory reaction (sensitization and asthma). May cause adverse effects in the central nervous system, blood, kidneys, liver, and lungs. Prolonged or repeated exposure to beryllium fumes may cause chronic beryllium lung disease. Overexposure to metal fumes may cause pulmonary edema and methemaglobanemia. Inhalation of dust may cause pulmonary fibrosis.



## **12. ECOLOGICAL INFORMATION**

### *Toxicity*

Cobalt: LC50 Brachydanio rario 96 hr – >100 mg/L

Copper: LC50 Pimephales promelas 96 hr – 0.0068 – 0.0156 mg/L; EC50 daphnia magna 48 hr – 0.03 mg/L

Nickel: LC50 Cyprinus carpio 96 hr – 1.3 mg/L; EC50 daphnia magna 48 hr – 1 mg/L

Lead: LC50 Cyprinus carpio 96 hr – 0.44 mg/L; EC50 daphnia magna 48 hr – 600 ug/L

Cadmium: LC50 Pimephales promelas 96 hr – 0.0004-0.003 mg/L; EC50 daphnia magna 48 hr – 0.0244 mg/L

This product contains ingredients that are toxic to aquatic organisms with long-lasting effects. Avoid Environmental releases.

### *Persistence and Degradability*

No data

### *Bio-Accumulative Potential*

No data

### *Mobility in Soil*

Not applicable

### *Results of PBT and vPvB Assessment*

Not applicable

### *Other Adverse Effects*

Not applicable

## **13. DISPOSAL CONSIDERATIONS**

### *General*

Dispose in accordance with all applicable local, state/provincial and federal regulations. Local regulations may be more stringent than regional and national requirements. It is the responsibility of the waste generator to determine the toxicity and physical characteristics of the material to determine the proper waste identification and disposal in compliance with applicable regulations. Possible US EPA Waste numbers that might apply to this material: D006, D007, D008, and D011.

### *Packaging*

Dispose of in accordance with Federal, State and Local regulations. Local regulations may be more stringent than regional and national requirements. It is the responsibility of the waste generator to determine the toxicity and physical characteristics of the material to determine the proper waste identification and disposal in compliance with applicable regulations.



#### **14. TRANSPORTATION INFORMATION**

*DOT/ADR/IATA/IMDG Regulations:*

Not regulated

*UN Number:*

N/A

*UN Proper Shipping Name:*

N/A

*Transport Hazard Class:*

N/A

*Packing Group:*

N/A

*Marine Pollutant:*

N/A

*Special Precautions:*

N/A



## 15. REGULATORY INFORMATION

### *US Regulations*

#### *SARA Section 311/312*

Hazard Categories: Acute Health, Chronic Health

#### *SARA Section 313:*

Some products contain the following toxic chemicals subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372 (Toxic Chemical Release Reporting):  
None.

Aluminum	7429-90-5
Antimony	7440-36-0
Arsenic	7440-38-2
Beryllium	7440-41-7
Cadmium	7440-43-9
Chromium	7440-47-3
Cobalt	7440-48-4
Copper	7440-50-8
Lead	7439-92-1
Manganese	7439-95-5
Nickel	7440-02-0
Silver	7440-22-4

### *California Proposition 65*

WARNING: You create dust when you cut, sand, drill or grind materials such as wood, paint, cement, masonry or metal. This dust often contains chemicals known to cause cancer, birth defects or other reproductive harm. This product contains the following chemicals known to the state of California to cause cancer and/or reproductive harm: Arsenic (cancer), Beryllium (cancer), Cadmium (cancer, male reproductive, Developmental), Cobalt (cancer), Lead (cancer, male and female reproductive, developmental), and Nickel (cancer).

### *TSCA Listed*

All components are listed.

### *Regulation (EC) No 1272/2008 (CLP)*

N/A

### *Canada WHMIS Classification (CPR, SOR/88-66)*

Not a controlled product. This product meets the definition of a "manufactured article" under the WHMIS regulations. This product has been classified under the CPR and this SDS discloses information elements required by the CPR.



## **15. REGULATORY INFORMATION - CONTINUED**

### *HMIS Rating*

Health: 1

Flammability: 0

Reactivity: 0

### *NFPA Rating*

Health: 1

Flammability: 0

Reactivity: 0

### *Chemical Safety Assessment*

A chemical safety assessment has not been carried out.

### *California Proposition 65*

WARNING: You create dust when you cut, sand, drill or grind materials such as wood, paint, cement, masonry or metal. This product & the dust it creates contains chemicals known in the state of California to cause cancer and birth defects or other reproductive harm.



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## **16. OTHER INFORMATION**

*Revision Number*     1

*Supersedes Date*     2015/06/24

*Prepared By*  
Osborn

### *Manufacturer Disclaimer*

The above information is believed to be correct, but does not purport to be all inclusive and shall be used only as a guide. Osborn shall not be held liable for any damages resulting from handling or from contact with the above product.