

01. Identification of the substance/mixture and of the company

Product name: ITB Brushes (stainless steel wire)

Code number(s): ITB-30-12, ITB-30-9, ITB-60-9, ITB-60-12.

Purpose of product: Intended as a tool for the cleaning of internal channels of items. All brushes are made of nylon bristles imbedded in twisted stainless-steel twisted wire.

Manufacturer/supplier: Healthmark Industries Co.

Address: 18600 Malyn Blvd. / Fraser, MI 48026

Telephone/Fax/Email: (800) 521-6224 / (586) 491-2113 / healthmark@hmark.com

Emergency telephone number: (800) 424-9300 (24-hour service)

02. Hazards identifications

Classification of the substance or mixture: Stainless steel. This product is generally an article and is considered non-hazardous in its solid form but is regulated under OSHA for the release of dust and fumes during mechanical processing operations.

Hazard Statements: There are no health hazards from stainless steel wire in solid form. Exposure to dust and/or fumes from processing such as burning, welding, sawing, brazing and grinding may cause serious health effects. Causes skin irritation, may cause an allergic skin reaction, causes serious eye irritation, may cause respiratory irritation, may cause cancer
Causes damage to organs- lungs via inhalation
Causes damage to organs- lungs through prolonged or repeated exposure via inhalation.
May form combustible dust concentrations in air.

Pigment: N/A

Adverse environmental and human health effects:

Skin Irritation 2

Eye Irritation 2

Skin Sensitization 1B

Carcinogenicity 1B

Specific Target Organ Toxicity Single Exposure 3: Respiratory Tract Irritation

Specific Target Organ Toxicity Single Exposure 1

Specific Target Organ Toxicity Repeated Exposure 1

Combustible Dust

Respiratory Sensitization 1B

03. Composition/information on ingredients

<u>Description of the mixture:</u>	<u>CAS #:</u>	<u>% by Weight</u>	<u>Hazardous</u>
Aluminum	7429-90-5	<3.5%	Yes
Chromium	7440-47-3	<30%	Yes
Cobalt	7440-48-4	>30%	Yes

Copper	7440-50-8	<34%	Yes
Iron	7439-89-6	<85%	Yes
Manganese	7439-96-5	<10%	Yes
Molybdenum	7439-98-7	<18%	Yes
Nickel	7440-02-0	<35%	Yes
Silicon	7440-21-3	<4.5%	Yes
Tantalum	7440-25-7	<5.5%	Yes
Tungsten	7440-33-7	<6.0%	Yes
Vanadium	7440-62-2	<0.5%	Yes

Stainless steel products as provides contain chromium metal in the zero-valence state. As such, chromium metal does not present an unusual health hazard. However, operation such as burning, welding, sawing, brazing or grinding may generate airborne concentrations of hexavalent chromium.

Hazardous ingredients: N/A

General information: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid breathing dusts, fumes and gasses. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves- work gloves and eye/face protection-safety glasses or goggles. In case of inadequate ventilation wear respiratory protection.

Following inhalation: Remove victim to fresh air and keep at rest in a position comfortable for breathing. IF exposed or concerned: Get medical advice/attention.

Following skin contact: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse.

Following eye contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing If eye irritation persists: Get medical advice/attention.

Following ingestion: Low hazard for usual industrial or commercial handling. Get medical attention if symptoms occur.

Notes for the doctor: N/A

04. Firefighting measures

Suitable extinguishing media: For solid formed alloys, as appropriate for surrounding fire. A fire involving finely divided alloy should be treated as a Class D metal fire. Use DRY sand, graphite powder, dry sodium chloride-based extinguishers, G-1 or Met-L-X powder.

Unsuitable extinguishing media: Do not use halogenated extinguishing agents or foam.

Special hazards arising from the substance and combustion products: Stainless steel products in the form shipped are not considered combustible. During subsequent processing (cutting, welding, grinding, etc.), the generation of dust in high concentrations may present fire and explosion hazards. May produce hazardous metal fumes.

Advice for firefighters: Fire fighters should wear complete protective clothing including self-contained breathing apparatus.

05. Accidental release measures

General information: Emergency procedures- Solid form: Not applicable. In dust environment, ELLIMINATE all ignition sources (no smoking, flares, sparks, or flames in immediate area). Clean up using methods which

avoid dust generation. Compressed air should not be use. During cleanup avoid inhalation and skin and eye contact. Provide local exhaust or dilution ventilation as required.

Environmental precautions: N/A

Contaminate/Clean-up Measures- use appropriate Personal Protective Equipment (PPE). Use clean non-sparking tools to collect material and place it into loosely covered plastic containers for later disposal. Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration. Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air).

Additional information: N/A

06. Handling and storage

Precautions for safe handling: No specific requirements for solid formed steel product. Do not breathe (dust or fumes). Do not use in areas without adequate ventilation. Do not use sparking tools. Keep away form heat and ignition sources-No Smoking. Use good safety and industrial hygiene practices.

Fire Preventions: N/A

Technical measures and storage conditions: Do not store and transport with oxidizers, acids, etc.

Incompatible Materials or Ignition Sources- Oxidizers. Reacts with strong acids to form explosive hydrogen gas and oxides of nitrogen.

07. Exposure controls/personal protection

Control parameters: Adequate ventilation systems as needed to control concentrations of airborne contaminants below applicable threshold limit values. Use only appropriately classified electrical equipment.

	Result	Exposure Limits/Guidelines		
		ACGIH	NIOSH	OSHA
Vanadium (7440-62-2)	TWAs	Not established	1 mg/m ³ TWA (listed under Ferrovandium dust)	Not established
Aluminum (7429-90-5)	TWAs	1 mg/m ³ TWA (respirable fraction)	10 mg/m ³ TWA (total dust); 5 mg/m ³ TWA (respirable dust)	15 mg/m ³ TWA (total dust); 5 mg/m ³ TWA (respirable fraction)
Silicon (7440-21-3)	TWAs	Not established	10 mg/m ³ TWA (total dust); 5 mg/m ³ TWA (respirable dust)	15 mg/m ³ TWA (total dust); 5 mg/m ³ TWA (respirable fraction)
Tantalum (7440-25-7)	TWAs	Not established	5 mg/m ³ TWA (dust)	5 mg/m ³ TWA
Tungsten (7440-33-7)	TWAs	5 mg/m ³ TWA	5 mg/m ³ TWA	Not established
Manganese (7439-96-5)	TWAs	0.02 mg/m ³ TWA (respirable fraction); 0.0 mg/m ³ TWA (inhalable fraction)	1 mg/m ³ TWA (fume)	Not established
Molybdenum (7439-98-7)	TWAs	10 mg/m ³ TWA (inhalable fraction); 3 mg/m ³ TWA (respirable fraction)	Not established	Not established

Chromium (7440-47-3)	TWAs	0.5 mg/m3 TWA	0.5 mg/m3 TWA	1 mg/m3 TWA
Cobalt (7440-48-4)	TWAs	0.2 mg/m3 TWA	0.05 mg.m3 TWA (dust and fume)	0.1 mg/m3 TWA (dust and fume)
Nickel (7440-02-0)	TWAs	1.5 mg/m3 TWA (inhalable fraction)	0.015 mg/m3 TWA	1 mg/m3 TWA

Personal protective equipment: Goggles or safety glasses, gloves, face shield

Hand protection: Wear protective gloves- suitable for protection against physical injury and skin contact during handling and processing.

Respiratory protection: use of a NIOSH/OSHA approved dust respirator is recommended where airborne dust levels exceed appropriated PELs and TLVs.

Eye protection: Wear protective eyewear (goggles, face shield or safety glasses.

Skin/Body: Wear protective clothing- such as long sleeves and or coveralls during processing.

Advice on general occupational hygiene: Practice good housekeeping and avoid creating/breathing dust. Do not allow dust to collect. Maintain, clean, and fit test respirators in accordance with OSHA regulations. Provide readily accessible eyewash stations.

Environmental exposure controls: N/A

08. Physical and chemical properties

Appearance: N/A

Physical state: Solid, Appearance/Description- Solid wire of various grades.

Color: Silver-gray metallic,

Odor: Odorless

Safety relevant basic data: N/A

Explosion hazard: N/A

Density: N/A; Bulk density- 7.75 g/cm³

pH: N/A

Initial boiling point/range: °C /°F N/A

Solubility: Insoluble

Flash point: °C /°F N/A

Ignition temperature: °C /°F N/A

Melting point: 1371°C-1538°C /2500 - 2800°F

Conditions to avoid: N/A

Incompatible materials: N/A

09. Stability and reactivity

Chemical Stability: Stable

Conditions to avoid: Incompatible materials

Incompatible materials: Oxidizers, strong acids

Hazardous decomposition products: May occur during certain operations such as welding, burning, melting or hot rolling, generating hazardous metal fumes. Hexavalent chromium which is a suspect carcinogen may result from pickling of stainless steel.

10. Toxicological information

Information on toxicological effects: Toxicological impacts expected to be minimal for products in purchased form.

Target organs- Skin/Dermal, lungs, Central Nervous System (CNS), Liver/Hepatotoxin, Kidney/Nephrotoxin, Metal Fume Fever, Nasal Cavity.

Route(s) of exposure- Dermal contact with and/or inhalation of dust or fumes during welding, cutting, grinding, burning, and other operations. Overexposure to dusts and/or fume generated during processing can pose health hazards as defined below:

Medical Conditions Aggravated by Exposure- May aggravate asthma or other respiratory disorders. May aggravate skin disorders.

Acute (immediate)- May cause respiratory irritation. May cause sensitization. May cause metal fume fever.

Chronic (Delayed)- Prolonged inhalation of dust or fume may cause lung, central nervous system, liver, kidney and nasal cavity damage.

Acute toxicity- OSHA HCS 2012- Acute Toxicity-Dermal-not relevant; Acute Toxicity-Inhalation-do data available; Acute Toxicity- Oral-Not relevant

Carcinogenicity- OSHA HCS 2012- Carcinogenicity 2

STOT-RE- OSHA HCS 2012- Specific Target Organ Toxicity Repeated Exposure 1

STOT-SE- OSHA HCS 2012- Specific Target Organ Toxicity Single Exposure 1; Specific Target Organ Toxicity Single Exposure 3; Respiratory Tract Irritation

Irritation: Skin irritation 2

Sensitization: Skin sensitizer 1B. Skin Acute- causes skin irritation. May cause skin sensitization. Symptoms include redness, and skin rash. Chronic- Repeated and prolonged exposure may cause irritation. Repeated and prolonged exposure may cause sensitization.

Inhalation: Respiratory sensitization- OSHA HCS 2012 – Respiratory Sensitizer B. Ingestion Acute- Low hazard for usual industrial or commercial handling. Gastrointestinal disturbances including nausea and vomiting may result from ingestion of dusts. Chronic- Low hazard for usual industrial or commercial handling. Repeated and prolonged exposure may cause gastrointestinal disturbances including nausea and vomiting.

Serious Eye Damage/Irritation- OSHA HCS 2012- Eye irritation 2. Eye Acute- Exposure to dust and fumes may cause irritation. Exposure to fumes and dusts may cause sensitization and conjunctivitis. Chronic-

Repeated and prolonged exposure to dust and fumes may cause irritation. Repeated and prolonged exposure to dusts and fumes may cause sensitization and conjunctivitis.

Carcinogenic Effects- no carcinogenic effects resulting from exposure to stainless steels have been reported, either in epidemiological studies or in test with animals. Stainless steel does contain carcinogenic components above the cut-off threshold amount of 0.1% (nickel and cobalt) and therefore stainless steel (as dusts and fumes) must be classified as a carcinogen.

Carcinogenic Effects

	CAS	IARC	NTP
Chromium	7440-47-3	Group 3-Not Classifiable	Not Listed
Chromium as hexavalent chromium	18540-29-9	Group 1- Carcinogenic	Known Human Carcinogen
Cobalt	7440-48-4	Group 2B-Possible Carcinogen	Not Listed
Nickel	7440-02-0	Group 2B- Possible Carcinogen	Reasonably Anticipated to be Human Carcinogen

Practical experiences: N/A

Ingredient: N/A

11. Ecological information

Terrestrial toxicity: No data available

Aquatic toxicity: N/A

Mobility: N/A

Persistence and degradability: N/A

Bio accumulative potential: N/A

Results of PBT and vPvB assessment: N/A

Other adverse effects: N/A

12. Disposal considerations

Product: Please refer to applicable local, state, and federal regulations. Should be recycled. Product dusts from processing may be classified as hazardous waste, as defined in 40 CFR 261. Solid waste generated from product processing should be classified by a competent environmental professional and disposed, processed or recycled in accordance with federal, state and local regulation.

Contaminated packaging: Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Uncontaminated packaging: Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

13. Transport information

UN-No: N/A

Proper shipping name: N/A

Classification code: N/A

Packing group: N/A

Hazard label: N/A

14. Regulatory information

Material safety evaluation:

Inventory

Component	CAS	Canada DSL	TSCA
Aluminum	7429-90-5	Yes	Yes
Chromium	7440-47-3	Yes	Yes
Cobalt	7440-48-4	Yes	Yes
Copper	7440-50-8	Yes	Yes
Iron	7439-89-6	Yes	Yes
Manganese	7439-96-6	Yes	Yes
Molybdenum	7439-98-7	Yes	Yes
Nickel	7440-02-0	Yes	Yes
Silicon	7440-21-3	Yes	Yes
Tantalum	7440-25-7	Yes	Yes
Tungsten	7440-33-7	Yes	Yes
Vanadium	7440-62-2	Yes	Yes

Regulation on combustible liquids:

Class according 2009/104/EG (BetrSichV): N/A

Water hazard class: N/A

Storage according TRGS 510 (Storage of hazardous substances in non-stationary containers): N/A

15. Other information

Recommended application: Store in cool place. Do not store brushes above 104°F (40°C). Shield from direct sun exposure or fluorescent lighting to prevent discoloration. Do not store in areas that are damp or in high humidity.

Relevant R-, H-, and EUH-phrases: N/A

Environment United States-California

Proposition 65- Carcinogens list: Cobalt Carcinogen, initial date 7/1/92

Nickel Carcinogen, initial date 10/1/89

The information supplied in this Safety Data Sheet is designed only as a guidance for the safe use, storage, and handling of the product. This information is correct to the best of our knowledge and beliefs at the date of the publication however no guarantee is made to its accuracy. This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any other processes.