



Product SDS

Reference date: 06/14/1999 Revision date:
10/07/2022

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

Product name: Tube Brushes (Jewel Wire Company- Stainless Steel Stem)

Code number(s): 4030, 4031, 4032, 4033, RB300105

Purpose of product: To assist in cleaning channels and lumens of cannulated items in conjunction with a suitable cleaning solution, according to the manufacturer's (Mfr.'s) IFU.

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. Hazardous identifications

Classification of the substance or mixture: See table below.

UNS Designation	AISI Type	MAX. C	MAX. Mn	MAX. P	MAX. Si	MAX. S	Cr	Ni	Other Elements %
S-30200	302	0.15	2.00	0.045	1.0	0.03	17-19	8 - 10	
S-30400	304	0.08	2.00	0.045	1.0	0.03	18-20	8 - 10.5	
	304L	0.03	2.00	0.045	1.0	0.03	18-20	8 - 12	
S-30500	305	0.12	2.00	0.045	1.0	0.03	17-19	10.5 - 13	
S-30800	308	0.08	2.00	0.045	1.0	0.03	19-21	10 - 12	
	308L	0.021	1.70	0.012	0.38	0.023	20.3	9.8	
S-30900	309	0.20	2.00	0.045	1.00	0.03	22 - 24	12 - 15	
S-31000	310	0.25	2.00	0.045	1.50	0.03	24 - 26	19 - 22	
S-31600	316	0.08	2.00	0.045	1.00	0.03	16 - 18	10 - 14	Mo 1.9 - 3.0
	316L	0.03	2.00	0.045	1.00	0.03	16 - 18	10 - 14	Mo 2.0 - 3.0
S-31700	317	0.08	2.0	0.045	1.00	0.03	18 - 20	11 - 15	Mo 3.0 - 4.0
	317L	0.03	2.0	0.045	1.00	0.03	18 - 20	11 - 15	Mo 3.0 - 4.0
S-32100	321	0.08	2.0	0.045	1.00	0.03	17 - 19	9 - 12	To 5XC min
S-34700	347	0.08	2.0	0.045	1.00	0.03	17 - 19	9 - 13	Cb+Ta 10XC min.
S-41000	410	0.15	1.0	0.040	1.00	0.03	11.5 - 13.5	---	---
	410L	0.017	0.42	0.006	0.88	0.0018	12.4	---	---
S-43000	430	0.12	1.00	0.040	1.00	0.03	14 - 16	---	---
	20Cb - 3	0.07	2.0	0.035	1.0	0.035	19 - 21	32 - 38	Mo 2-3, Cu 3-4, Cb+Ta 8XCmin 1.0
		NI	C	Mn	Fe	S	Si	Cu	
	Alloy 400	66.0	0.12	0.90	1.35	0.005	0.15	31.5	
	Alloy 600	76.0	0.04	0.20	7.20	0.007	0.20	0.10	Cr 15.8
	Alloy X750	73.0	0.04	0.70	6.75	0.007	0.20	0.05	Cr 15.0 Ti 2.50 Al 0.80, Cb 0.85 Cr 20.5
	Alloy 800	32.0	0.04	0.75	46.0	0.007	0.35	0.30	
	Nickel 200	99.50	0.06	0.25	0.15	0.005	0.05	0.05	
	Nickel 270	99.97	0.02	TRACE	TRACE	TRACE	TRACE	TRACE	

Pigment: N/A

Adverse environmental and human health effects: N/A

03. Composition/information on ingredients

Description of the mixture: N/A CAS #: % by Weight

Hazardous ingredients: N/A

04. First Aid Measure

General information: Remove from exposure and obtain prompt medical attention. If the victim is unconscious, administer oxygen. If not breathing, resuscitate immediately.

Short Term Exposure: Metallic taste, nausea, tightness of chest, fever, irritation of eyes, nose, throat, loss of consciousness/death due to welding gases or lack of oxygen.

Long Term Exposure: Adverse effects may result from long term exposure to welding fumes, gases, or dust. These effects may include skin sensitization, neurological damage respiratory disease such as bronchial asthma, lung fibrosis or pneumoconiosis. Nickel and chromium must be considered possible carcinogens under OSHA (29CFR 1910.1200). The International Agency for Research on Center has indicated that nickel and certain nickel compounds are probably carcinogenic for humans, but that the specific compounds which may be carcinogenic cannot be specified precisely. This conclusion was based on experience in certain nickel reining operations. Chromium has also been listed by IARC because of "sufficient evidence for the carcinogenicity of Chromium compounds." The studies forming the basis of workers melting and working alloys containing nickel/chromium have found no increased risk of cancer. Nevertheless, exposures MUST be maintained below level in section 2 and section 6.

Following inhalation: Aggravation of preexisting respiratory or allergic may occur in some workers.

Following skin contact: N/A

Following eye contact: N/A

Following ingestion: N/A

Notes for the doctor: N/A

05. Firefighting measures

Suitable extinguishing media: N/A

Unsuitable extinguishing media: N/A

Special hazards arising from the substance and combustion products: Non-flammable, however, welding arcs and sparks can ignite flammable liquids and vapors, and combustible solids.

NOTES: As defined by OSHA (29 CFR 1910.1200) or certain state regulations

1. Permissible Exposure Limit- (mg/m³)-OSHA (29CFR1910).
2. Threshold Limit Value-(mg/m³)- American Conference of Governmental Industrial Hygienists (Current as of MSDS).

Advice for firefighters: N/A

06. Accidental release measures

General information: N/A

Hazardous Reaction Products: N/A

Environmental precautions: Vacuum residue from cutting, grinding, or welding operations into suitable container. Dispose of in accordance with EPA or local regulations.

Additional information: N/A

07. Handling and storage

Precautions for safe handling: N/A

Fire Preventions: N/A

Technical measures and storage conditions: N/A

08. Exposure controls/personal protection

Control parameters: Use local exhaust when cutting, grinding, or welding. IMPORTANT-Maintain exposures below the limits in Section 2 and 6. Confined spaces require special attention to provision of adequate ventilation.

Personal protective equipment: Wear gloves, face protection, and flame-retardant clothing. Do not expose skin.

Hand protection: N/A

Respiratory protection: Necessary when permissible exposure limits may be exceeded during cutting, grinding, or welding. Use air-supplied respiratory in confined spaces. Use only NIOSH approved respirator in accordance with 29CFR1910.134.

Eye protection: Required when cutting, grinding, or welding.

Advice on general occupational hygiene: Use industrial hygiene air monitoring to ensure that your use of this material does not create exposures which exceed PEL/TLV. Always use exhaust ventilation. Refer to the following sources for important additional information.

ANSI Z49.1 The American Welding Society
P.O. Box 351040, Miami, FL 33135

OSHA (29CFR1910) U.S. Dept. of Labor
Washington, DC 20210

Environmental exposure controls: Maintain exposures below the PEL/TLV.

09. Physical and chemical properties

Appearance: N/A

Physical state: Solid metals shaped as wire.

Color: N/A

Odor: N/A

Safety relevant basic data: N/A

Explosion hazard: N/A

Density: N/A

pH: N/A

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

Solubility: N/A

Flash point: °C /°F N/A

Ignition temperature: °C /°F N/A

Melting point: °C / °F N/A

Conditions to avoid: N/A

Incompatible materials: N/A

10. Stability and reactivity

Conditions to avoid: Fumes and gases from welding and high temperatures cutting cannot be classified simply. The composition and quality of both depend on the metal being welded, the process, procedures, and electrodes used. The contents of the fumes are generally different from the ingredients listed in Section 2 and include oxides of the metals, chromate's, fluorides, and complex metallics. The gases may include carbon monoxide, ozone, and oxides of nitrogen. Chlorinated solvents may be decomposed by the arc into toxic gases such as phosgene. The following exposure limits apply to those fumes and gases which may be found in the welding or high temperature cutting environment.

<u>Substance</u>	<u>PEL</u>	<u>TLV</u>	<u>Substance</u>	<u>PEL</u>	<u>TLV</u>
Carbon monoxide (CO)	50ppm	50ppm	Molybdenum	5.0	5.0
Chromium (Chromate's)	0.1	0.05	Nickel (soluble) (Ni)	1.0	0.1
Cobalt fume (Co)	0.1	0.05	Nitrogen dioxides (NO2)	C5.0ppm	3ppm
Copper fume (Cu)	0.1	0.2	Ozone (O3)	0.1ppm	0.1ppm
Fluorides (as F)	2.5	2.5	Phosgene (COC12)	0.1ppm	0.1ppm
Iron oxide fume (as Fe)	10.0	5.0	Sulfur dioxide	5ppm	5ppm
Manganese fume (Mn)	C5.0	1.0			

(PEL / TLV values are mg/m except where indicated as ppm)

Incompatible materials: N/A

Hazardous decomposition products: N/A

11. Toxicological information

Information on toxicological effects: N/A

Irritation: N/A

Sensitization: N/A

Inhalation: N/A

Practical experiences: N/A

Ingredient: N/A

12. 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

13. Disposal considerations

Product: Please refer to applicable local, state, and federal regulations.

Contaminated packaging: N/A

Uncontaminated packaging: N/A

14. Transport information

UN-No: N/A

Proper shipping name: N/A

Classification code: N/A

Packing group: N/A

Hazard label: N/A

15. Regulatory information

Material safety evaluation: N/A

Regulation on combustible liquids: N/A

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

16. Other information

Recommended application: Store in cool place. Do not store 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

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.