



Material Safety Data Sheet

High carbon steel wire
Common Name
Music Wire 21
Identity (Trade Name As Used On Label) and Product Code

Manufacturer Precision Brand Products Inc.	Phone Number (For Information) 630-969-7200
Address 2250 Curtiss Street Downers Grove IL 60515 USA	Emergency Phone Number Chemtrec 800-424-9300 USA & Canada 202-483-7616 International
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SECTION 1 – COMPOSITION / INFORMATION ON INGREDIENTS

		CAS #	% Weight	Permissible Exposure Levels	Units	
Base Metal:	Iron (Fe)	7439-89-6	95-99	As Iron Oxide Fume	10 mg/M ³	
Alloys:	Carbon (C)	7440-44-0	.01-1.1	None Listed	--	
	Manganese (Mg)	7439-96-5	.25-1.65	As Manganese	5 mg/M ³	
	Phosphorus (P)	7723-14-0	.04 Max	As Phosphorus (Yellow)	0.1 mg/M ³	
	Silicon (Si)	7440-21-3	1.6 Max	None Listed	--	
	Sulfur (S)	7704-34-9	.001-.035	As Sulfur Dioxide	13 mg/M ³	
	Vanadium (V)	7440-62-2	.01-.35	As Vanadium Pentoxide –	Fume	0.1 mg/M ³
					Dust	0.5 mg/M ³
Chromium (Cr)	7440-47-3	.01-1.5	As Soluble Chromic-Chromous Salts		0.5 mg/M ³	
				-Chrome & Insoluble Salts	1 mg/M ³	
Coatings:	Optional – Light surface coatings (less than 1% total weight of product) of Petroleum Oil, Phosphate, Borax, Lime or Dry Lubricants (Calcium or Sodium)					
Note:	Use gloves when handling to prevent skin irritation.					

SECTION 2 -- PHYSICAL DATA

BOILING POINT	NA	EVAPORATION RATE	NA
VAPOR PRESSURE	NA	AUTO IGNITION TEMP.	
VAPOR DENSITY	NA	APPEARANCE & ODOR	Gray-Black & odorless
SOLUBILITY IN WATER	NA	PHYSICAL STATE	Solid
SPECIFIC GRAVITY	7	pH	NA
% VOLATILE BY VOLUME	NA		

SECTION 3 – EMERGENCY MEDICAL PROCEDURES

FIRST AID	In case of excessive exposure, remove to fresh air, administer oxygen, and seek physician's assistance.
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SECTION 4 – PERSONAL PROTECTION ITEMS	
Respiratory Protection	NIOSH approved dust/mist/fume respirator if OSHA PEL is exceeded.
Protective Clothing	Depending on use, consult local, state, and federal codes for appropriate selection.
Gloves	
Eye Protection	
Ventilation Requirements	
Other- As per welding requirements	

SECTION 5 – HEALTH HAZARD DATA
Steel products in the natural state do not present an inhalation, ingestion, or contact hazard. However operations such as burning, welding, sawing and grinding may result in the following effects exposures exceeded permissible limits as listed in Section 1.
(v) Major Exposure Hazard - v Inhalation ρ Skin Contact ρ Skin Absorption ρ Eye Contact ρ Ingestion

EFFECTS OF OVEREXPOSURE		
ACUTE:	Iron (Iron-Oxide)	Irritation of the eyes, nose, throat, metallic taste in mouth or metal fume fever
	Manganese	Irritation of the eyes, nose, throat, metallic taste in mouth or metal fume fever
	Vanadium	Irritant to conjunctivae and respiratory tract (greenish-black discoloration of tongue and shortness of breath.)
	Chromium	Irritant of eyes, nose, and lungs. Dermatitis.
CHRONIC:	Iron (Iron-Oxide)	Pulmonary effects, siderosis.
	Manganese	Bronchitis, pneumonitis, lack of coordination
	Vanadium	No reported cases of exposure to vanadium
	Chromium	Various forms of dermatitis, inflammation and/or ulceration of upper respiratory tract and possibly cancer of nasal passages and lungs. Based on available information, there does not appear to be any evidence that exposure to welding fume induces human cancer.

SECTION 6: FIRE AND EXPLOSION DATA	
Flash Point	NA
Lower Explosive Limit	NA
Upper Explosive Limit	NA
Extinguishing Media	NA
Special Fighting Precautions	NA

SECTION 7 -- REACTIVITY HAZARD DATA	
STABLE	Yes
INCOMPATIBILITY	None
PRODUCTS OF DECOMPOSITION	Metal Fume: Iron Oxide
	Manganese
	Vanadium Pentoxide
	Chromium

SECTION 8 – SPILL/LEAK PROCEDURES	
CLEAN UP	NA
WASTE DISPOSAL	NA

SECTION 9 – SPECIAL PRECAUTIONS	
HANDLING STORAGE	NA
WELDING & CUTTING	Adequate ventilation and/or approved respiratory protection should be provided in PEL is extended.
OTHER PRECAUTIONS	NA

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