Conduit Pipe Products Company
Material Safety Data Sheet

Company	**Issue Date**	**Identification Number**
Conduit Pipe Products Co. 1501 W. Main St. West Jefferson, OH 43162	Dec 2004	Conduit Pipe- 1

Trade Name (Common Name or Synonym)
Carbon, Alloy and Stainless Forgings and Pipe Fittings

Emergency Phone Number
614-879-9114

Chemical Name
Steel, Copper, Aluminum, Brass

Form
Machined & Unmachined Forgings and Pipe Fittings

I. INGREDIENTS

Material or Component	CAS Number	% Weight	Exposure Limits	
Base Metal			OSHA PEL (mg/m3)	ACGIH TLV (mg/m3)
Iron (Fe)	7439-89-6	Balance	10 (Fe_2O_3 Fume)	5.0 (Fe_2O_3 Fume)
Alloying Elements				
Aluminum (Al)	7429-90-5	0.10 - 100	None Listed	5.0 as welding fume
Carbon (C)	7440-44-0	0.01 - 1.5	None Listed	None Listed
Chromium (Cr)	7440-47-3	0.01 – 27	1.0 as chrome	0.5 as chrome
Cobalt (Co)	7440-48-4	8 Max.	0.1 as cobalt and fume	0.05 as fume
Copper (Cu)	7440-50-8	0.04 - 100	0.2 as copper; 1.0 as dust	0.2 as fume; 1.0 as dust
Lead (Pb)	7439-92-1	0.15 - 0.35	0.05 as fume & dust	0.15 as dust and fume
Manganese (Mn)	7439-96-5	0.05 - 2.0	5 as manganese	5 as dust; 1 as fume
Molybdenum (Mo)	7439-98-7	0.01 - 1.10	15 as insoluble compounds	10 as insoluble compounds
Nickel (Ni)	7440-02-0	0.01 – 22	1.0 as Nickel	1.0 as Nickel
Phosphorous (P)	7723-14-0	0.16 Max.	0.1 as Phosphorous	0.1 as Phosphorous
Silicon (SI)	7440-21-3	0.15 - 2.20	None Listed	10 total dust
Sulfur (S)	7704-34-9	0.001 - 0.35	13 sulfur dioxide	5 sulfur dioxide
Tungsten (W)	7440-33-7	0 – 18	None Listed	5 insoluble compounds
Vanadium (V)	7440-62-2	0.01 - 1.0	0.5 dust; 0.1 fume	0.05 dust and fume
Zinc (Zn) coating	1314-13-2	10.002 Max	5.0 as fume	5.0 as fume

Note:Various grades of steel will contain different combinations of these elements. Trace elements may also be present in minute amounts. Forgings may have phosphate conversion coating, the elements of which are included in the ingredients, and rust protection oil. Fittings may also contain plastic or rubber components.

II. PHYSICAL DATA

Material is (At Normal Conditions**):**	**Appearance and Odor**	**Acidity/Alkalinity**
Solid	Gray-Black With Metallic Lustre – Odorless	pH= NA
Melting Point-Approx 2750 deg F (Steel), 1220 deg F (Al), 1981 deg F (Cu), 1823 deg F (Brass)	**Specific Gravity** (H20 = 1) - 7	**Vapor Pressure (mm Hg @20 deg C)**
Boiling Point-NA	**Solubility in water** (% by weight) - NA	NA

III. PERSONAL PROTECTIVE EQUIPMENT

Respiratory Protection
NIOSH approved dust/mist/fume respirator should be used during welding or burning if OSHA PEL or TLV is exceeded.

Eyes and Face
Safety glasses should always be worn when grinding or cutting; face shields should be worn when welding or burning.

Hands, Arms, Body
Use appropriate protective clothing such as welder's aprons & gloves when welding or burning. Check local codes.

Other Clothing and Equipment
As required.

IV. EMERGENCY MEDICAL PROCEDURES

Inhalation: Remove to fresh air; if condition continues, consult physician.
Eye Contact: Immediately flush well with running water to remove particulate; get medical attention.
Skin Contact: If irritation develops, remove clothing and wash well with soap and water. If condition persists, seek medical attention.
Ingestion: If significant amounts of metal are ingested, seek medical attention.

V. HEALTH/SAFETY INFORMATION

HEALTH

Metal pipe fittings in the natural state do not present air inhalation, ingestion, or contact health hazards. However, operations such as welding, burning, sawing, brazing, grinding, and other processes which elevate the temperature of the product to or above its melting point or result in the generation of airborne particulates may present hazards. These operations should be performed in well-ventilated areas. The major exposure hazard is inhalation.

Effects of overexposure:

Acute: Excessive inhalation of metallic fumes and dusts may result in irritation of eyes, nose, and throat. Also high concentrations of fumes and dusts of iron oxide, manganese, copper, & selenium may result in metal fume fever. Typical symptoms consist of a metallic taste in the mouth, dryness and irritation of the throat, chills and fever, and usually last from 12 to 48 hours.

Chronic: Chronic and prolonged inhalation of high concentrations of fumes or dust of the following elements may lead to the conditions listed opposite the element:

Iron (iron oxide) - Pulmonary effects, siderosis.
Manganese - Bronchitis, pneumonitis, lack of coordination.
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.
Nickel – Same as Chromium.
Selenium - Nasal and bronchial irritation, gastrointestinal disturbances, garlic odor of breath.
Copper - Pulmonary effects.
Vanadium - No reported cases of exposure to vanadium.
Cobalt - Inhalation of cobalt dust may cause an asthma-like disease with cough and dyspnea.
Molybdenum - Pain in joints, hands and feet.

Occupational Exposure Limits

See Section I.

FIRE AND EXPLOSION

Flash Point	Auto Ignition Temperature	Flammable Limits in Air	Extinguishing Media
NA	NA	NA	NA

Fire and Explosion Hazards
None

Extinguishing Media Not to be Used
NA

REACTIVITY

Stability
Stable

Incompatibility (Materials to Avoid)
Reacts with strong acids to form hydrogen gas.

Conditions to Avoid
Non-ventilated areas when cutting, welding, burning, or brazing; avoid generation of airborne dusts and fumes

Keep Area Well Ventilated

Hazardous Decomposition Products
Metallic oxides.

VI. ENVIRONMENTAL

Spill or leak procedures Special Precautions: Use good housekeeping practices to prevent accumulation of dust
NA and to keep airborne dust to a minimum.

Waste Disposal Method

Dust, etc. -follow federal, state, and local regulations regarding disposal.

VII. ADDITIONAL INFORMATION

Disclaimer

The information in this MSDS was obtained from sources that we believe are reliable. However, the information is provided without any representation or warranty, express or implied, regarding the accuracy or correctness.

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