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MATERIAL SAFETY DATA SHEET

FOR STEEL JOISTS AND GIRDERS AND ACCESSORIES IN COMPLIANCE
WITH OSHA 29 CFR 1910.1200

DATE OF ISSUE JANUARY 1988

I. PRODUCT IDENTIFICATION: STEEL JOISTS AND JOIST GIRDERS
AND ACCESSORIES

MANUFACTURER: NEW COLUMBIA JOIST COMPANY
Member of the Steel Joist Institute
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New Columbia, PA 17856-0031

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II. HAZARDOUS INGREDIENTS:

IN ITS MANUFACTURED AND SHIPPED STATE:
THIS PRODUCT IS CONSIDERED NON-HAZARDOUS. WELDING TO THE PRODUCT
OR OTHER PROCESSING INVOLVING THE PRODUCT MAY GENERATE FUMES AND
PARTICULATE MATTER.

III. PHYSICAL DATA:

PHYSICAL STATE- solid
APPEARANCE AND COLOR- prime coated red or gray paint, bare metal
is rust/gray-black; odorless
SPECIFIC GRAVITY: 7.8
MELTING POINT: 2800 Degrees Fahrenheit
SOLUBILITY IN WATER: N/A
BOILING POINT: N/A
VAPOR PRESSURE: N/A
VAPOR DENSITY: N/A
EVAPORATION RATE: N/A
% VOLATILE by VOLUME: N/A

IV. FIRE AND EXPLOSION HAZARD DATA: Steel joist products in the
solid form present no fire or explosion hazards.

FLASH POINT: N/A
METHOD USED: N/A
FLAMMABLE LIMITS: LEL=N/A; UEL= N/A
AUTO-IGNITION TEMPERATURE- N/A
EXTINGUISHER MEDIA- N/A
SPECIAL FIRE FIGHTING PROCEDURES- N/A

V. REACTIVITY DATA:

STEEL JOISTS ARE STABLE UNDER NORMAL CONDITIONS OF USE, STORAGE AND SHIPPING.
THE STEEL MELTING TEMPERATURE RANGE IS 2600F to 2786F.

VI. HEALTH HAZARDS:

STEEL JOISTS IN THEIR USUAL PHYSICAL FORM DO NOT PRESENT A HEALTH HAZARD TO THE ENVIRONMENT. WELDING, FLAME CUT BURNING OR GRINDING AND SIMILAR ACTIONS ON THE JOIST MAY EMIT POTENTIALLY HAZARDOUS METAL AND/OR GASEOUS FUMES.

ACUTE: NONE

CHRONIC: OVER EXPOSURE TO WELDING FUMES MAY BE GENERATED FROM THE STEEL JOIST WITH THE FOLLOWING HEALTH EFFECTS ASSOCIATED WITH OVER EXPOSURE TO THE FUMES WITHOUT SUFFICIENT VENTILATION:

LIST OF FUMES-----

IRON (Fe) fumes:

Subjecting iron or alloys containing iron to high temperatures, such as occurs during welding, will cause the formation of iron oxide. Long term exposure to iron oxide fumes or dusts has been associated with a benign lung condition known as siderosis which is observable as an X-ray change. No physical impairment of lung function has been linked to siderosis, a deposit of iron in the lungs.

NICKEL (Ni) fumes:

Nickel fumes and dusts produced from welding, burning or grinding, are respiratory irritants and may cause a severe chemical pneumonitis. Skin contact with Nickel and its compounds may cause an allergic dermatitis. Nickel and its compounds may also produce eye irritation, on the inner surfaces of the eyelids; i.e., the conjunctiva. Animal and/or epidemiology studies have linked Nickel and certain Nickel compounds to an increased incidence of cancer of the lungs and nasal passages.

ZINC (ZN) fumes:

High temperatures, such as occurs during welding or flame cutting, will cause the formation of zinc oxides. Exposure to zinc oxide fumes or dusts can result in influenza-like illness referred to as "metal fume fever".

Early symptoms may include a sweet or metallic taste in the mouth, dryness and irritation of the throat, and coughing. These symptoms may progress to shortness of breath, headache, fever, chills, muscle aches, nausea, vomiting, weakness, fatigue and profuse sweating. The attack may last six to forty-eight hours. The attack is more likely to occur four to eight hours after exposure.

EMERGENCY AND FIRST AID PROCEDURES

For overexposure to fumes and particulate matter, remove person to fresh air. If breathing is difficult or has stopped, administer oxygen or artificial respiration as indicated by the situation. Seek medical attention promptly.

continued-EMERGENCY AND FIRST AID PROCEDURES

"Metal fume fever" is normally self-limiting and should be treated symptomatically by a physician.

If particulate matter enters the eyes, flush with water for at least fifteen minutes. If irritation persists, seek medical attention.

VII. SPECIAL PRECAUTIONS AND SPILL/LEAK PROCEDURES

This is not applicable to steel joists in the solid state as used.

WASTE DISPOSAL METHODS:

Any excess product can be recycled for use as a joist or disposed of as steel for scrap in steel making.

VIII. SPECIAL PROTECTION INFORMATION/CONTROL MEASURES

RESPIRATORY PROTECTION:

Respirator need and selection depends on the ventilation provided during welding to the joist product and the magnitude of exposure to the welding fumes. The amount of fumes or gases that the welder is liable to inhale is governed by numerous factors such as the dimensions of the welding area, the arc time, the ventilation afforded, the type of welding, the materials involved and electrode size.

An increased hazard may exist in a well ventilated area if the position of the work or the work habits of the welder are such that the welder works with his or her head in the path of the fumes. The single most important factor is governed by the welder and positioning of the head with respect to the path of the fumes.

VENTILATION: should be sufficient to maintain exposure levels below the applicable exposure limit for welding. No filter or cartridge type of respirator will protect against carbon monoxide or nitrogen dioxide; an air line respirator, hose mask, or a gas mask is required protection. These should be used where any question of adequacy exists after proper survey-investigation of the air is done.

PROTECTIVE GLOVES: should be worn while welding.

LOCAL EXHAUST: yes while welding in confined area.

EYE PROTECTION: yes, protect the eyes while welding from heat and glare of the flame or arc; from the particles of hot metal that may fly up from the work piece. In arc welding it is necessary for welders to be equipped with shields or helmets that will protect not only the eyes but also the skin, because of the intensity of the ultraviolet and infrared rays. The arc should not be struck without having such a helmet or shield over the face. **LENSES SUITABLE FOR GAS WELDING OR CUTTING SHOULD NOT BE DEPENDED UPON FOR PROTECTION AGAINST THE RAYS FROM ARC WELDING.**

OTHER PROTECTIVE CLOTHING: should be worn to protect from burns, spatter or in the case of arc welding or cutting, from the radiant energy from the arc.

Woolen clothing is preferable to cotton because it is not readily ignited and does not disintegrate as rapidly as cotton when exposed to the intense ultraviolet radiation in gas metal-arc welding.

Outer clothing should be free of oil or grease. Sparks, hot slag or hot metal may lodge in rolled-up sleeves, in pockets or in the cuffs of overalls or trousers.

High top safety shoes are recommended.

Welders should wear flameproof gauntlet gloves, preferably of leather.

All clothing and gloves should be kept in good repair. Wet or worn gloves or clothing have lost their protective qualities.

NOTE: THIS INFORMATION HAS BEEN TAKEN FROM SOURCES BELIEVED TO BE PERTINENT AND RELIABLE. NO GUARANTEE AS TO ABSOLUTE CORRECTNESS OR COMPLETENESS OF ANY OF THE FOREGOING INFORMATION IS MADE OR IMPLIED; OR THAT ADDITIONAL, OR OTHER MEASURES MAY NOT BE REQUIRED UNDER CERTAIN CONDITIONS.