Heckmann Building Products Inc.
1501 N. 31st Avenue
Melrose Park, IL 60160-2911
800-621-4140 708-865-2403 Fax: 708-865-2640

MATERIAL SAFETY DATA SHEETS (MSDS) June 30, 2000.

Heckmann Building Products Inc. manufactures its building products from sheet steel, bar and coil stock, and wire in Plain Steel, Mill Galvanized Steel, Electro Galvanized After Fabrication, Hotdip Galvanized After Fabrication, and Stainless Steel. The products we manufacture present no health hazard in their natural state during use, storage, or transportation. However, operations such as flame cutting, shot blasting, or welding may generate concentrations of dust particles of the alloying elements that may present hazards. All operations of this nature should be performed in well ventilated areas.

The following paragraph is the exemption for finished products which are not welded, such as the Pos-I-Tie® anchoring system and the eye and pintle combination. It is from the Code of Federal Regulations:

29 CFR Ch. XVII (7-1-92 Edition) 1910.1200 Hazard Communication. (6) (IV) Articles: (c) Definitions. ARTICLE means a manufactured item: (I) which is formed to a specific shape or design during manufacture; (II) which has end use function(s) dependent in whole or in part upon its shape or design during end use; and (III) which does not release, or otherwise result in exposure to, a hazardous chemical, under normal conditions of use.

The information contained in the MSDS reports is intended to be used for employee health and safety education and not for specification purposes.

We appreciate your business and will continue to strive to provide a high quality of service and product to meet your requirements.

Sincerely,

Paul G. Curtis
President

MATERIAL SAFETY DATA SHEET

STAINLESS STEEL – revised June 30, 2000

I. PRODUCT INFORMATION

Company: Heckmann Building Products Inc.
1501 N. 31st Avenue
Melrose Park, IL 60160
708-865-2403

Trade Name: Stainless Steels

Chemical Name: AISI/SAE Grades 300 Series, 400 Series, Special Alloys.

Form: Anchors, Ties, Flashing, Steel Connectors.

II. PRODUCT INGREDIENTS

Exposure Limits

MATERIAL CAS NUMBER %WEIGHT OSHA PEL (mg/m3) ACGIH TLV (mg/m3)

Base Metal

Iron (Fe) 7439-89-6 38.0-89.6 10 Oxide Fume 5 Oxide Fume

Aluminum (Al) 7429-90-5 .01-0.5 Not Established 10 Dust/5 Fume

Carbon (C) 7440-44-0 .03-2.0 Not Established Not Established

Chromium (Cr) 7440-47-3 10-27 1.0 Chrome Metal 0.5 Chrome Fume

Cobalt (Co) 7440-48-4 .01- .75 0.1 Cobalt Metal 0.05 Cobalt Fume

Copper (Cu) 7440-50-8 .18-4.5 0.1/Fume/1.0 Dust 0.2 Fume/1.0 Dust

Manganese (Mn) 7439-96-5 2-10 5c Dust/5c Fume 5c Dust/1 Fume

Molybdenum (Mo) 7439-98-7 .04-5 15 Insoluble Comp. 10 Insoluble Comp.

Nickel (Ni) 7440-02-0 .12-34 1 Nickel Metal 1 Nickel Metal

Phosphorous (P) 7723-14-0 .01-.06 0.1 Phosphorous 0.1 Phosphorous

Selenium (Se) 7782-49-2 .01-0.3 0.2 Se Metal 0.2 Se Metal

Silicon (Si) 7440-21-3 .15-2.0 Not Established 10 Total Dust

Sulfur (S) 7704-34-9 .01-.06 13 Sulfur Dioxide 5 Sulfur Dioxide

Titanium (Ti) 7440-32-6 .01-0.7 15 Ti Eioxide 15 Ti Eioxide

Columbium (Cb) 7440-25-7 Not Established Not Established

Tantalum (Ta) 7440-03-1 .01-1.1 5.0 Ta Metal 5.0 Ta Metal

Note: The above listing is a summary of elements used in alloying Stainless Steels. Various grades of Stainless Steel will contain different combinations of these elements. Trace elements may also be present in minute amounts. No permissible exposure limits (PEL) or threshold limit values (TLV) exist for Stainless Steels. Values shown are applicable to component elements.

III. PHYSICAL DATA

PHYSICAL FORM: Solid under normal conditions BOILING POINT: Not applicable

APPEARANCE & ODOR: Silvery gray odorless metal VAPOR PRESSURE: Not applicable

SPECIFIC GRAVITY: (H20=1): Approx. 8 VAPOR DENSITY: Not applicable.

MELTING POINT: Approx. 2400 F - 2800 F ACIDITY/ALKANITY: Not applicable.

SOLUBILITY IN WATER: % by weight Not Applicable %VOLITILE BY VOLUME: Not applicable.

IV. FIRE AND EXPLOSION DATA

FLASH POINT: Not applicable AUTO IGNITION TEMP: Not applicable.

FLAMMABLE LIMITS IN AIR: Not applicable.

FIRE & EXPLOSION HAZARDS-EXTINGUISHING MEDIA: Stainless steel does not present fire or explosion hazards under normal conditions. Use fire fighting methods and materials that are appropriate for surrounding fire.

Fine metal particles, such as produced in grinding and sawing, can burn. High concentration of metallic fines in the air may present an explosion hazard. Molten metal may explode on contact with water. For these fires, use dry powder or sand extinguishing media.

V. ENVIRONMENTAL HEALTH & SAFETY INFORMATION

HEALTH HAZARDS: Stainless steel products in their solid state present no inhalation, ingestion, or contact health hazard.

Operations such as burning, welding, sawing, brazing, grinding, and machining, which result in elevating the temperature of the product to, or above its melting point, or result in the generation of airborne particulates may present hazards. The major exposure hazard is inhalation. Effects of overexposure to fume and dust are as follows:

ACUTE: Excessive inhalation of metallic fumes and dusts may result in irritation of eyes, nose, and throat. High concentrations

of fumes and dusts of iron-oxide, maganese, copper, and zinc may result in metal fume fever. Typical symptoms last from 12 to 48 hours and consist of a metallic taste in the mouth, dryness and irritation of the throat, chills, and fever.

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:

ALUMINUM: Irritation of the eyes, nose, and throat.

CHROMIUM: Lesions of the skin and mucous membranes, possible cancer of nose or lungs - bronchogenic carcinoma.

COBALT: Respiratory tract irritation, skin rash.

COPPER: Irritation of eyes, nose and throat, metal fume fever.

IRON: Pulomany effects, siderosis.

Maganese: Bronchitis, pneymonitis, lack of coordination.

Molybdenum: Respiratory tract irritation, possible liver/kidney damage, bone deformity.

NICKEL: Lesions of the skin and mucous membranes, possibly cancer of nose or lungs, bronchogenic carcinoma.

PHOSPHOROUS: Necrosis of the mandible.

SELENIUM: Nasal and bronchial irritation, gastro-intestinal disturbances, garlic breath odor.

SULFUR: Edema of the lungs.

TITANIUM: No chronic debilitating symptoms indicated.

COLUMBIUM/TANTALUM: No chronic debilitating symptoms indicated.

Occupational Exposure Limits: See products ingredients Section 2. Chromium and Nickel have been identified by the International Agency for Research on Cancer and/or the National Toxicology Program as potential cancer causing agents.

EMERGENCY MEDICAL PROCEDURES: Inhalation: Remove to fresh air; if condition continues, consult a physician.

Eye Contact: Flush thoroughly with running water to remove particulate; obtain medical attention.

Skin Contact: Remove particles by washing thoroughly with soap and water. Seek medical attention if condition persists.

Ingestion: If significant amounts of metal are ingested, consult physician. If condition is voluntary, psychotherapy is advised.

OCCUPATIONAL PROTECTIVE MEASURES: Respiratory Protection: Appropriate dust/mist/fume respirator should be used to avoid excessive inhalation of particulates. If exposure limits are reached or exceeded, use NIOSH approved equipment.

Hands, Arms, and Body: Protective gloves should be worn as required for welding, burning, ro handling operations.

Eyes & Face: Safety Glasses should be worn when grinding or cutting. Face shields should be worn when welding or burning.

Other clothing and Equipment: As required depending on operations and safety codes.

Stability: Stable under normal conditions of use, storage and transportation.

INCOMPATIBILITY (Materials to avoid): Stainless steel at temperatures above the melting point may liberate fumes containing oxides of iron and alloying elements. Avoid generation of airborne fume and dust.

VII. SPILL, LEAK & DISPOSAL METHODS

Fine turnings and small chips should be swept or vacuumed. Scrap metal can be reclaimed for rescue. Used or unused product should be disposed of in accordance with federal, state, or local laws and regulations.

VIII. ADDITIONAL PRECAUTIONS

Minimize and control operations producing airborne dust and fume. Provide adequate local and general exhaust ventilation. Maintain good housekeeping.

IX. DISCLAIMER

This MSDS is intended for use solely in safety education and environmental health training and not for specification purposes.

The information in this MSDS was obtained from usually reliable sources and is provided without and representation or warranty, express or implied regarding the accuracy or correctness. The conditions or methods of handling, storage, use and disposal of the product are beyond our control and may be beyond our knowledge. Heckmann Building Products Inc. assumes no responsibility and expressly disclaims liability for loss, damage, or expense arising out of or in any way connected with the handling, storage, use or disposal of the product.

MATERIAL SAFETY DATA SHEET

PLAIN STEEL, MILL GALVANIZED STEEL, HOTDIP GALVANIZED AFTER FABRICATION, ELECTRO GALV. (Carbon, Alloy Steels) revised June 30, 2000

I. PRODUCT INFORMATION

Company: Heckmann Building Products Inc.
1501 N. 31st Avenue
Melrose Park, IL 60160
708-865-2403

Trade Name: Plain Steel, Mill Galvanized Steel.

Chemical Name: Steel

Form: Masonry Anchors & Ties, Flashings, Rounds, Steel Building Anchors.

II. PRODUCT INGREDIENTS

Exposure Limits

MATERIAL CAS NUMBER % WEIGHT OSHA PEL (mg/m3) ACGIH

TLV(mg/3m)

Base Metal Iron (Fe) 7439-89-6 Balance 10 (Fe,o,Fume) 5.0 (Fe,O,Fume)

Alloying Elements

Carbon (C) 7440-44-0 0.01-1.5 None Listed None Listed

Chromium (Cr) 7440-47-3 0.01-12 1.0 as chrome 0.5 as chrome

Copper (Cu) 7440-50-8 0.04-0.7 0.2 as copper 0.2 as fume

1.0 as dust 1.0 as dust

Lead (Pb) 7439-92-1 0.15-0.35 0.05 as fume 0.15 as dust & 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 10 as insoluble comp.

Nickel (Ni) 7440-02-0 0.01-10 1.0 as Nickel 1.0 as Nickel

Phosphorous (P) 7723-14-0 0.15 Max 0.1 as Phos 0.1 as Phosphorous

Silicon (Si) 7440-21-3 0.15-2.2 None Listed 10 total dust

Sulphur (S) 7704-34-09 0.001-0.35 13 sulfur dioxide 5 sulfur dioxide

Tungsten (W) 7440-33-7 0.0-18 None Listed 5 insoluble compounds

Vanadium (V) 7440-62-2 0.01-1.0 0.5 as dust 0.05 dust and fume

Zinc (Zn) Coating 1314-13-2 10 Max 5.0 as fume 5.0 as fume

Note: The above listing is a summary of elements used in alloying steel. Various grades of steel will contain different combinations of these elements. Trace elements may also be present in minute amounts.

III. PHYSICAL DATA

PHYSICAL FORM: Solid under normal conditions. BOILING POINT: Not applicable.

APPEARANCE & ODOR: Grey-Black with Metallic Luster Odorless. VAPOR PRESSURE: Not applicable.

SPECIFIC GRAVITY (H2O = 1): 7 VAPOR DENSITY: Not applicable.

MELTING POINT: 2750 degrees F ACIDITY/ALKANITY: Not applicable.

SOLUBILITY IN WATER % by weight: Not applicable.

% VOLITILE BY VOLUME: Not applicable.

IV. PERSONAL PROTECTIVE EQUIPMENT

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

HANDS, ARMS, BODY: Use appropriate protective clothing such as welders aprons & gloves when welding or burning. Check local codes.

EYES & FACE: Safety glasses should always be worn when grinding or cutting: face shields should be worn when welding or burning.

OTHER CLOTHING AND EQUIPMENT: As required. (Makes sense, doesn't it!)

V. 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, consult physician.

VI. HEALTH & SAFETY INFORMATION

Steel products in the natural state do not present an inhalation, ingestion, or contact health hazard. However, operations such as welding, burning, sawing, brazing, grinding, and possibly machining, which results in elevating the temperature of the product to or above its melting point or results in the generation of airborne particulates may present hazards. The above operations

should be performed in well ventilated areas. The major exposure hazard is inhalation.

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, maganese, copper, zinc, and lead may result in the dreaded 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: Pulmonary effects, siderosis.

MANGANESE: Bronchitis, pheumonitis, lack of coordination.

CHROMIUM: Various forms of dermatitis, inflammation and/or ulceration of upper respiratory tract, and possible 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.

COPPER: Pulmonary effects.

VANADIUM: No reported cases of exposure to vanadium.

MOLYBDENUM: Pain in the joints, hands, knees, and feet.

TUNGSTEN: Some evidence of pulmonary involvement such as cough.

LEAD: Prolonged exposures can cause behavioral changes, kidney damage, periphery neuropathy characterized by decreased hand-grip strength and adverse reproductive effects.

ZINC: None reported.

VII. FIRE AND EXPLOSION

FLASH POINT: Not Applicable.

AUTO IGNITION TEMPERATURE: Not Applicable.

LIMITS IN AIR: Not Applicable.

FIRE AND EXPLOSION HAZARDS: None

EXTINGUISHING MEDIA NOT TO BE USED: None.

VIII. REACTIVITY

Material is stable under normal conditions.

INCOMPATIBILITY: Reacts with strong acids to form hydrogen gas.

Conditions to avoid: Keep area well ventilated when cutting, welding, burning, or brazing. Avoid generation of airborne dusts and fumes.

HAZARDOUS DECOMPOSITION PRODUCTS: Metallic oxides.

IX. ENVIRONMENTAL

Spill or lead procedures: Not applicable. Special Precautions: Use good housekeeping practices to prevent accumulation of dust and to keep airborne dust to a minimum. Waste Disposal Method: Dust, etc - follow federal, state, and local regulations regarding disposal.

X. DISCLAIMER

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

The conditions or methods of handling, storage, use and disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage, or expense arising out of or in any way connected with the handling, storage, use or disposal of the product.

MATERIAL SAFETY DATA SHEET

COPPER PRODUCTS revised June 30, 2000

I. PRODUCT INFORMATION

Company: Heckmann Building Products Inc.
1501 N. 31st Avenue

Melrose Park, IL 60160
708-865-2403

Trade Name: Copper (OFHC)(DHP)(ETP) Electrolytic Tough Pitch Alloy 110.

Chemical Name: Copper (Cu)

Form: Anchors, Flashings, Misc. Steel Building Products.

II. PRODUCT INGREDIENTS

Base Metal Copper is the prime Ingredient. 99.9% Copper plus silver (less than .1% Ag). Copper, Dust 1 Mg/m3, Fume 0.1 Mg/m3. If exposure to copper dust/fume is kept below copper TLV, all trace elements should not pose any health risk.

III. PHYSICAL DATA

PHYSICAL FORM: Solid under normal conditions BOILING POINT: Not applicable

APPEARANCE & ODOR: Gold/Copper color odorless metal

VAPOR PRESSURE: Not applicable

SPECIFIC GRAVITY (H2O = 1): 8.9 VAPOR DENSITY: Not applicable

MELTING POINT: Approx. 1949 degrees F ACIDITY/ALKANITY: Not applicable

SOLUBILITY IN WATER (% by weight) Not applicable

% VOLITILE BY VOLUME: Not applicable

IV. FIRE AND EXPLOSION DATA

FLASH POINT: Not applicable AUTO IGNITION TEMPERATURE: Not applicable

FLAMMABLE LIMITS IN AIR: Not applicable.

V. ENVIRONMENTAL HEALTH & SAFETY INFORMATION

Effect of Overdose : Fume and dust - sneezing, congestion, nausea, metallic taste, chills, fever. Not known to be carcinogenic.

EMERGENCY AND FIRST AID PROCEDURES: Skin: Flush thoroughly with water.

Eyes: Flush with water, call physician.

Ingestion: Drink water, induce vomiting, call physician.

Inhalation: Remove victim to fresh air, call physician.

VI. REACTIVITY DATA

Stability: Stable under normal conditions of use, storage and transportation.

Incompatibility (Materials to avoid): Reacts with strong acids to form hydrogen gas. Avoid acetylene and chlorine.

Hazardous Decomposition Products: Copper Fume

Hazardous Polymerization: Will not occur.

VII. SPILL, LEAK & DISPOSAL METHODS

Steps to be taken in case material is released or spilled: DUST or FUME: wear respirator following OSHA use instructions and shovel up, or vacuum and place in an approved DOT container and seal. Wash contaminated clothing. Used or unused product should be disposed of in accordance with federal, state or local laws and regulations.

VIII. DISCLAIMER

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MATERIAL SAFETY DATA SHEET

PLASTIC WEEP TUBES

1. PRODUCT IDENTIFICATION

Company: Heckmann Building Products Inc.
1501 N. 31st Avenue
Melrose Park, IL 60160
708-865-2403

Trade name: Plastic Weep Tubes

Chemical Name: "TENITE" Butyrate Formulas 264, 285, 409,

530, 550, 565, 566, 567, B2149-92B, B2249-95A

Formula: Mixture

2. PRODUCT INGREDIENTS

A: COMPONENTS: % WEIGHT CAS REG. NO.

Cellulose acetate >75 9004-36-8

butyrate

Bis(2-ethulhexyl) adipate <25 103-23-1

See section 5 for information on exposure limits

B: PRECAUTIONARY LABEL STATEMENTS:

FIRST AID: If burned by contact with molten material cool as quickly as possible with water and see a physician for treatment of burn.

Note To Physicians: Burns should be treated as thermal burns. The plastic will come off as healing occurs; therefore, immediate removal from the skin is not necessary.

NOTICE: Refer to NPPA Pamphlet No. 654, "Prevention of Fire and Dust Explosions in the Chemical, Dye, Pharmaceutical, and Plastics Industries" if this material is to be reduced to or collected as a powder.

3. PHYSICAL DATA

Appearance and Odor: Hollow tubes with low odor.

Softening Point: >125 degrees C. (>257 degrees F)

Specific Gravity (H201): >1.0

Solubility in Water: Negligible.

4. FIRE & EXPLOSION HAZARD DATA

FLASH POINT: Not Applicable: Nonvolatile, combustible.

EXTINGUISHING AGENT: Water spray, dry chemical, or Co2.

SPECIAL FIRE-FIGHTING PROCEDURES: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Refer to MFPA Pamphlet No. 654 "Prevention of Fire and Dust Explosions in the Chemical, Dye, Pharmaceutical and Plastics Industries", if this material is to be reduced to or collected as a powder.

5. REACTIVITY DATA

STABILITY: Stable

INCOMPATIBILITY: Oxidizing materials can cause a reaction.

HAZARDOUS DECOMPOSITION PRODUCTS: As with other organic material, combustion will produce carbon dioxide and probably carbon monoxide.

HAZARDOUS POLYMARIZATION: Will not occur.

6. ENVIRONMENTAL HEALTH & SAFETY INFORMATION

A: EXPOSURE LIMITS

Threshold Limit Value (TLV): Not established

OSHA Permissible Exposure Limit (PEL) Not Established

B: EXPOSURE EFFECTS

Inhalation: Low hazard for usual industrial handling.

Eyes: Low hazard for usual industrial handling

Skin: Molten material will produce thermal burns.

C: FIRST AID

Skin: If burned by contact with molten material, cool as quickly as possible with water and see a phycian for treatment of burn. Treatment should be as with thermal burns. The plastic will come off as healing occurs, therefore, immediate removal from the skin is not necessary.

D: TOXICITY DATA

Toxicity data for the components of these materials are as follows:

CELLULOSE ACETATE BUTYRATE

TEST Species Result Toxicity Class

Acute oral LD 50 Rat >6400 mg/kg Nontoxic

Dermal LO 50 Guinea Pig >1000 mg/kg

Skin irritation Guinea Pig Very slight

Skin sensitization None

Feeding Study No. 1:Rats fed diets containing 20% of the compound for 7 days consumed approx. 16 g/kg/day with a maximum daily intake of 18.5 g/kg/day. The animals showed no ill effect from this massive dosage.

Feeding Study No. 2: Rats were fed diets containing 1.0% and 5.0% of the compound for 99 days. No biologically significant effects were noted in feed intake, weight gain, clinical signs, hematology, gross pathology, or histopathology. Feeding Study No. 3: Dogs were fed 50 to 150 g/d y of the compound for 4 months without toxic effect. Only side effect noted was that the dogs would eat Frisbee's when thrown to them instead of retrieving them.

In Rats, intratracheal injection of cellulose acetate butyrate dust suspended in 0.25 mL of water gave no evidence of specific pulmonary reaction as judged by the histological appearance of the lungs at 10 days and 14 days after injection.

bIS(2-ETHYLHEXYL)aDIPATE

TEST Species Result Toxicity

Acute oral LD 50 Rat 9100 mg/kg Nontoxic

Dermal LD 50 Rabbit 16.3 ml/kg Nontoxic

Skin Irritation Rabbit Slight

Eye irritation Rabbit Slight

Rats exposed to saturated vapor of he material for 8 hours showed no mortality.

Rats fed levels o 0,5, 2.0, or 5.0% of the material in their diet for a month showed definite growth effect at 5%, but not at the lower levels. No changes in hematology, urine, or histopathology were noted at the lower levels. Similarly, except for a slight transient loss in appetite, no changes in these same parameters were observed in dogs fed 2 g/kg of the material in their diet for 2 months. Rats fed doses of 0.16 to 4,74 g/kg/day in their diet showed deaths at 4.71 g/kg; no effects were observed on growth, appetite liver and kidney weights, or histopathology at 0.16 g/kg.

7. VENTILATION AND PERSONAL PROTECTION

A: Ventilation: Good ventilation (typically 10 air changes per hour) should be sufficient to control airborn levels. Ventilation rates should be matched to conditions.

Supplementary local exhaust ventilation or respiratory protection may be needed in special circumstances such as mechanical generation of dust, overheating, etc.

B: Respiratory Protection: If respiratory protection is needed, an appropriate NIOSH-approved respirator for dust or fume should be worn. If respirators are used, a program should be established to assure compliance with OSHA Standard 20 CFR 1910,13A

C: Skin & Eye Protection: Safety glasses with side shields (or goggles) are recommended for any type of industrial chemical handling. Gloves should be worn to protect against thermal burns. Good industrial hygiene practice could be followed which includes minimizing skin contact.

8. SPECIAL STORAGE AND HANDLING PRECAUTIONS

Keep from contact with oxidizing materials.

9. SPILL, LEAK, & DISPOSAL PRACTICES

Steps to be taken in case material is released or spilled: Collect and contain for salvage or disposal.

Waste Disposal Method: Incineration or landfill, Observe all federal, state, and local laws concerning health and environment.

10. ENVIRONMENTAL EFFECTS DATA

These materials have not been tested for environmental effects.

11. TRANSPORTATION

DOT Hazard Classification: Not regulated by DOT.

12. REFERENCES

AM IHD HYG ASSOC Q 20, 93-96 (1949)

13. HAZARD RATINGS

HEALTH FLAMMABILITY REACTIVITY

MMIS RATING: 0 1 0

NFPA RATING: 0 1 0

Notice: These ratings involve data and interpretations that may vary from company to company and are intended only for rapid, general identification of the magnitude of the specific hazard. TO DEAL ADEQUATELY WITH THE SAFE HANDLING OF THIS MATERIAL, ALL THE INFORMATION CONTAINED IN THIS MSDS MUST BE CONSIDERED. The customer is responsible for determining the proper personal protective equipment needed for its particular use of this material.

**Hazardous Material Identification System's HMIS Revised

RAW MATERIALS RATING MANUAL, National Paint & Coatings Association Fall 1984

NFPA 704 Standard System for the Identification of the Fire Hazards of materials, national fire protection association 1933.

The information contained herein is furnished without warranty of any kind. Users should consider these data only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use and disposal of these materials and the safety and health of employees and customers.

MATERIAL SAFETY DATA SHEET

Aluminum Alloys

1. PRODUCT IDENTIFICATION

Company: Heckmann Building Products Inc.
1501 N. 31st Avenue
Melrose Park, IL 60160
708-865-2403

Trade name: Aluminum

Form: Bar, Sheet, Plate, Tubing, Structural, and Forgings

2. PRODUCT INGREDIENTS

Exposure Limits

Material or Component	CAS Number	% Weight	1984-85 ACGIH TLV (mg/m3)	OSHA 1910.000 PEL (mg/m3)
Base Material				
Aluminum (Al)	7429-90-5	90-99.7	10.0 as metal dust and oxide 5.0 as welding fume	Not established Not Established
Alloying Elements				
Cobalt (Co)	7440-48-4	<1.0 – 10.0	0.1	0.1

Copper (Cu)	7440-50-8	<1.0 – 10.0	0.2 as fume	0.1 as fume
Iron (Fe)	1309-37-1	<1.0 – 10.0	5.0 as fume	10.0 as fume
Lead (Pb)	7439-92-1	<0.2 – 0.7	0.15 as dust and fume	0.05 as dust and fume
Magnesium (Mg)	1309-46-4	<1.0 – 10.0	10.0 as fume	15.0 as fume
Manganese (Mn)	7439-96-5	<1.0 – 10.0	1.0 as fume	5.0 calling
Silicon (Si)	7440-21-3	<1.0 – 10.0	10.0 as total dust	Not established
Tin (Sn)	7440-31-5	<1.0 – 10.0	2.0 as oxide and metal	2.0 as inorganic compounds
Zinc (Zn)	1314-13-2	<1.0 – 10.0	5.0 as fume	5.0 as fume

Note: Aluminum alloys will be comprised of various combinations of the elements shown here. In addition,. Other alloying elements may be present in minute quantities.

3. PHYSICAL DATA

Material is Solid.	Metallic Appearance – No odor.
PH = N/A	Melting Point 900° – 1200° F. (approx.)
Specific Gravity (H20 = 1) – 2.5 – 2.9 Soulbility in water (% by weight) - Nil	Vapor Pressure = N/A

4. PERSONAL PROTECTIVE EQUIPMENT

Respiratory Protection: Appropriate respirator depending upon potential airborne contaminants and their concentrations. If exposure limits are reached or exceeded use NIOSH approved respiration equipment.	Hands, Arms, and Body: Appropriate gloves, especially for sheet and coil.
Eyes and Face: Safety glasses or shield as appropriate.	Other Clothing and Equipment. As needed depending on operation and safety codes

5. EMERGENCY MEDICAL PROCEDURES

Skin Contact: Remove particies thoroughly by washing with soap and water. Eye Contact: Flush with water thoroughly. Get medical attention if irritation persists.

6. HEALTH AND SAFETY INFORMATION

HEALTH
For standard operation (e.g. melting, cutting, grinding), aluminum alloys present a low health risk by inhalation and are usually considered a nuisance dust. Toxicity by ingestion – none expected. Skin and eyes – not an irritant. Welding and plasma cutting of alloys high in copper (2000 and 7000 series) may present the potential for overexposure to copper fume which can result in upper respiratory tract irritation, nausea, and the dreaded metal fume fever. Nickel and chromium are other alloying elements considered hazardous as fume; however, they do not present a carcinogenic or other health concerns due to their low concentrations of the chemical form in which they are present. Overexposure to lead fumes over an extended period of time can result in such toxic effects as central nervous system disturbances, renal changes, peripheral neuropathy, gastrointestinal disturbances, anemia, and chromosomal changes.
Medical conditions generally aggravated by exposure would be dermatitis and pulmonary disease or disorders.
Occupational Exposure Limits: See ingredients Section 1. Chromium and nickel have been identified by the International Agency for Research on Cancer (IARC) and the National Toxicology Program (NTP) as potential carcinogens.
FIRE AND EXPLOSION
Flash Point = N/A Auto Ignition Temperature = N/A Flammable Limits in Air N/A Extinguishing Method: Dry Powder or sand
REACTIVITY
Stability = Stable Incompatibility (Materials to Avoid) = Reacts with strong acids to form hydrogen gas.
Conditions to Avoid: Aluminum products under normal conditions are stable during use, storage, and transportation. Halogen acids and sodium hydroxide in contact with aluminum may generate explosive mixtures of hydrogen. Finely divided aluminum, such as small chips and fines, will form explosive mixtures in air. It will also form explosive mixtures in air in the presence of bromates, iodates, or ammonium nitrate. Strong oxidizers cause violent reactions with considerable heat generation.
Hazardous Decomposition Products : See additional information Section VIII

VII. ENVIRONMENTAL

Spill or leak procedures: N/A
Waste Disposal Method: Used or unused product should be tested to determine hazard status and disposal requirements under federal, state, or local laws and regulations.

VIII. ADDITIONAL INFORMATION

Other Precautions:

1. Do not touch cast aluminum metal or heated aluminum product without knowing metal temperature. Aluminum experiences no color change during heating. Burns could result.
2. Aluminum powder must be packaged and shipped as a flammable solid.
3. Hard alloy ingots in the 2000 and 7000 series must be stress relieved to prevent explosion when sawed.
4. The welding of aluminum alloys may generate carbon monoxide, carbon dioxide, ozone, nitrogen oxides, infrared radiation, and ultraviolet radiation.

The information contained herein is furnished without warranty of any kind. Users should consider these data only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use and disposal of these materials and the safety and health of employees and customers.

HECKMANN HOMEPAGE