

SAFETY DATA SHEET

1. PRODUCT INFORMATION

Product Identifier: ASTM A500, ASTM A252, ASTM A513 and ASTM A1085

Manufacturer:

Independence Tube Chicago
6226 West 74th Street
Chicago, Illinois 60638

Independence Tube Marseilles
1201 East Broadway
Marseilles, Illinois 61341

Independence Tube Decatur
2000 Independence Ave N.W.
Decatur, Alabama 35601

Independence Tube Trinity
2000 Cooperage Way
Trinity, Alabama 35673

Phone: 1-800-376-6000
Email: quality@independencetube.com

2. HAZARD(S) IDENTIFICATION

Steel is considered an “article” and not hazardous in its solid form. However, certain processes such as welding, burning, grinding, abrasive blasting, heat treatment, pickling, cutting or similar operations, potentially hazardous fumes or dusts may be emitted.

SIGNAL WORD, HAZARD STATEMENT & SYMBOLS: DANGER

SYMBOLS	HAZARD	GHS CLASSIFICATION	HAZARD STATEMENTS
	Carcinogenicity	Category—1B	May cause cancer
	Respiratory Sensitizer	Category—1	May cause allergy or asthma symptoms or breathing difficulties if inhaled
	STOT (repeated exposure)	Category—1	Causes damage to organs through prolonged or repeated exposure
	Acute Oral Toxicity	Category—4	Harmful if swallowed
	Skin Sensitizer	Category—1	May cause allergic skin reaction
	STOT (Single exposure)	Category—3	May cause respiratory irritations
N/A	Eye Irritation	Category—2B	Causes eye irritations

PRECAUTIONARY STATEMENT(S)

Prevention	Response	Storage/Disposal
Do not breathe dusts/fume/gas/mist/vapor/spray	If inhaled: Remove person to fresh air and keep comfortable for breathing	Dispose of contents in accordance with Federal, State and Local regulations
Wear protective gloves / protective clothing / eye protection / face protection	If exposed, concerned or feel unwell: Get medical advice/attention	
Contaminated work clothes must not be allowed out of the workplace Use only outdoors or in well ventilated areas.	If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.	
Obtain special instructions before use. Do not handle until all safety precautions have been read and understood Do not eat, drink or smoke when using this product	If on skin: Wash with plenty of water. If irritation or rash occurs: GET MEDICAL ADVICE/ATTENTION. Take off and wash contaminated clothing before reuse. Call a poison center/doctor if you feel unwell.	

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STORAGE

Store away from acids and incompatible materials

Store in accordance with federal/provincial/state or local regulations

DISPOSAL

Steel scrap should be recycled whenever possible.

Otherwise, dispose of in accordance with applicable federal/provincial/state or local regulations.

3. COMPOSITION/INFORMATION ON INGREDIENTS

CHEMICAL NAME	CAS NUMBER	% WEIGHT
Iron	7439-89-6	Balance
Manganese	7439-96-5	1.7 max
Phosphorus	7723-14-0	0.15 max
Sulfur	7704-34-9	0.35 max
Columbium	7440-25-7	0.10 max
Vanadium	7440-62-2	0.20 max
Aluminum	7429-90-5	0.10 max
Copper	7440-50-8	.20-0.6

Percentages are expressed as typical ranges or maximum concentrations of trace elements for the purpose of communicating the potential hazards of the finished product. Consult product specifications for specific composition information.

4. FIRST AID MEASURES

EYE CONTACT: FLUSH EYES WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES
SEEK MEDICAL ATTENTION IF EYE IRRITATION PERSISTS

SKIN CONTACT: MAINTAIN GOOD PERSONAL HYGIENE. WASH AFFECTED AREA WITH MILD SOAP AND WATER
SEEK MEDICAL ATTENTION IF SKIN IRRITATION PERSISTS.

INHALATION: REMOVE TO FRESH AIR, CHECK FOR CLEAR AIRWAY, BREATHING AND PRESENCE OF PULSE.
IF NECESSARY ADMINISTER CPR AND CALL 911.

INGESTION: RARE IN INDUSTRY. DUST MAY IRRITATE MOUTH AND GASTROINTESTINAL TRACT.
IF INGESTED SEEK MEDICAL ATTENTION IMMEDIATELY

MOST IMPORTANT SYMPTOMS/EFFECTS, ACUTE AND DELAYED (CHRONIC)

HSS HOLLOW STRUCTURAL STEEL IS SOLD AS IS AND IS NOT LIKELY TO PRESENT ANY ACUTE OR CHRONIC HEALTH EFFECTS. HOWEVER DURING FURTHER PROCESSING (WELDING, GRINDING, BURNING, ETC) INDIVIDUAL COMPONENTS MAY ELICIT AN ACUTE OR CHRONIC HEALTH EFFECT.

5. FIRE FIGHTING MEASURES

None of these products are flammable or combustible. Use extinguishers appropriate for surrounding materials.

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6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

Not applicable to steel in solid state. Avoid dust formation. Ensure adequate ventilation. Clean-up personnel should be protected against contact with eyes and skin protection.

ENVIRONMENTAL PRECAUTIONS

Not applicable to steel in solid state

METHODS AND MATERIAL FOR CONTAINMENTS AND CLEANING CREW

Not applicable to steel in solid state. For spills involving fine dusts, remove by vacuuming or wet sweeping methods to prevent spreading of dust. Avoid inhalation of dusts.

7. HANDLING & STORAGE

PRECAUTIONS FOR SAFE HANDLING

Not applicable for steel in a solid state. Operations with the potential for generating high concentrations of airborne particles should be evaluated and controlled as necessary.

CONDITIONS FOR SAFE STORAGE

No special storage conditions for steel in a solid state.

INCOMPATIBLE PRODUCTS

Store away from acids and incompatible materials.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

HSS Structural Steel Tubing as sold/shipped in its physical form does not present an inhalation, ingestion or contact hazard, nor would any of the following exposure data apply. However, operations such as burning, welding, sawing, brazing, machining, grinding, etc. may expose fumes and/or particles. The following exposure limits are offered as reference.

CHEMICAL NAME	CAS NUMBER	ACGIH TLV
Iron	7439-89-6	5.0 (Respirable)
Manganese	7439-96-5	0.2 (As inorganic Mn)
Chromium	7440-47-3	0.5 (Metal & Cr+3) 0.05 (Cr+6 Soluble) 0.01 (Cr+6 Insoluble)
Nickel	7440-02-0	1.5 (Metal) 0.2 (Insoluble) 0.1 (Soluble)
Copper	7440-50-8	1.0 (Dust) 0.2 (Fume)
Phosphorous	7723-14-0	0.1
Molybdenum	7439-98-7	10.0 (Insoluble) 5.0 (Soluble)
Lead	7439-92-1	0.05

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INDIVIDUAL PROTECTIVE MEASURES

Dependent on the process being performed on material each operation must be addressed for suitable equipment.

GLOVES Wear gloves as required

EYES Safety glasses or goggles as required

CLOTHING N/A

FOOTWEAR N/A

RESPIRATOR If concentrations exceed established limits, use NIOSH/MSHA approved particulate respirators (dust & fume or high efficiency dust fume) when grinding or welding.

9. CHEMICAL & PHYSICAL PROPERTIES

PHYSICAL STATE	Solid	APPEARANCE	Silver grey (Metallic)
ODOR	Odorless	ODOR THRESHOLD	N/A
pH	N/A	MELTING POINT	~2750°F (~1510°C)
BOILING POINT	N/A	FLASH POINT (°C)	N/A
EVAPORATION POINT	N/A	FLAMMIBILITY (solid/Gas)	Non-flammable
UPPER FLAMMABLE LIMIT %	N/A	LOWER FLAMMIBLE LIMIT %	N/A
VAPOR PRESSURE	N/A	VAPOR DENSITY	N/A
RELATIVE DENSITY	7.85	SPECIFIC GRAVITY	N/A
SOLUBILITY	Water Insoluble	PARTITION COEFFICIENT	N/A
AUTO-IGNITION TEMP (°C)	N/A	DECOMPOSITION TEMP	N/A
VISCOSITY	N/A	OTHER INFORMATION	None

10. STABILITY & REACTIVITY

REACTIVITY

Not determined for product in solid form

CHEMICAL STABILITY

Yes. Steel products are stable under normal storage and handling conditions.

POSSIBILITY OF HAZARDOUS REACTIONS

Hazardous polymerization cannot occur

CONDITIONS TO AVOID

Contact with mineral acids will release flammable hydrogen gas. Dust formation.

INCOMPATIBLE MATERIALS



Yes, strong acids

HAZARDOUS DECOMPOSITION PRODUCTS

Not applicable




11. TOXICOLOGICAL INFORMATION

The following toxicity data has been determined for HSS Hollow Structural Sections when further processed using the information available for its components applied to the guidance on the preparation of an SDS under the GHS requirements of OSHA.

HAZARD CLASSIFICATION	HAZARD CATEGORY OSHA	HAZARD SYMBOLS	SIGNAL WORD	HAZARD STATEMENT
Eye Damage/Irritation	2B ^a	No Pictogram	Warning	Causes eye irritation—Rating due to iron particulate generated from further processing.
Skin/Dermal	1 ^b		Warning	May cause an allergic skin reaction—Nickel is a skin sensitizer
Carcinogenicity	2 ^c		Warning	Suspected of causing cancer—Rating due to nickel particulate or fume that can enter the body generated from further processing.

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11. TOXICOLOGICAL INFORMATION (continued)

HAZARD CLASSIFICATION	HAZARD CATEGORY OSHA	HAZARD SYM-BOLS	SIGNAL WORD	HAZARD STATEMENT
Toxic Reproduction	2 ^d		Warning	Suspected of damaging fertility or the unborn child—Rating due to nickel particulate or fume that can enter the body generated when further processing.
Specific Target Organ Toxicity	3 ^e		Warning	May cause respiratory irritation—Rating due to iron particulate or fume entering the body generated when further processing.
STOT following repeated exposure	1 ^f		Warning	Causes damage to lungs and central nervous system through prolonged or repeated inhalation exposure—Rating due to nickel or manganese particulate or fume that may enter the body when further processing.

- a. **EYE DAMAGE/IRRITATION**—No eye irritation data available for *HSS Hollow Structural Sections* as a mixture. The following **Eye Irritation Information** was found for the components: Iron causes eye irritation. Nickel—slight eye irritation from particulate abrasion only.
- b. **SKIN DERMAL SENSITIZATION**—No skin irritation data available for *HSS Hollow Structural Sections* a mixture. The following **Skin (Dermal) Sensitization Information** was found for the components: Nickel—May cause skin sensitization.
- c. **CARCINOGENICITY**— IARC, NTP, and OSHA do not list *HSS Hollow Structural Sections* as carcinogens. The following **Carcinogenicity Information** was found for the components: Welding fumes— IARC Group 2B carcinogen, a mixture that is possibly carcinogenic to humans. Nickel and certain nickel components—Group 2B—metallic nickel Group 1—nickel compounds ACGIH confirmed human carcinogen.
- d. **TOXIC REPRODUCTION**— No Toxic Reproduction data available for *HSS Hollow Structural Sections* as a mixture. The following **Toxic Reproductive Information** was found for the components: Nickel—effects on fertility.
- e. **SPECIFIC TARGET ORGAN TOXICITY**—No Specific Target Organ Toxicity (STOT) following Single Exposure Data was available for *HSS Hollow Structural Sections* as a mixture. The following STOT following a Single Exposure Data was found for the components: Iron—irritating to respiratory tract.
- f. **STOT following repeated exposure**—No Specific Target Organ Toxicity (STOT) following repeated exposure data was available for *HSS Hollow Structural Sections* as a whole. The following STOT following Repeated Exposure Data was found for the components: Nickel—Rat 4 inhalation LOEL 4mg/m³Kung and Lymph node histopathology. Rat 2 yr inhalation LOEL 0.1 mg/m³ Pigment in kidney, effects on hematopoiesis spleen and bone marrow and adrenal tumor. Rat 13 Week inhalation LOAEC 1.0 mg/m³Lung weights and Alveolar histopathology. Manganese—Inhalation of metal fumes—Degenerative changes in human Brain; Behavioral: Changes in motor activity and muscular weakness.

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12. ECOLOGICAL INFORMATION

ECOTOXICITY No data available for HSS Hollow Structural Steel in its natural solid state. However, components of the material have been found to be toxic to the environment

COMPONENT	TOXICITY TO FISH	TOXICITY TO ALGAE	TOXICITY TOO MICROORGANISMS
Iron	LC50 Common Carp 96 hr. 0.56 mg/l	-	-
Chromium	LC50 Fathead minnow 96 hr. 10-100 mg/l	-	-
Nickel	LC50 Common Carp 96 hr. 1.3 mg/l	EC50 Freshwater Algae 72 hr. 0.18 mg/l	EC50 Water Flea 48 hr. 1.0 mg/l
Lead	LC50 Common Carp 96 hr. 0.44 mg/l	-	EC50 Water Flea 48 hr. 0.0006 mg/l

PERSISTENCE AND DEGRADABILITY

No data available

BIOACCUMULATIVE POTENTIAL

No data available

MOBILITY IN SOIL

No data available in its natural solid state. Individual metal dusts may migrate into soil and groundwater and be absorbed by plants

OTHER ADVERSE EFFECTS

Non known

13. DISPOSAL INFORMATION

WASTE DISPOSAL METHODS

Steel scrap should be recycled whenever possible

CONTAINER CLEANING & DISPOSAL

Dispose in accordance with applicable Federal, Provincial or State law.

14. TRANSPORTATION INFORMATION

GENERAL SHIPPING INFORMATION—US Department of Transportation (DOT) does not regulate HSS Hollow Structural Sections as a hazardous material. All Federal, Provincial or State laws and regulations that apply to the transport of this type of material must be adhered to.

Shipping Name —N/A	Packaging Authorizations	Quantity Limitations
Shipping Symbols —N/A	a) Exceptions: N/A	a) Passenger, Aircraft or Railcar: N/A
Hazard Class —N/A	b) Group: N/A	b) Cargo Aircraft Only: N/A
UN No. —N/A	c) Authorization: N/A	Vessel Stowage Requirements: N/A
Packing Group —N/A		a) Vessel Stowage: N/A
DOT/IMO Label —N/A		b) Other: N/A
Special Provisions (172.102) - N/A		c) DOT Reportable Quantities: N/A

TRANSPORT REGULATIONS:

Canadian Transportation of Dangerous Goods Regulations (TDG) March 2011.

US Department of Transport (DOT) Hazardous Materials shipping information (Title 49—Transportation March 2011)

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15. REGULATORY INFORMATION

REGULATORY INFORMATION

The following listing of regulations relating to HSS Hollow Structural Sections may not be complete and should not be solely relied upon for all regulatory compliance responsibilities.

ADDITIONAL CANADIAN REGULATIONS

WHMIS CLASSIFICATION

Class D2A/D2B: Materials Causing Other Toxic Effects

DOMESTIC SUBSTANCE LIST

The components of this material are on the federal DSL Inventory

OTHER CANADIAN REGULATIONS

N/A

ADDITIONAL U.S. REGULATIONS

SARA

The components of this material are subject to the reporting requirements of Sections 302, 304 and 313 of Title III of the Superfund Amendments and Reauthorization Act (SARA—Oct. 2006) as follows:

CHEMICAL NAME	SARA 302 (40 CFR 355, Appendix A)	SARA 304 (40 CFR Table 302.4)	SARA 313 (40 CRR 372.65)	CERCLA Reportable Quantities
Chromium	NO	NO	YES	5,000 Lbs.
Copper	NO	NO	YES	5,000 Lbs.
Lead	NO	NO	YES	10 Lb.
Manganese	NO	NO	YES	None Listed
Nickel	NO	NO	YES	100 Lb.
Phosphorus	YES	YES	YES	1 Lb.
Vanadium	NO	NO	NO	None Listed

16. OTHER INFORMATION

STEEL

HAZARD LABEL RATING SYSTEMS:

NATIONAL FIRE PROTECTION CODE

NFPA CODE: H=0 F=0 R=0



HAZARD MATERIALS IDENTIFICATION SYSTEM:

HMIS CODE: H=1* F=0 R=0 PPE: See Section 8

HEALTH	1
FLAMMABILITY	0
REACTIVITY	0
OTHER	

*Denotes possible chronic hazard if airborne dusts or fumes are generated

TELEPHONE: 1-800-376-6000

DATE: September 2015

NOTE: Contact supplier for additional product information

DISCLAIMER: The information contained herein based on data considered accurate. However, no warranty is expressed or implied regarding the accuracy of these data or the results obtained thereof.