



## SAFETY DATA SHEET

### SECTION 01 – IDENTIFICATION

**Common / Product Name:** Steel Unisub, Steel ChromaLuxe

**Revision Date:** November 19, 2015

**Recommended Use:** Various fabricated steel parts and products

**Identification of the Company:** Universal Woods Inc.  
2600 Grassland Dr.  
Louisville, KY 40299-2591  
USA  
Emergency Telephone No: (502) 491 1477  
Other Information Calls: (502) 491 1461

**Emergency Information:** CHEMTREC 24 HR. Emergency Telephone:  
U.S. /North America: (800) 424-9300  
International: (703) 527-3887

### SECTION 02 – HAZARD(S) IDENTIFICATION

**Physical State:** Solid

**Appearance:** Shaped as a panel

**Odor:** None

In its manufactured and shipped state, this product is considered non-hazardous. Processing may generate hazardous fumes and dusts.

#### Potential Health Effects

**Inhalation:** No inhalation hazard under normal conditions. Welding, burning, sawing, brazing, grinding or machining operations may generate fumes and dusts of metal oxides. High concentrations of freshly formed fumes/dusts of metal oxides can produce symptoms of metal fume fever.

**Eye Contact:** Under normal conditions of intended use, this material does not pose a risk to health. Contact with hot material can cause thermal burns which may result in permanent damage. Grinding and sanding this product may generate dust. Dust may irritate the eyes. Exposed individuals may experience eye tearing, redness, and discomfort.

**Skin Contact:** Under normal conditions of intended use, this material does not pose a risk to health. Dust may irritate skin. May dry the skin leading to discomfort and dermatitis. Skin contact may

aggravate an existing dermatitis. Contact with hot material can cause thermal burns which may result in permanent damage.

**Ingestion:** Solid steel: Not relevant, due to the form of the product. However, ingestion of dusts generated during working operations may cause nausea and vomiting.

**Chronic Health Effects:** Frequent inhalation of fume/dust over a long period of time increases the risk of developing lung diseases. Chromium VI compounds are regarded as human carcinogens by IARC, NTP, OSHA and ACGIH. Contains nickel. May cause sensitization by skin contact. Nickel is listed by IARC (Group 2B) and NTP. Vanadium pentoxide is classified as possibly carcinogenic to humans (Group 2B) by IARC, may cause adverse reproductive effects and may adversely affect the developing fetus. A residual chrome VI compound from the surface coating is water soluble and is carcinogenic. Exposure to manganese fume/dust can affect the central nervous system (apathy, drowsiness, weakness and other chronic symptoms such as postural tremors). These ingredients are bound within the product and release is not expected under normal conditions.

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**Target Organ(s):** | Lung | Skin.

**Potential Physical / Chemical Effects:** The dangerous properties of the product are considered limited.

**OSHA Regulatory Status:** Under some use conditions, this material may be considered to be hazardous in accordance with OSHA 29 CFR 1910.1200.

**Environment:** The environmental hazard of the product is considered to be limited.

The sublimation or engraving process could also create an odor.

### SECTION 03 – COMPOSITION/INFORMATION ON INGREDIENTS

**General Information:** The product is an alloy. May liberate hazardous oxides such as iron oxides and vanadium pentoxide at temperatures above the melting point. The surface may be passivated with chromic acid leaving residual coating of chrome III and VI compounds. The treated alloy surface is coated. Coatings may include vinyl, epoxy, polyester, siliconized polyester, acrylic, fluorocarbons, polyurethane, petrolatum, chromium conversion and titanium conversion.

Surface finishes are factory applied. These products are classified as an “article” according to 29 CRF 1910.1200(c). They do not release any hazardous chemical under normal conditions of use.

**Please Note:** Other components used in the sublimation process such as inks are separate materials and are not covered in this MSDS.

<u>CAS Number</u>	<u>Chemical Name</u>	<u>Weight %</u>
7439-89-6	Iron	90-100%
N/A	Coating(s)	N/A
7439-96-5	Manganese	0-2%
7440-21-3	Silicon	0-1%
7440-47-3	Chromium	0-1%
7440-02-0	Nickel	0-0.4%

1309-37-1	Iron oxide **	0%
1314-62-1	Vanadium pentoxide**	0%

\*\* Iron oxide and vanadium pentoxide are formed at temperatures above the melting point.

Surface finishes are factory applied. These products are classified as an “article” according to 29 CRF 1910.1200(c). They do not release any hazardous chemical under normal conditions of use.

#### SECTION 04 – FIRST-AID MEASURES

**Inhalation:** In case of inhalation of dusts or fumes from heated product: Move into fresh air and keep at rest. Get medical attention if symptoms persist. If breathing is difficult, give oxygen. If breathing stops, provide artificial respiration.

**Eye Contact:** Any material that contacts the eye should be washed out immediately with water. If easy to do, remove contact lenses. Get medical attention promptly if symptoms occur after washing.

**Skin Contact:** Wash skin with soap and water. In case of burns with hot metal, rinse with plenty of cold water. If burns are severe, consult a physician. If skin irritation or an allergic skin reaction develops, get medical attention.

**Ingestion:** Solid steel: Not Applicable Dust: Get medical attention if any discomfort continues.

#### SECTION 05 – FIRE-FIGHTING MEASURES

**Extinguishing Media:** Use fire-extinguishing media appropriate for surrounding materials.

**Unsuitable Extinguishing Media:** Not applicable.

**Special Fire Fighting Procedures:** Use standard firefighting procedures and consider the hazards of other involved materials.

**Unusual Fire & Explosion Hazards:** No unusual fire or explosion hazards noted.

**Hazardous Combustion Products:** Acrid fumes, Carbon Dioxide, Carbon Monoxide, Nitrogen Oxides, Sulfur Oxides, inorganic compounds

**Protective Measures:** Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

**Flammability Class:** NFPA Rating Fire = 0.

#### SECTION 06 – ACCIDENTAL RELEASE MEASURES

**Personal Precautions:** Cold solid metal: No special precautions are necessary beyond normal good hygiene practices. See Section 8 of the MSDS for additional personal protection advice when handling this product. Hot metal: Avoid contact with hot material. Wear protective clothing as described in Section 8 of this safety data sheet.

**Spill Cleanup Methods:** Collect for recycling.

**Environmental Precautions:** No specific precautions.

**Notification Procedures:** In the event of accidental release, notify relevant authorities in accordance with all applicable regulations.

## SECTION 07 –HANDLING AND STORAGE

**Handling:** Avoid contact with sharp edges and hot surfaces. Use appropriate gloves and tools to ensure a safe handling. Use work methods which minimize dust/fume production. Do not breathe fumes and dusts. Observe safety measures suited to the coating(s) when handling, cutting or melting. Follow the recommendations in ANSI Z49.1, Safety in welding and cutting (ANSI=American National Standard Institute).

**Storage:** Store in a dry place. Store away from: Acids. Oxidizing agents.

## SECTION 08 –EXPOSURE CONTROLS / PERSONAL PROTECTION

**Exposure Guidelines:** The following table lists exposure limits for all chemicals listed in Section 3 where a limit exists.

Chemical Name	ACGIH TLV	OSHA PEL
Silicon 7440-21-3	TWA: 10 mg/m <sup>3</sup> TWA: 15 mg/m <sup>3</sup> (total)	TWA: 5 mg/m <sup>3</sup> (respirable)
Manganese 7439-96-5	TWA: 0.2 mg/m <sup>3</sup>	Ceiling: 5 mg/m <sup>3</sup>
Chromium 7440-47-3	TWA: 0.5 mg/m <sup>3</sup>	TWA: 1 mg/m <sup>3</sup>
Nickel 7440-02-0	TWA: 1.5 mg/m <sup>3</sup>	TWA: 1 mg/m <sup>3</sup>
Iron oxide**	TWA: 5 mg/m <sup>3</sup>	TWA: 10 mg/m <sup>3</sup>
Vanadium pentoxide**	TWA: 0.05 mg/m <sup>3</sup>	Ceiling: 0.1 mg/m <sup>3</sup>

**Engineering Controls:** Adequate ventilation should be provided so that exposure limits are not exceeded. Use local exhaust when welding, burning, sawing, brazing, grinding or machining to prevent excessive dust or fume exposure.

**Respiratory Protection:** Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fume at levels exceeding the exposure limits.

**Eye Protection:** Use of safety glasses or goggles is required for welding, burning, sawing, brazing, grinding or machining operations. In addition to safety glasses or goggles, a welding helmet with appropriate shaded shield is required during welding, burning, or brazing. A face shield is recommended, in addition to safety glasses or goggles, during sawing, grinding, or machining.

**Hand Protection:** Wear protective gloves. When material is heated, wear gloves to protect against thermal burns. While handling product and/or steel packing material wear cut resistant gloves and sleeves for laceration protection.

**Skin Protection:** Wear suitable protective clothing. Thermally protective apron or coat with long sleeves are recommended when the volume of hot material is significant.

**Hygiene Measures:** Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Observe any medical surveillance requirements.

**Environmental Exposure Controls:** Environmental manager must be informed of all major releases.

## SECTION 09 –PHYSICAL AND CHEMICAL PROPERTIES

**Color:** Various colors

**Odor:** None

**Odor Threshold:** Not applicable.

**pH:** NA

**Boiling Point:** NA

**Freezing Point:** NA

**Flash Point:** NA

**Specific Gravity:** No data available

**Vapor Pressure (mm Hg):** NA

**Percent Volatile by Volume (%):** 0

**Vapor Density (Air = 1):** NA

**Evaporation Rate (BuAc = 1):** NA

**Solubility in Water:** NA

**Physical State:** Solid

**Boiling Point Range:** NA

**Melting Point Range:** 1510° C (2750° F)

**Partition Coefficient (n-Octanol/water):** NA

**Autoignition Temperature:** NA

**Decomposition Temperature:** NA

**Appearance and Odor:** Universal Woods steel is shaped as a panel. The sublimation or engraving process could also create an odor.

## SECTION 10 –STABILITY AND REACTIVITY

**Stability:** This product is stable under expected conditions of use.

**Conditions to Avoid:** Avoid contact with acids and oxidizing substances.

**Incompatible Materials:** Strong Acids. Oxidizing agents.

### Hazardous Decomposition Products:

At Elevated Temperatures:	Acrid fumes, Carbon Dioxide, Carbon Monoxide, Metal oxides, Nitrogen Oxides, Sulfur Oxides, inorganic compounds
Strong Acid Contact:	Hydrogen, inorganic compounds

**Possibility of Hazardous Reactions:** Will not occur.

## SECTION 11 –TOXICOLOGICAL INFORMATION

Product is a solid sheet of steel. No hazards anticipated during handling and storage.

### Specified Substance(s)

Acute Toxicity: Component Chemical Name	Test Results
Manganese	Oral LD50 (Rat): 9 g/kg
Silicon	Oral LD50 (Rat): 3160 mg/kg

**Other Acute:** Polyurethan based coating: During processing irritating fumes and dust may be formed.

**Chronic Toxicity:** Contains nickel. May cause sensitization by skin contact. Nickel is listed by IARC (Group 2B) and NTP. Vanadium pentoxide is classified as possibly carcinogenic to humans (Group 2B) by IARC, may cause adverse reproductive effects and may adversely affect the developing fetus. A residual chrome VI compound from the surface coating is water soluble and is carcinogenic. Chromium VI compounds are regarded as human carcinogens by IARC, NTP, OSHA and ACGIH. Exposure to manganese fume/dust can affect the central nervous system (apathy, drowsiness, weakness and other chronic symptoms such as postural tremors)

Listed Carcinogens: Chemical Name	IARC	NTP	OSHA	ACGIH
Chromium	3	Not Listed	Not Listed	A4
Vanadium pentoxide**	2B	Not Listed	Not Listed	A4
Iron oxide**	3	Not Listed	Not Listed	A4
Nickel	2B	Listed	Not Listed	A5

IARC: 1 = Carcinogenic to Humans; 2A = Probably Carcinogenic to Humans; 2B = Possibly Carcinogenic to Humans; 3 = Not classifiable as to carcinogenicity to humans; 4 = Probably not carcinogenic to humans; Not listed = Not evaluated by IARC.

ACGIH: A1 = Confirmed Human Carcinogen; A2 = Suspected Human Carcinogen; A3 = Confirmed Animal Carcinogen; A4 = Not classifiable as a human carcinogen; A5 = Not suspected to be a human carcinogen; Not listed = Not evaluated by ACGIH

### Product Information

**Other Acute:** High concentrations of freshly formed fumes/dusts of metal oxides can produce symptoms of metal fume fever. Inhalation of dust (generated at high temperatures only) may cause mild irritation of the upper respiratory tract. Prolonged contact may cause redness, irritation and cracking. Welding, cutting and metalizing can generate ozone. Ozone can cause irritation of eyes, nose and respiratory tract.

**Chronic Toxicity:** Frequent inhalation of fume/dust over a long period of time increases the risk of developing lung diseases. The product contains a small amount of sensitizing substance which may provoke an allergic reaction among sensitive individuals in contact with skin. The ingredients of the alloy are bound within the product and release is not expected under normal conditions.

## SECTION 12 – ECOLOGICAL INFORMATION

**Ecotoxicity:** No data available.  
**Mobility:** Not relevant, due to the form of the product.  
**Persistence and Degradability:** No data available.  
**Bioaccumulative Potential:** No data available on bioaccumulation.  
**Other Adverse Effects:** None known.

## SECTION 13 – DISPOSAL CONSIDERATIONS

**General Information:** Dispose waste and residues in accordance with applicable federal, state, and local regulations.

**Disposal Methods:** Disposal recommendations are based on material as supplied. Disposal must be in accordance with current applicable laws and regulations, and material characteristics at time of disposal. Recover and reclaim or recycle, if practical.

**Container:** Since emptied containers retain product residue, follow label warnings even after container is emptied.

## SECTION 14 – TRANSPORT INFORMATION

**DOT (Department of Transportation):** non-regulated  
**TDG:** non-regulated  
**IMO/IMDG code (Ocean) Hazard Class of Division:** non-regulated  
**IATA: Non-Hazardous for Air Transportation:** non-regulated

## SECTION 15 – REGULATORY INFORMATION

### UNITED STATES REGULATORY INFORMATION

#### CERCLA Hazardous Substance List (40 CFR 302.4):

Chemical Name	RQ
Vanadium pentoxide**	1000 lbs

#### SARA Title III

#### Section 302 Extremely Hazardous Substances (40 CFR 355, Appendix A): None

Chemical Name	RQ	TPQ
Vanadium pentoxide**	1000 lbs	

#### Section 311/312 (40 CFR 370):

Acute (Immediate)     Chronic (Delayed)     Fire     Reactive     Pressure Generating



**Section 313 Toxic Release Inventory (40 CFR 372):**

Chemical Name	CAS-No.	Concentration
Vanadium pentoxide**	1314-62-1	0%
Manganese	7439-96-5	0 - 2%
Nickel	7440-02-0	0 - 0.4%
Chromium	7440-47-3	0 - 1%

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):**

None

**Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3):** Vanadium pentoxide\*\*

**Drug Enforcement Act:** None

**TSCA:** No component is listed on TSCA Sections 4(a), 5(a)(2), 5(e) or 12(b).

**State Regulations**

**California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65):** Nickel; Vanadium pentoxide\*\*

**Massachusetts Right-To-Know List:** Chromium; Iron oxide\*\*; Manganese; Nickel; Vanadium pentoxide\*\*

**Michigan Critical Materials List (Michigan Natural Resources and Environmental Protection Act (Act. 451 of 1994)):** None

**Minnesota Hazardous Substances List:** Chromium; Iron oxide\*\*; Manganese; Nickel; Vanadium pentoxide\*\*

**New Jersey Right-To-Know List:** Chromium; Iron oxide\*\*; Manganese; Nickel; Vanadium pentoxide\*\*

**Pennsylvania Right-To-Know List:** Chromium; Iron oxide\*\*; Manganese; Nickel; Vanadium pentoxide\*\*

**Rhode Island Right-To-Know List:** Chromium; Iron oxide\*\*; Manganese; Nickel; Vanadium pentoxide\*\*

**SECTION 16 –OTHER INFORMATION**

Issuing Date: 11-19-15

#### Disclaimer

The condition or methods of handling, storage, use and disposal of the product are beyond our control and may be beyond our knowledge. For this reason, 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.