

## SAFETY DATA SHEET: Bison Paver Tray

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### Section 1 Product Information

Product Name	Bison 2cmTray/ Bison 2cmPAVERTray/ PT-2424
Component Synonyms	<b>Tray:</b> Galvanized (Hot Dipped) Sheet—Carbon Steel; Galvannealed (Hot Dipped) Sheet—Carbon Steel; UPI.GalXC Sheet—Carbon Steel <b>Adhesive Square:</b> Butyl Rubber
Chemical Family	Natural Inorganic Products

### Section 2 – Hazard(s) Identification

<p><b>Hazard Identification</b></p>	<p>As sold, this product is not considered hazardous under Cal-OSHA 8CCR Section 5194 and OSHA 29 CFR Parts 1910.1200 Hazard Communication Standard, steel products are considered articles/ mixtures due to further processing which may produce dusts and/or fumes. However, individual customer processes, (such as welding, sawing, brazing, melting, grinding, abrasive blasting, and machining) may result in the formation of fumes, dust (combustible or otherwise), and/ or particulates which may present the following hazards:</p> <p><b>OSHA Hazards:</b> Carcinogen Skin Sensitizer Target Organ Effect</p> <p><b>Target Organs:</b> Respiratory system</p> <p><b>GHS Classification:</b> Carcinogenicity (Category 2) Skin Sensitization (Category 1) Specific Target Organ Toxicity (STOT)-Repeated Exposure (Category 1) Specific Target Organ Toxicity (STOT)-Single Exposure (Category 3) Toxic to Reproduction (Category 2) Acute Toxicity-Oral (Category 4) Eye Irritation (Category 2B)</p> <div style="text-align: center;">  </div> <p><b>SIGNAL WORD: WARNING</b></p> <p><b>Hazard Statement(s):</b> May cause an allergic skin reaction. Suspected of causing cancer. Suspected of damaging fertility or the unborn child. Causes damage to lungs through prolonged or repeated inhalation exposure. Harmful if swallowed. May cause respiratory irritation. Causes eye irritation.</p> <p><b>Precautionary Statement(s):</b> Do not handle until all safety precautions have been read and understood. Do not breathe dusts/ fumes/ spray. Wear protective gloves/ protective clothing/ eye protection/ face protection. Contaminated work clothing must not be allowed out of the workplace.</p>
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	<p>Use only outdoors or in well ventilated areas.  Wash thoroughly after handling.  Do not eat, drink or smoke when using this product.  If inhaled: Remove person to fresh air and keep comfortable for breathing.  If exposed, concerned or feel unwell: Get medical advice/ attention.  If in eyes: Rinse cautiously with water/ eye wash solution for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  If on skin: Wash with plenty of water. If irritation or rash occurs: Get medical advice/ attention. Take off contaminated clothing and wash before reuse.  <b>Hazard(s) Not Otherwise Classified (HNOC):</b> None known.  <b>Unknown Acute Toxicity Statement (mixture):</b> None known.  These products do not contain asbestos. Under normal condition these products do not release hazardous materials after installation and are not considered hazardous. Waste and residues should be disposed of in accordance with local authority requirements.</p>
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### Section 3 – Composition/ Information on Ingredients

Product Component	Ingredient Name	CAS Number	Percentage by wt.
Tray-Base Metal	Iron	7439-89-6	>90.0
Tray-Alloying Elements	Calcium	7440-70-2	0.10 max.
	Carbon	7440-44-0	0.60 max.
	Copper	7440-50-8	0.50 max.
	Manganese	7439-96-5	0.90 max.
	Phosphorus	8049-19-2	0.15 max.
	Silicon	7440-21-3	0.60 max.
	Sulfur	7704-34-9	0.04 max.
Tray-Metallic Coating	Aluminum	7429-90-5	0.055 max.
	Antimony	7440-36-0	0.011 max.
	Iron	7439-89-6	0.8 max.
	Lead	7439-92-1	0.004 max.
	Zinc	7440-66-6	0.15-9.1

**Notes:** Galvanized sheet surfaces may be chemically treated, with trace amounts of chromate solution (apprx. 1-2 mg/ft<sup>2</sup> per side or 0.002% of total product weight) to prevent humid storage stain, and/ or phosphate solution (<300 mg/ft<sup>2</sup> or <0.3%) to enhance paint adherence and formability. Surface may also be treated with small amounts (<0.05%) of corrosion-inhibiting oil. All commercial steel products may contain small various elements in addition to those specified. These small quantities (less than 0.1%) may exist as intentional additions, or as "trace" or "residual" elements that generally originate in the raw materials used. These elements may include: aluminum, antimony, arsenic, boron, cadmium, calcium, chromium, cobalt, columbium, copper, lead, molybdenum, nickel, silicon, tin, titanium, vanadium, and zirconium.

Product Component	Ingredient Name	CAS Number	Percentage by wt.
Adhesive Square	Limestone	1317-65-3	50-60%
	Butene, homopolymer	9003-27-4	20-30%
	Hydrous magnesium silicate	14807-96-6	10-20%
	Precipitated calcium carbonate	471-34-1	1-10%

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### Section 4 – First-Aid Measures

Inhalation	This product as sold/ shipped is not a likely form of exposure as all constituents are encapsulated. However, during further processing (cutting, grinding, burning, etc.), potential exposure may occur. If inhaled and breathing becomes difficult, remove to fresh air and keep at rest in a position comfortable for breathing. Call a physician if symptoms develop or persist.
Eye Contact	This product as sold/ shipped is not a likely form of exposure. However, during further processing (cutting, grinding, burning, etc.), potential exposure may occur. Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Seek medical attention if irritation develops and persists.
Skin Contact	If clothing sticks to the skin, do not remove. Lotion or hand cream may aid in the removal of adhesive. Wash contact areas with soap and water. If irritation or rash occurs: seek medical advice/ attention. Wash contaminated clothing before reuse.
Ingestion	Rinse mouth. <b>DO NOT</b> induce vomiting. Get medical attention immediately. If ingestion of a large amount does occur, call a poison control center immediately.
Most important symptoms/ effects, acute and delayed	This product as sold/ shipped is not a likely form of exposure as all constituents are encapsulated. However, during further processing (cutting, grinding, burning, etc.), potential exposure may occur. Breathing or swallowing dusts/ fumes may cause irritation to the nose, throat, and digestive tract. <u>Repeated exposure to dusts/ particulates could expose individuals to constituents including Lead which is known to the state of California to cause Male and Female developmental issues.</u>
Indication of immediate medical attention and special treatment needed	Treat symptomatically. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.

### Section 5 – Fire-Fighting Measures

Suitable extinguishing media	Foam. Dry Chemical Powder. Carbon Dioxide (CO <sub>2</sub> ).
Unsuitable extinguishing media	Water. Do not use jet as an extinguisher, as this will spread the fire.
Special hazards arising from the chemical	<b>Tray:</b> Metallic coating will begin to melt around 800°F (427°C) and the metal will begin to melt around 2750°F (1510°C). This product will proceed to a liquid and will form irritating and toxic gaseous metallic oxides at extremely high temperatures. <b>Adhesive Square:</b> During fire, gases hazardous to health may be formed.
Unusual fire or explosion hazards	Not applicable for solid product. <b>DO NOT</b> use water on molten metal or adhesive.
Special protective equipment and precautions for firefighters	Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and self-contained breathing apparatus (SCBA). Structural firefighter's protective clothing will only provide limited protection.
Fire-fighting equipment/ instructions	Use standard fire-fighting procedures and consider the hazards of other involved materials. <b>DO NOT</b> breathe fumes.

### Section 6 – Accidental Release Measures

Spill/ Leak Procedures	Not applicable for this product as sold/ shipped. For spills involving finely divided particles, clean-up personnel should be protected against contact with eyes and skin. If material is in a dry state, avoid inhalation of dust. Fine, dry material should be removed by vacuuming or wet sweeping methods to prevent spreading of dust. Avoid using compressed air. Do not release into sewers or waterways. Collect material in appropriate, labeled containers for recovery and/ or disposal in accordance with federal, state, and local regulations.
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<b>Regulatory Requirements</b>	Follow applicable OSHA regulations (29 CFR 1910.120 and Cal-OSHA 8CCR 5192) and all other pertinent state and federal requirements.
<b>Disposal</b>	Follow applicable federal, state, and local regulations.

### Section 7 – Handling and Storage

<b>Precautions for safe handling</b>	Trays can become very hot when sitting in the sun. Use caution when handling and always wear gloves. Avoid prolonged exposure to dusts/ fumes and control exposure as necessary. Avoid unnecessary handling of the adhesive square as frequent contact could result in accidental contamination leading to further exposure. Cut only in well ventilated areas. Good personal hygiene is necessary. Wash hands and contaminated areas with water and soap before leaving the work site. Practice good housekeeping.
<b>Conditions for safe storage</b>	Store away from acids and incompatible materials (section 10 of the SDS).

### Section 8 – Exposure Control Measures / Personal Protection

Product Component	Ingredient Name	CAS Number	Cal-OSHA PEL <sup>1</sup>	OSHA PEL <sup>1</sup>	ACGIH TLV <sup>2</sup>
Tray-Base Metal	Iron	7439-89-6	5 mg/m <sup>3</sup> -Iron Oxide fume	10 mg/m <sup>3</sup> -Iron Oxide fume	5 mg/m <sup>3</sup> -Iron Oxide dust and fume
Tray-Alloying Elements	Calcium	7440-70-2	2 mg/m <sup>3</sup> -Calcium Oxide	5 mg/m <sup>3</sup> -Calcium Oxide	2 mg/m <sup>3</sup> -Calcium Oxide
	Carbon	7440-44-0	10 mg/m <sup>3</sup> -Total dust (PNOR) <sup>3</sup> 2 mg/m <sup>3</sup> – Respirable fraction (PNOR)	15 mg/m <sup>3</sup> -Total dust (PNOR) <sup>3</sup> 5 mg/m <sup>3</sup> – Respirable fraction (PNOR)	10 mg/m <sup>3</sup> -Inhale fraction <sup>4</sup> (PNOS) <sup>5</sup> 3 mg/m <sup>3</sup> – Respirable fraction <sup>6</sup> (PNOS)
	Copper	7440-50-8	0.1 mg/m <sup>3</sup> -Fume (as Cu) 1 mg/m <sup>3</sup> – Dusts & mists (as Cu)	0.1 mg/m <sup>3</sup> -Fume (as Cu) 1 mg/m <sup>3</sup> – Dusts & mists (as Cu)	0.2 mg/m <sup>3</sup> -Fume 1 mg/m <sup>3</sup> – Dusts & mists (as Cu)
	Manganese	7439-96-5	0.2 mg/m <sup>3</sup> (C)-Fume & Mn compounds	0.5 mg/m <sup>3</sup> (C)-Fume & Mn compounds	0.2 mg/m <sup>3</sup>
	Phosphorus	8049-19-2	10 mg/m <sup>3</sup> -Total dust (PNOR) 5 mg/m <sup>3</sup> – Respirable fraction (PNOR)	15 mg/m <sup>3</sup> -Total dust (PNOR) 5 mg/m <sup>3</sup> – Respirable fraction (PNOR)	10 mg/m <sup>3</sup> -Total dust (PNOS) 3 mg/m <sup>3</sup> – Respirable fraction (PNOS)
	Silicon	7440-21-3	10 mg/m <sup>3</sup> -Total dust 5 mg/m <sup>3</sup> – Respirable fraction	10 mg/m <sup>3</sup> -Total dust 5 mg/m <sup>3</sup> – Respirable fraction	10 mg/m <sup>3</sup>
	Sulfur	7704-34-9	10 mg/m <sup>3</sup> -Total dust (PNOR) 5 mg/m <sup>3</sup> – Respirable fraction (PNOR)	15 mg/m <sup>3</sup> -Total dust (PNOR) 5 mg/m <sup>3</sup> – Respirable fraction (PNOR)	10 mg/m <sup>3</sup> -Inhalable fraction (PNOS) 3 mg/m <sup>3</sup> – Respirable fraction (PNOS)
Tray-Metallic Coating	Aluminum	7429-90-5	10 mg/m <sup>3</sup> -Aluminum metal & oxide total dust 5 mg/m <sup>3</sup> – Respirable fraction	15 mg/m <sup>3</sup> -Total dust 5 mg/m <sup>3</sup> – Respirable fraction	10 mg/m <sup>3</sup> -Metal dust 5 mg/m <sup>3</sup> – Welding fume
	Antimony	7440-36-0	0.5 mg/m <sup>3</sup>	0.5 mg/m <sup>3</sup>	0.5 mg/m <sup>3</sup>

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	Iron	7439-89-6	5 mg/m <sup>3</sup> -Iron Oxide fume	10 mg/m <sup>3</sup> -Iron Oxide fume	5 mg/m <sup>3</sup> -Iron Oxide dust and fume
	Lead	7439-92-1	0.05 mg/m <sup>3</sup> <sup>7</sup>	0.05 mg/m <sup>3</sup> <sup>7</sup>	0.05 mg/m <sup>3</sup> <sup>7</sup>
	Zinc	7440-66-6	5 mg/m <sup>3</sup> -Fume 10 mg/m <sup>3</sup> – Total Dust 5 mg/m <sup>3</sup> – Respirable fraction	5 mg/m <sup>3</sup> -Fume 15 mg/m <sup>3</sup> – Total Dust 5 mg/m <sup>3</sup> – Respirable fraction	5 mg/m <sup>3</sup> -Fume 10 mg/m <sup>3</sup> – Fume (STEL) 10 mg/m <sup>3</sup> – Dust

<sup>1</sup>OSHA Permissible Exposure Limits (PELs) are 8-hour TWA (time-weighted average) concentrations unless otherwise noted. A (“C”) designation denotes a ceiling limit, which should not be exceeded during any part of the working exposure unless otherwise noted. A Short Term Exposure Limit (STEL) is defined as a 15-minute exposure, which should not be exceeded at any time during the workday.

<sup>2</sup>Threshold Limit Values (TLV) established by the American Conference of Governmental Industrial Hygienists (ACGIH) are 8-hour TWA concentrations unless otherwise noted.

<sup>3</sup>PNOR (Particulates Not Otherwise Regulated). All inert or nuisance dusts, whether mineral, inorganic, or organic, not listed specifically by substance name are covered by the PNOR limit which is the same as the inert or nuisance dust limit of 15 mg/m<sup>3</sup> for total dust and 5 mg/m<sup>3</sup> for the respirable fraction.

<sup>4</sup>Inhalable fraction. The concentration of inhalable particulate for the application of this TLV is to be determined from the fraction passing a size-selector with the characteristics defined in ACGIH TLVs and BEIs Appendix D, paragraph C.

<sup>5</sup>PNOS (Particulates Not Otherwise Specified). Particulates identified under the PNOS heading are “nuisance dusts” containing no asbestos and <1% crystalline silica. A TWA-TLV of 10 mg/m<sup>3</sup> for inhalable particulate and 3 mg/m<sup>3</sup> for respirable particulate has been recommended.

<sup>6</sup>Respirable fraction. The concentration of respirable dust for the application of this limit is to be determined from the fraction passing a size-selector with the characteristics defined in the ACGIH TLVs and BEIs Appendix D, paragraph C.

<sup>7</sup>The 8-hour PEL is 50 µg/m<sup>3</sup>. If an employee is exposed to lead for more than 8 hours in any work day, the PEL as a TWA for that day, shall be reduced according to the following formula: Maximum permissible limit (in µg/m<sup>3</sup>) = 400 divided by hours worked in that day. The Action Level is 30 µg/m<sup>3</sup> averaged over an 8-hour period.

Product Component	Ingredient Name	CAS Number	Cal-OSHA PEL <sup>1</sup>	OSHA PEL <sup>1</sup>	ACGIH TLV <sup>2</sup>	US NIOSH
Adhesive Square	Limestone	1317-65-3	0.3 mg/m <sup>3</sup> – Total Dust 0.1 mg/m <sup>3</sup> – Respirable fraction	15 mg/m <sup>3</sup> - Total dust 5 mg/m <sup>3</sup> – Respirable fraction	10 mg/m <sup>3</sup> -Total dust 3 mg/m <sup>3</sup> – Respirable fraction	10 mg/m <sup>3</sup> -Total dust 5 mg/m <sup>3</sup> – Respirable fraction
	Butene, homopolymer	9003-27-4	No established limit	No established limit	No established limit	No established limit
	Hydrous magnesium silicate	14807-96-6	No established limit	20 mppcf	2 mg/m <sup>3</sup> – Respirable fraction	No established limit
	Precipitated calcium carbonate	471-34-1	10 mg/m <sup>3</sup> – Total Dust 5 mg/m <sup>3</sup> – Respirable fraction	15 mg/m <sup>3</sup> - Total dust 5 mg/m <sup>3</sup> – Respirable fraction	10 mg/m <sup>3</sup>	10 mg/m <sup>3</sup> -Total dust 5 mg/m <sup>3</sup> – Respirable fraction
<b>Biological Limit Values</b>		No biological exposure limits noted for the ingredient(s).				
<b>Engineering Controls</b>		Provide adequate ventilation, including appropriate local extraction, to ensure that the defined occupational exposure limit is not exceeded.				

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<b>Administrative Controls</b>	Do not use compressed air to clean-up dust or particles generated by grinding, sawing, or cutting operations.			
<b>Personal Protective Equipment</b>	<b>Eyes</b>	<b>Skin/Hand</b>	<b>Other</b>	<b>Respiratory</b>
	Use of safety glasses with side shields or goggles required for any cutting, grinding, drilling, etc. operation. A face shield may also be required depending on the circumstance.	Wear suitable gloves to prevent contact, cuts and abrasions.	Wear appropriate clothing to prevent any possibility of contact to undesired parts of the body.	Not normally required. Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fumes at levels exceeding the exposure limits. Seek professional advice prior to respirator selection and use. Follow Cal-OSHA and Federal OSHA respiratory regulations (8CCR Section 5144; 29 CFR 1910.134) and, if necessary, wear a NIOSH-Approved respirator. Select respirator based on its suitability to provide adequate worker protection for given working conditions, level of airborne contamination, and presence of sufficient oxygen.
<b>Thermal Hazards</b>	When material is heated, wear gloves to protect against thermal burns. Be aware that the adhesive will soften to a liquid form as it heats up.			
<b>General hygiene considerations</b>	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.			

### Section 9 – Physical and Chemical Properties

#### Tray:

<b>Physical State:</b> Solid	<b>Flammability Classification:</b> Non-flammable, non-combustible	<b>Surface Tension:</b> N/A
<b>Appearance and Odor:</b> Metallic Gray, Odorless	<b>LEL:</b> N/A	<b>Vapor Pressure:</b> N/A
<b>Odor Threshold:</b> N/A	<b>UEL:</b> N/A	<b>Vapor Density (Air=1):</b> N/A
<b>Formula Weight:</b> N/A	<b>Auto-Ignition Temperature:</b> N/A	<b>pH:</b> N/A
<b>Density:</b> 7.85 g/cc	<b>Water Solubility:</b> Insoluble	<b>% Volatile:</b> N/A
<b>Specific Gravity (H<sub>2</sub>O=1, at 4°C):</b> 7.85	<b>Other Solubilities:</b> N/A	<b>Evaporation Rate:</b> N/A
<b>Flash Point:</b> N/A	<b>Boiling Point:</b> N/A	<b>Freezing/ Melting Point:</b> Base Metal - 2750°F Metallic Coating – 800-900°F
<b>Flash Point Method:</b> N/A	<b>Viscosity:</b> N/A	
<b>Burning Rate:</b> N/A	<b>Refractive Index:</b> N/A	

#### Adhesive:

<b>Physical State:</b> Semi-Solid	<b>Flammability Classification:</b> Not Classified as a flammable hazard	<b>Surface Tension:</b> N/A
<b>Appearance and Odor:</b> Black, tacky solid. Faint, mild odor	<b>LEL:</b> N/A	<b>Vapor Pressure:</b> N/A

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Odor Threshold: N/A	UEL: N/A	Vapor Density (Air=1): N/A
Formula Weight: N/A	Auto-Ignition Temperature: N/A	pH: N/A
Density: N/A	Water Solubility: N/A	% Volatile: N/A
Specific Gravity (H <sub>2</sub> O=1, at 4°C): 1.61 g/cm <sup>3</sup>	Other Solubilities: N/A	Evaporation Rate: N/A
Flash Point: N/A	Boiling Point: N/A	Freezing/ Melting Point: N/A
Flash Point Method: N/A	Viscosity: N/A	Decomposition Temperature: >200°C (392°F)
Burning Rate: N/A	Refractive Index: N/A	

### Section 10 – Stability and Reactivity

Stability	The product is stable and non-reactive under normal conditions of use, storage and transport.
Polymerization	Hazardous reactions or polymerization will not occur.
Chemical Incompatibilities	<b>Tray:</b> Will react with strong acids to form hydrogen. Iron oxide dusts in contact with calcium hypochlorite evolve oxygen and may cause an explosion. <b>Adhesive:</b> Strong oxidizing agents.
Conditions to Avoid	<b>Tray:</b> Storage with strong acids or calcium hypochlorite. <b>Adhesive:</b> None.
Hazardous Decomposition Products	<b>Tray:</b> Thermal oxidative decomposition of galvanized steel products can produce fumes containing oxides of zinc, iron, and manganese as well as other elements. <b>Adhesive:</b> Upon decomposition, this product may yield carbon monoxide, carbon dioxide, isobutane and other combustion products are possible.

### Section 11 – Toxicological Information – Information on likely exposure routes

Ingestion	As sold and under normal use this product does not present an ingestion, inhalation, skin, or eye hazard. However, during further processing (cutting, grinding, burning, etc.), potential exposure may occur from dust or fumes. <b>Ingestion</b> of dust generated may cause nausea or vomiting. <b>Inhalation</b> of dusts, fumes, or metal oxides generated during processing especially in high concentrations can produce symptoms of metal fever. Typical symptoms last 12-48 hours and are characterized by metallic taste in the mouth, dryness, and irritation of the throat, followed by weakness, muscle pain, fever, and chills. Dust may <b>irritate the skin</b> , and contact with hot material can cause thermal burns which may result in permanent damage. Repeated or prolonged contact with chemical surface treatments or oil residue may cause skin irritation, dermatitis, ulceration, or allergic reactions in sensitized individuals. Dust or fumes produced during further processing may <b>irritate the eyes</b> , as can direct contact to the eye from a piece of heated metal or the adhesive. Heating steel products with surface treatments, oil coatings, or acrylic films may produce emissions which may irritate the eyes.
Inhalation	
Skin Contact	
Eye Contact	
Symptoms related to the physical, chemical, and toxicological characteristics	Symptoms may include itching, burning, redness, and tearing of the eyes. Mechanical irritation of the skin. Heating above the melting point releases metallic oxides which may cause metal fume fever by inhalation. The symptoms are shivering, fever, malaise and muscular pain. Directly contacting the adhesive to one's eyes may cause temporary irritation.
Acute Toxicology	Cutting the trays can potentially generate ozone. Ozone can cause irritation of eyes, nose, and respiratory tract.

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Tray	<b>Iron (CAS 7439-89-6)</b> Acute Oral LD50	Rat	30 g/kg
	<b>Manganese (CAS 7439-96-5)</b> Acute Oral LD50	Rat	9 g/kg
Adhesive	<b>Product (mixture calculation method)</b> Oral: LD <sub>50</sub> >5000 mg/kg Dermal: LD <sub>50</sub> >2600 mg/kg Inhalation: LD <sub>50</sub> >8 mg/kg		
	<b>Limestone (CAS 1317-65-3)</b> Oral: LD <sub>50</sub> >6450 mg/kg Dermal: LD <sub>50</sub> : No Data Inhalation: LD <sub>50</sub> : No Data		
	<b>Butene, homopolymer (CAS 9003-27-4)</b> Oral: LD <sub>50</sub> >5000 mg/kg Dermal: LD <sub>50</sub> >3000 mg/kg Inhalation: LD <sub>50</sub> >17.3 mg/L	Dermal (rabbit) Inhalation (mist)	
	<b>Hydrous magnesium silicate (CAS 14807-96-6)</b> Oral: LD <sub>50</sub> : No Data Dermal: LD <sub>50</sub> : No Data Inhalation: LD <sub>50</sub> : No Data		
	<b>Precipitated calcium carbonate (CAS 471-34-1)</b> Oral: LD <sub>50</sub> >2000 mg/kg Dermal: LD <sub>50</sub> >2000 mg/kg Inhalation: LD <sub>50</sub> >3 mg/L		
Skin corrosion/ irritation	Contact with dusts or particulates produced by cutting, grinding, drilling may be abrasive and mildly irritate the skin. Particulates may cause a red-brown pigmentation of the skin following repeated or prolonged exposure.		
Serious eye damage/ eye irritation	Contact with dusts or particulates produced by cutting, grinding, drilling may be abrasive and irritate the eyes causing stinging, redness, and watering. Direct contact of the adhesive is harmful to the eyes.		
Respiratory Sensitization	Not expected to be a respiratory sensitizer.		
Skin Sensitization	Repeated or prolonged exposure to the adhesive may cause skin disorders.		
Carcinogenicity	<b>Tray:</b> The International Agency for Research on Cancer (IARC), the National Laboratory Toxicology Program (NTP), and OSHA do not list steel products as carcinogens. IARC identifies lead and welding fumes as group 2B carcinogen (possibly carcinogenic to humans). EPA lists lead as Group B2 (probable human carcinogen) based on a combination of sufficient evidence in animals and inadequate evidence in humans. When specified, a hexavalent chromium passivation treatment is applied to the product surface. IARC lists hexavalent chromium compounds as Group 1 (sufficient evidence for carcinogenicity in humans). NTP lists certain hexavalent chromium compounds as Group 1 (known to be carcinogenic). The American Conference of Governmental Industrial Hygienists (ACGIH) lists hexavalent chromium compounds as A1 (confirmed human carcinogen).		



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<b>Reproductive Toxicity</b>	No information available on the reproductive hazard of this material. However, manganese and lead, are constituents, and have demonstrated some effects on the male and female reproductive system. The expected exposure is not sufficient enough to classify the material as a reproductive hazard.
<b>Specific Target Organ Toxicity-Single Exposure</b>	Not expected to cause organ effects from a single exposure.
<b>Specific Target Organ Toxicity-Repeated Exposure</b>	Limestone (CAS 1317-65-3) may cause damage to organs (lungs) through prolonged or repeated exposure. Repeated exposure to dust/ particulates from cutting and/or grinding the tray may cause damage to male and female reproductive organs.
<b>Aspiration Hazard</b>	Not applicable.
<b>Chronic effects</b>	<b>Tray:</b> Frequent inhalation of dust over a long period of time increases the risk of developing lung diseases. Exposure to manganese fume/ dust can affect the central nervous system (apathy, drowsiness, weakness, and other chronic symptoms such as postural tremors). <b>Adhesive:</b> Prolonged or repeated contact with skin may cause redness, itching, irritation, eczema/ chapping and oil acne.
<b>Further Information</b>	<u>In its manufactured and shipped state, this product is considered non-hazardous.</u> Processing may generate hazardous fumes and dusts. <b>Manganese CAS# 7439-96-5</b> Repeated administration of manganese resulted in limited evidence of male reproductive effects in laboratory animals. The adverse effects included decreased spermatids, spermatocytes and degeneration of seminiferous tubules. Chronic administration of certain inorganic manganese salts has resulted in limited evidence of central nervous system effects in laboratory animals. The effects included degenerative changes in basal ganglionic cells. These effects do not meet the criteria for classifying it as a reproductive toxicant.

### Section 12 – Ecological Information

<b>Ecotoxicity (aquatic &amp; terrestrial)</b>	Individual components of the product when tested have been found to be toxic to the environment. Metal dusts may migrate into the soil and groundwater and be ingested by wildlife as follows.		
	<b>Iron (CAS 7439-89-6)</b> Aquatic <i>Fish</i> LC50	Channel catfish ( <i>Ictalurus punctatus</i> )	>500mg/l, 96 hours
	<b>Zinc (CAS 7440-66-6)</b> Aquatic <i>Fish</i> LC50	Rainbow trout, Donaldson Trout ( <i>Oncorhynchus mykiss</i> )	0.24 mg/l, 96 hours
<b>Environmental Fate</b>	No data available.		
<b>Environmental Degradation</b>	No data available.		
<b>Bioaccumulative potential</b>	No data available.		
<b>Soil Absorption/ Mobility</b>	No data available for the product. However, individual components of the product have been found to be absorbed by plants from soil.		

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<b>Mobility in general</b>	Not relevant due to the form of the product. No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this product. This product does not contain any of the controlled substances listed in the Annexes to the Montreal Protocol at concentrations of $\geq$ 0.1%.
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### Section 13 – Disposal Considerations

<b>Disposal</b>	Collect and dispose at licensed waste disposal site. Dispose in accordance with all applicable regulations. No components are identified as hazardous wastes. Disposal recommendations are based on uncontaminated materials. Do not dispose material into any storm water or sewage system.
<b>Container cleaning and disposal</b>	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may contain residual products, follow label warnings even after the container is emptied. Dispose of in accordance with applicable federal, state, and local regulations.

### Section 14 – Transport Information

The DOT, IATA, and IMDG do NOT regulate this product as a dangerous good.

### Section 15 – Regulatory Information

<b>OSHA Regulations</b>	<b>Tray:</b> Under some use conditions, this material may be considered hazardous in accordance with OSHA 29 CFR 1910.1200. Air contaminant (29 CFR 1910.1000, Table Z-1, Z-1-A): The product as a whole is not listed. However individual components of the product are listed. OSHA Specifically Regulated Substance: Lead (29 CFR 1910.1025). This material has not been identified as a carcinogen by NTP, IARC, or OSHA. <b>Adhesive:</b> Contents of this MSDS comply with OSHA Hazard Communication Standard 29 CFR 1910.1200.
<b>TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)</b>	<b>Tray:</b> Not regulated. <b>Adhesive:</b> Not listed or exempt from listing on the TSCA Inventory.
<b>CERCLA Hazardous Substance List (40 CFR 302.4)</b>	<b>Tray:</b> The product as a whole is not listed. However, individual components of the product are listed: Antimony (CAS 7440-36-0) LISTED Copper (CAS 7440-50-8) LISTED Lead (CAS 7439-92-1) LISTED Manganese (CAS 7439-96-5) LISTED Zinc (CAS 7440-66-6) LISTED <b>Adhesive:</b> Not listed.
<b>Superfund Amendments and Reauthorization Act of 1986 (SARA)</b>	<b>Tray/ Adhesive:</b> Immediate Hazard-No Delayed Hazard-No Fire Hazard-No Pressure Hazard-No Reactivity Hazard-No
<b>SARA 302 Extremely hazardous substance</b>	<b>Tray:</b> Not listed. <b>Adhesive:</b> Not listed.
<b>SARA 311/312 Hazardous chemical</b>	<b>Tray:</b> No. <b>Adhesive:</b> Chronic health hazard.

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<p><b>SARA 313</b> (TRI reporting)</p>	<p><b>Tray:</b>  <i>Chemical Name:</i>    <i>CAS Number:</i>    <i>% by wt.:</i>  Antimony            7440-36-0            0.011 max.  Copper                7440-50-8            0.50 max.  Lead                    7439-92-1            0.004 max.  Zinc                    7440-66-6            0.5-19.0  Manganese          7439-96-5            0.0-1.35  <b>Adhesive:</b> Not regulated.</p>
<p><b>Clean Air Act (CAA)</b> <b>Section 112</b> <b>Hazardous Air</b> <b>Pollutants (HAPs) List</b></p>	<p><b>Tray:</b> Manganese (CAS 7439-96-5)  <b>Adhesive:</b> Not regulated.</p>
<p><b>Clean Air Act (CAA)</b> <b>Section 112(r)</b> <b>Accidental Release</b> <b>Prevention</b> (40 CFR 68.130)</p>	<p><b>Tray:</b> Not regulated.  <b>Adhesive:</b> Not regulated.</p>
<p><b>Safe Drinking Water</b> <b>Act (SDWA)</b></p>	<p><b>Tray:</b> Not regulated.  <b>Adhesive:</b> Not regulated.</p>
<p><b>RCRA (40CFR261)</b></p>	<p><b>Tray:</b> Steel scrap is not regulated as a solid waste or a hazardous waste under this act. If product dusts and/ or fumes from processing operations are not recycled, they are considered to be a solid waste and may be classified as a hazardous waste depending on the toxicity characteristics of the dust as defined within 40CFR261.24.</p>
<p><b>State Regulations</b></p>	<p><b>Tray:</b> This product as a whole is not listed in any state regulations. However, individual components of the product are listed in various state regulations.</p> <ul style="list-style-type: none"> <li>• <b>Massachusetts Right-to-Know – Substance List</b> <ul style="list-style-type: none"> <li>○ Aluminum (CAS 7429-90-5)</li> <li>○ Antimony (CAS 7440-36-0)</li> <li>○ Copper (CAS 7440-50-8)</li> <li>○ Lead (CAS 7439-92-1)</li> <li>○ Manganese (CAS 7439-96-5)</li> <li>○ Zinc (CAS 7440-66-6)</li> </ul> </li> <li>• <b>New Jersey Worker and Community Right-to-Know Act</b> <ul style="list-style-type: none"> <li>○ Aluminum (CAS 7429-90-5)</li> <li>○ Antimony (CAS 7440-36-0)</li> <li>○ Copper (CAS 7440-50-8)</li> <li>○ Lead (CAS 7439-92-1)</li> <li>○ Manganese (CAS 7439-96-5)</li> <li>○ Sulfur (CAS 7704-34-9)</li> <li>○ Zinc (CAS 7440-66-6)</li> </ul> </li> <li>• <b>Pennsylvania Worker and Community Right-to-Know Law</b> <ul style="list-style-type: none"> <li>○ Aluminum (CAS 7429-90-5)</li> <li>○ Antimony (CAS 7440-36-0)</li> <li>○ Copper (CAS 7440-50-8)</li> <li>○ Lead (CAS 7439-92-1)</li> <li>○ Manganese (CAS 7439-96-5)</li> <li>○ Zinc (CAS 7440-66-6)</li> <li>○ Calcium (CAS 7440-70-2)</li> <li>○ Silicon (CAS 7440-21-3)</li> <li>○ Sulfur (CAS 7704-34-9)</li> </ul> </li> <li>• <b>Rhode Island Right-to-Know</b> <ul style="list-style-type: none"> <li>○ Aluminum (CAS 7429-90-5)</li> <li>○ Antimony (CAS 7440-36-0)</li> <li>○ Copper (CAS 7440-50-8)</li> </ul> </li> </ul>

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- Lead (CAS 7439-92-1)
- Manganese (CAS 7439-96-5)
- Zinc (CAS 7440-66-6)
- **California Proposition 65 Carcinogens & Reproductive Toxicity (CRT):**  
**⚠WARNING:** This product can expose you to chemicals including nickel (metallic), which are known to the State of California to cause cancer, and lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to – [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).  
 Though the product is NOT hazardous in its as shipped condition and only becomes hazardous when exposed to post-processing dusts/particulates from cutting, grinding, etc.
- **Listed Substance**
  - This product may contain an extremely small amount of lead in the metallic coating. An extremely small amount of hexavalent chromium passivation treatment may be applied to the surface of the galvanized steel product. Lead and hexavalent chromium are materials known to the State of California to cause cancer or reproductive toxicity. In addition, the product may also possibly contain trace quantities (generally much less than 0.1%) of other metallic elements known to the State of California to cause cancer or reproductive toxicity. These include arsenic (inorganic), cadmium and nickel.

**Adhesive:**

- **Massachusetts Right-to-Know – Substance List**
  - Amorphous Silica (Respirable Dust) (CAS 112926-00-8).
- **New Jersey Worker and Community Right-to-Know Act**
  - Not regulated.
- **Pennsylvania Worker and Community Right-to-Know Law**
  - Not regulated.
- **Rhode Island Right-to-Know**
  - Not regulated.
- **California Proposition 65 Carcinogens & Reproductive Toxicity (CRT):**  
**⚠WARNING:** This product can expose you to chemicals including crystalline silica, which is known to the State of California to cause cancer. For more information go to – [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).
- **California Proposition 65 – CRT: Listed date/ Carcinogenic substance**
  - Lead (CAS 7439-92-1) from cutting/ grinding post-processing—Male and Female Reproductive Toxicity [February 27, 1987].
  - Silica, crystalline (CAS N/A) encapsulated in the adhesive and not expected to become airborne under normal use conditions-- Cancer [October 1, 1988].

**International Inventories**

Tray:		
Country(s) or region:	Inventory name:	On Inventory (yes/ no)*:
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes
Adhesive:		
Country(s) or region:	Inventory name:	On Inventory (yes/ no)*:
Australia	Australian Inventory of Chemical Substances (AICS)	No
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	No

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Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	No
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	No
<p>*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s). A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).</p>		
<b>Other Regulations:</b>	<p><b>Tray: WHMIS Classification (Canadian):</b> This product, <b>Galvanized (Hot Dipped) Sheet-Carbon Steel</b> is not listed as a whole. However, individual components are listed: Manganese—Classified B4, D2A. This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations.</p>	

### Section 16 – Other Information

<b>Original Issue Date</b>	06/15/2016
<b>Version Number (Revised)</b>	2.0 (09/25/2018) – Switched butyl adhesive formulation. 3.0 (04/04/2019) – Updated California Proposition 65 Warning.
<b>References</b>	<p>ACGIH  EPA: AQUIRE database  NLM: Hazardous Substances Data Base  US. IARC Monographs on Occupational Exposures to Chemical Agents  IARC Monographs. Overall Evaluation of Carcinogenicity  National Toxicology Program (NTP) Report on Carcinogens  ACGIH Documentation of the Threshold Limit Values and Biological Exposure Indices  USS-POSCO Galvanized (Hot Dipped) Sheet—Carbon Steel MSDS Version 4/14/2015  DeVan 825.11-SDS, 2018-06-14—DeVan Butyl</p>

**Disclaimer:** The data in this Material Safety Data Sheet applies only to the specific product designated herein and does not relate to use in combination with any other material or process. The data given here is based on current knowledge and experience. The purpose of this MSDS is to describe the products in terms of their safety requirements. The data does not signify any warranty with regard to the products' properties. 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 customer and the protection of the environment. The information and data herein are believed to be accurate and have been compiled from sources believed to be reliable. It is offered for your consideration, investigation and verification. Buyer assumes all risk of use, storage and handling of the product in compliance with applicable federal, state and local laws and regulations. United Construction Products, dba Bison Innovative Products and its subsidiaries make no warranty of any kind, expressed or implied, concerning the accuracy or completeness of the information and data herein. The implied warranties of merchantability and fitness for a particular purpose are specifically excluded. United Construction Products, dba Bison Innovative Products and its subsidiaries will not be liable for claims relating to any party's use of or reliance on information and data contained herein regardless of whether it is claimed that the information and data are inaccurate, incomplete or otherwise misleading.