SINGLE-BILL SERVICE OFFER MANUAL

steelscape®

This issue supersedes all previous issues

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INTRODUCTION TO STEELSCAPE

Welcome to Steelscape. To make doing business with us easy and hassle-free, we developed this manual as a resource. It will explain our product and service offers, highlighting all available options. You can reference how to most effectively place an order with Steelscape, selecting the appropriate packaging, shipping and storage options. You can also reference our billing and claims policies, as necessary. We have documented product capabilities and ASTM specifications.

This manual is not all-encompassing and is subject to amendment. However, your basic questions should be answered fully and accurately. Any information not addressed can be quickly answered by contacting the appropriate Steelscape Customer Service Representative by calling 1-888-285-7717.

Please distribute the information presented within this manual to appropriate departments and people within your company. For example, section 7 should be forwarded to your accounting or payables area and so on.

Steelscape's Single-Bill Service Offer Manual will be updated as the information found within is refined and developed. The updated manual will be released once per year - during the 2nd Quarter. To ensure your version of this manual is as current as possible please reference the footer information at the bottom of the page. The footer will display the version number and release date of the Service Offer Manual in your possession. Should your version be outdated, please contact your Steelscape Sales Representative or our Marketing Department for the most up-to-date version.

We hope this information proves useful in answering your questions. We welcome any feedback you may have on the layout or content.

We know you have many options when selecting your suppliers and we appreciate your business. All of us at Steelscape look forward to working with you to fulfill your coated steel needs.

CLICK HERE FOR THE STEELSCAPE TERMS & CONDITIONS

STEELSCAPE'S VISION, MISSION & VALUES

Our Shared Vision...

Inspire, strengthen and beautify our communities through color and imagery on metal.

Our Shared Mission...

Deliver unique value via innovative and robust product solutions, superior customer experience, and the best team in the industry.

Our Shared Values...

Integrity: Doing what we say we'll do.

High Performance: Achieving superior results and stretching our capabilities.

Courage to Lead Change: Inspiring and delivering change even in the face of adversity.

Respect for Each Other: Valuing diversity and recognizing our interdependencies.

Safety and the Environment: Commitment to safety, health & environmental responsibilities.

OUR BOND

We and our customers proudly bring inspiration, strength and color to communities with Steelscape steel.

Our customers are our partners.
Our success depends on our customers and suppliers choosing us. Our strength lies in working closely with them to create value and trust, together with superior products, service and ideas.

Our people are our strength.
Our success comes from our people. We work in a safe and satisfying environment. We choose to treat each other with trust and respect and maintain a healthy balance between work and family life. Our experience, teamwork and ability to deliver steel inspired solutions are our most valued and rewarded strengths.

Our shareholders are our foundations.
Our success is made possible by the shareholders and lenders who choose to invest in us. In return, we commit to continuing profitability and growth in value, which together, make us all stronger.

Our communities are our homes.
Our success relies on communities supporting our business and products. In turn, we care for the environment, create wealth, respect local values and encourage involvement. Our strength is in choosing to do what is right.

STEELSCAPE CONTACT LIST

To ensure you have the best possible access to our staff, we ask that you to reference our website at www.steelscape.com. Most departments and contacts associated with your account will be listed under the Contacts page of our website.

Name	Title	Telephone	Cellular	Email
SALES ADMINISTRATION				
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ACCOUNT MANAGERS				
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Brian Mesneak	Account Manager		(360) 270-7575	brian.mesneak@steelscape.com
Brian Eyer	Account Manager		(360) 431-6871	brian.eyer@steelscape.com
Chris Barnes	Account Representative		(360) 335-4804	christopher.barnes@steelscape.com
CUSTOMER SERVICE				
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QUALITY SYSTEMS & TECHNICAL SERVICE				
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SHIPPING & DISPATCH				
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Ken Taylor	Transportation Coordinator	(360) 673-8217		kenneth.taylor@bluescope.us
Kasy Starkel	Dispatcher			kasy.starkel@steelscape.com
Terra Luff	Dispatcher	(360) 673-8281		terra.luff@bluescope.us
ACCOUNTS RECEIVABLE				
Lisa Stein	Credit Manager	(360) 673-8234		lisa.stein@steelscape.com
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KALAMA, WASHINGTON FACILITY				
Reception		(360) 673-8200		
Mick Rompa	Plant Manager	(360) 673-8247		mick.rompa@steelscape.com
RANCHO CUCAMONGA, CALIFORNIA FACILITY				
Reception		(909) 987-4711		
Alonza Lewis	Plant Manager	(909) 484-4684	(559) 920-6867	alonza.lewis@steelscape.com

ORDER PROCESSING

Purchase Order Requirements*

To process your order more efficiently, we require the following information when receiving your order:

Criteria	Options (If Applicable)
Ship-to Address	NA if customer will call
Mode of Transportation	(Truck or Rail)
Customer Purchase Order No.	
Total Quantity Ordered	(Pounds and/or Lineal Feet)
Metallic-Coating Type	(ZINCALUME® or TruZinc® Steel)**
Resin Coating	(Yes/No)
Metal Grade	(33, 37, 40, 50CL1, 50CL2, 50CL4, 57, 80CL1, CSA, CSB)
Coating Weight	(G30, G40, G60, G90, G100, AZ35, AZ50, AZ55)
Thickness	(Base Metal Thickness or Total Coated Thickness)
Thickness Tolerance	(Full Thickness Tolerance - See Section 4.5)
Width Tolerance	(Standard or Slit Tolerance)
Output Width	(Min)
Skin Passed	(Yes/No)
End Use	
Chem. Treat	(Yes/No)
RoHS Compliant	(Yes/No)
Oil	(None/Light/Medium) (Heavy upon request & approval)
Branding	(Yes/No and Type)
Coil Inside Diameter (ID)	(20")
Coil Weight Minimum	
Coil Weight Maximum	
Skid Weight Maximum	
Packaging Preference	
Steelscape to Paint	(Yes/No)
Steelscape to Slit	(Yes/No)
Steelscape to Emboss	(Yes/No)
Emboss Type & Depth	(Non-directional Stucco 0.007” to 0.010”)
Steelscape to CTL	(Yes/No)
Flat Sheet Length	
Flat Sheet Plastic Film Required	(Yes/No)
Customer to Paint	(Yes/No)
Requested Ship Date	
Paint Details-Top & Bottom Primer/Backer	(Mils Primer/Mils Backer)
Paint Details-Top & Bottom Paint Color	(Paint Code with Color Description and Paint System)
Unit Pricing	(Per CWT or Pounds and TWM or Actual) (Note: Freight always calculated on actual weight)
Quote Number Used for Pricing	

* If your order needs to comply with any special building requirements, you will need to include that information on your purchase order provided to Steelscape. This includes requirements to meet the Buy American Act (BAA), Surface Transportation Assistance Act (STAA), American Recovery and Reinvestment Act (ARRA), various Buy America requirements, domestic and/or melted and poured requirements, or recycled-content requirements.

** If you are ordering any of Steelscape’s custom, branded products, you will need to include that information on your purchase order as well. This includes Vintage®,, ReziBond®, TruzGuard®, Spectrascape® and Steelscape Prints®.

Lead Times & Releases

Steelscape will make every attempt to satisfy the customer order request date. Availability of materials - substrate and paint - in addition to line time availability will determine Steelscape's ability to meet the request date. Every order will reflect the customer order requested ship date as well as the Steelscape Acknowledged Date.

To help our customers better understand Steelscape's order entry process as it relates to lead times we offer the following order practices:

1. Steelscape commits to shipping orders within the agreed lead times.

2. Steelscape does require orders be processed with a release date already provided or the orders to be released at least one week prior to the Acknowledged Date. This will enable us to rapidly package the orders, schedule appropriate transportation and have them shipped on or before the date we have indicated.

3. Steelscape requires 48 hours to arrange trucking. Orders requiring shipment should be released a minimum of 48 hours prior to the required shipping date.

4. In the absence of a customer order release received at least one week before the Acknowledged Date, Steelscape will produce and package for shipment all orders by the agreed date.

NOTE: Our delivery time is measured by the Acknowledged Production Date of the order and does not include the transportation time or mode used to deliver the product from our facility to the customer's final destination. Providing a release date when placing an order will help ensure the added time for transportation is minimal.

Order Acknowledgments

Upon receipt and entry of an order into the Steelscape production system, the customer will be provided an Order Acknowledgement. The acknowledgement will contain all specifications related to the order and should be reviewed to ensure accuracy. Any discrepancies must be brought to your Customer Service Representative's attention immediately. Order Acknowledgements will be sent for all orders unless requested otherwise in writing from the customer to the appropriate Steelscape Customer Service Representative.

Change Requests

We realize sometimes an initial order will need to be altered. Recognizing that potential need, we have established the following guidelines to help customers understand our change policy for existing orders.

1. Any changes to an existing order must be submitted in writing to the Customer Service Representative (CSR).

2. The CSR will initiate the change in Steelscape's system by obtaining approval from all appropriate departments, as determined by the type of change requested. Each request will be reviewed within twenty-four (24) hours. However, it may take up to one (1) business day to determine acceptance or refusal of the requested change.

3. Approval of changes will depend on the type of change requested and the status of order (i.e. where the order is in-process, lead time guarantee, etc.)

4. Orders approved for change will be revised per the customer request.

4. Customers will be notified of the outcomes for all changes requested.

Allowable changes include:

- Substrate
- Coating Weight
- Width
- Quantity*
- Lead Time
- Price
- Cut To Length (CTL)
- Purchase Order No.
- Customer Part No.(s)
- Min/Max Coil Weights
- Packaging Instructions
- Paint Color*
- Paint Thickness*
- Grade*
- Decimal Thickness*
- End-Use
- Ship-To
- Ship Mode
- Slitting/Embossing Instructions

* Some restrictions apply to amending these items. Consult Steelscape Customer Service with any questions or concerns.

Amending an order may result in resetting of the Acknowledged Date. Upon amendment approval, a revised order acknowledgement will be reprinted and be sent to the customer.

Any further questions regarding Steelscape's order change policy can be directed to the Customer Service Department.

Thickness Tolerances

Full Restricted Tolerances - 1" Minimum Edge Distance

	Thickness (Inches)	
Width (Inches)	.010 - .023	>.023 - .045
MINIMUM	**Minimum Tolerances - All Plus**	
> 0 - 32	0.003	0.004
> 32 - 40	0.003	0.004
> 40 - 54	0.003	0.004
NOMINAL	**Nominal Tolerances - Plus and Minus**	
> 0 - 32	0.002	0.002
> 32 - 40	0.002	0.002
> 40 - 54	0.002	0.002

Thickness is measured on the coated sheet and includes the metallic-coating thickness. Thickness is measured at any point on the sheet not less than 1 inch from a side edge, per ASTM 924-16a, Table 2.

Customers should inquire about any application requiring improved (tighter) tolerances for performance reasons.

PRICING

All pricing is per current (most recent) quote and is price in effect at the time of acknowledgement*, including all add-ons and deductions. All applicable price changes will be communicated to the customer by the Account Manager and/or Customer Service Representative.

Any pricing disputes or discrepancies should be reported to the Steelscape Account Manager or Customer Service Representative for resolution upon receipt of Order Acknowledgement. Shipments are F.O.B. the Steelscape facility. Steelscape is not liable for any transportation costs unless mutually agreed to in writing prior to the material shipment.

Actual weight pricing will be applied on the finished material weight and will include applied coating weight. TMW pricing is available upon approval.

Price quotations are subject to change and will be communicated to the customer by their Steelscape Account Manager.

* Pricing may be based on shipment date if agreed upon and noted on final quote for the order.

CREDIT & PAYMENT TERMS

Steelscape is happy to accept payments on a net 30 day basis. However, Steelscape also offers a 0.5% discount for prompt payment of invoices. The discount is applicable to materials value only and does not include freight. Your invoice will clearly indicate the correct amount to discount on each page and as a total for the entire invoice. This offer is consistent with industry payment terms.

Customer invoices may be discounted 0.5% if paid within 10 days of the invoice date. Steelscape will permit discount if payment is postmarked on or before the 10th day, as appropriate. In the event that the discount dates fall on a weekend or national holiday the next working day will be allowed. Full payment of invoices is expected within 30 days of the invoice date.

Steelscape is prepared to receive payments by ACH or wire transfer. The Steelscape Credit/AR Department can provide details and bank routing information.

Steelscape charges for late payments on invoices not paid within terms. The late payment charge is described on the credit application and on the Steelscape Terms and Conditions of Sale. Allowing a grace period of 30 days, Steelscape will assess a 1.5% charge each month to all unpaid invoices 60 days from invoice date and beyond.

The customer will not delay payment or withhold (short-pay) for claims or related problems until the issue is resolved to the satisfaction of both parties.

All shipments are subject to prior approval by the Steelscape Credit Department.

ZINCALUME® STEEL

The following pages describe Steelscape's ZINCALUME® Steel product, including ZINCALUME production capabilities, Grade Data Sheets, Safety Data Sheets (SDS), Technical Bulletins and sample ZINCALUME warranties. These documents will serve as references when deciding fit-for-purpose applications using our products.

The Grade Data Sheets describe in detail each of our products' performance and composition characteristics. Typical dimensions, mechanical properties and supply conditions are described for each product by steel grade and metal type.

There is an SDS for both the bare and resin-coated versions of our ZINCALUME Steel product. Each SDS addresses potential health concerns and effects of prolonged exposure to our products. Ingredients, physical and chemical characteristics, potential physical hazards and special protection information is provided. Spill, leak, fire-fighting and emergency contact information is disclosed.

The Technical Bulletins provide helpful information regarding efficient and safe practice for application of ZINCALUME Steel products. There are currently thirteen bulletins detailing important installation, application, and maintenance guidelines and recommendations. The fit-for-purpose tips are also an excellent technical reference. These bulletins serve as an invaluable tool to both the veteran user and/or first time buyer of ZINCALUME.

ZINCALUME® Steel Processing Capabilities

The matrix below was designed to help you determine the ZINCALUME® Steel products Steelscape is capable of producing on a consistent basis. These capabilities grow and change with each new successful trial order we process to completion. As we become more proficient in producing product outside the stated capacity limits we will expand this matrix accordingly.

	Rancho
Max Input Coil Wt	55,000 #
Max Output Coil Wt	44,000 #*
Thickness	0.012" - 0.0356"^
Width	26" - 50"
Coatings	ZINCALUME®/Resin/Oil/ Passivant (Standard or RoHS Compliant)
Entry OD/ID	79" max/20" +/- 0.25"
Delivery OD/ID	76" max/20" +/- 0.25"
Cores	Not Available
Coatings	AZ35, AZ50, AZ55, AZ60**

^ 0.300" thickness and greater is considered non-surface critical for some product grades and end-uses, both bare and painted. Inquire with a Steelscape Sales Representative for additional information.

* Current crane capacity is limited it 39,000lbs

** For heavier coating weights inquire with a Steelscape Sales Representative.

Steelscape is happy to evaluate requests for ZINCALUME® Steel products not shown on the capability matrix above. Equipment capabilities and hot band supply may impact our production capabilities. Questions regarding ZINCALUME Steel processing capabilities should be directed to a Steelscape Sales Representative.

ZINCALUME® Steel Grade CS (Type A)
Grade Data Sheet

General Description
ZINCALUME® Steel Grade CS (Type A) - hot-dip zinc/aluminum alloy-coated profiling steel with a spangled surface and with good ductility. Suitable for bending and moderate forming.

Typical Uses
Roll-formed roofing, rainwater goods and general manufacturing.

Dimensions			
Typical Thickness (Inches)	Maximum .0356"	Typical Width	Maximum 48.5"
	Minimum .013"		Minimum 28"

Maximum and minimum thicknesses outside the typical range stated above may be supplied on an inquiry basis only.

Mechanical Properties			Chemical Composition	
Steel Base	**Guaranteed Minimum**	**Typical**	**Maximum Percent by Weight**	
Longitudinal tensile				
Yield strength, ksi	-	40-60	Carbon (C)	0.10
Tensile strength, ksi	-	50-70	Phosphorus (P)	0.03
Elongation in 2 inch, minimum %	-	20-45	Manganese (Mn)	0.60
Hardness, HRB	-	50-70	Sulfur (S)	0.035
Supply Condition	**Standard**	**Optional**	**Fabricating Performance (1-Limited to 5-Excellent, NR-Not Recommended)**	
Coating class	AZ50	AZ55	Bending	2
Tension leveling	Leveled		Drawing	NR
Surface conditioning	Not Skin-passed	Skin passed,	Pressing	NR
		(paint line feed)	Pittsburgh Lock Seam	NR
			Roll-forming	4
Chemical treatment	Passivated		Welding *	5
			Painting **	5
ZINCALUME® Plus	Resin Coated			
Oiling	Not Oiled	Oiled		
Branding	Not Branded			

Optional supply conditions and coating classes may be subject to dimensional restriction.

* Design must allow for some strength reduction near welds.
** Maximum thickness suitable for organic coil coating is 0.0296". Above .0296 to .0356 considered for non-surface critical finish.

ZINCALUME® Steel Grade CS (Type B)
Grade Data Sheet

General Description
ZINCALUME® Steel Grade CS (Type B) - hot-dip zinc/aluminum alloy-coated profiling steel with a spangled surface and with good ductility. Suitable for bending and moderate forming.

Typical Uses
Roll-formed roofing, rainwater goods and general manufacturing.

Dimensions			
Typical Thickness (Inches)	Maximum .0356"	Typical Width	Maximum 48.5"
	Minimum .013"		Minimum 28"

Maximum and minimum thicknesses outside the typical range stated above may be supplied on an inquiry basis only.

Mechanical Properties			Chemical Composition	
Steel Base	**Guaranteed Minimum**	**Typical**	**Maximum Percent by Weight**	
Longitudinal tensile				
Yield strength, ksi	-	40-60	Carbon (C)	0.02-0.15
Tensile strength, ksi	-	50-70	Phosphorus (P)	0.03
Elongation in 2 inch, minimum %	-	20-45	Manganese (Mn)	0.60
Hardness, HRB	-	50-70	Sulfur (S)	0.035
Supply Condition	**Standard**	**Optional**	**Fabricating Performance (1-Limited to 5-Excellent, NR-Not Recommended)**	
Coating class	AZ50	AZ55	Bending	5
Tension leveling	Leveled		Drawing	2
Surface conditioning	Not Skin-passed	Skin passed,	Pressing	2
		(paint line feed)	Pittsburgh Lock Seam	5
			Roll-forming	5
Chemical treatment	Passivated		Welding *	5
			Painting **	5
ZINCALUME® Plus	Resin Coated			
Oiling	Not Oiled	Oiled		
Branding	Not Branded			

Optional supply conditions and coating classes may be subject to dimensional restriction.

* Design must allow for some strength reduction near welds.
** Maximum thickness suitable for organic coil coating is 0.0296". Above .0296 to .0356 considered for non-surface critical finish.

ZINCALUME® Steel Grade 33
Grade Data Sheet

General Description
ZINCALUME® Steel Grade 33 - hot-dip zinc/aluminum alloy-coated structural steel with a spangled surface and guaranteed minimum yield strength of 33 ksi with good ductility.

Typical Uses
Roll-formed roofing and siding.

Dimensions			
Typical Thickness (Inches)	Maximum .0356"	Typical Width	Maximum 48.5"
	Minimum .013"		Minimum 28"
Maximum and minimum thicknesses outside the typical range stated above may be supplied on an inquiry basis only.			

Mechanical Properties			Chemical Composition	
Steel Base	**Guaranteed Minimum**	**Typical**	**Maximum Percent by Weight**	
Longitudinal tensile*				
Yield strength, ksi	33	40-56	Carbon (C)	0.20
Tensile strength, ksi	45	53-64	Phosphorus (P)	0.04
Elongation in 2 inch, minimum %	20	25-40	Manganese (Mn)	1.35
Hardness, HRB		50-70	Sulfur (S)	0.04
Supply Condition	**Standard**	**Optional**	**Fabricating Performance (1-Limited to 5-Excellent, NR-Not Recommended)**	
Coating class	AZ50	AZ55	Bending	5
Tension leveling	Leveled		Drawing	NR
Surface conditioning	Not Skin-passed	Skin passed,	Pressing	NR
		(paint line feed)	Pittsburgh Lock Seam	NR
			Roll-forming	5
Chemical treatment	Passivated		Welding **	5
			Painting ***	5
ZINCALUME® Plus	Resin Coated			
Oiling	Not Oiled	Oiled		
Branding	Not Branded			

Optional supply conditions and coating classes may be subject to dimensional restriction.

* Strength for Melted and Poured in USA or High Recycled Content steel may be higher, on average 5-10 ksi.
** Design must allow for some strength reduction near welds.
*** Maximum thickness suitable for organic coil coating is 0.0296". Above .0296 to .0356 considered for non-surface critical finish.

ZINCALUME® Steel Grade 37
Grade Data Sheet

General Description
ZINCALUME® Steel Grade 37 - hot-dip zinc/aluminum alloy-coated structural steel with a spangled surface and guaranteed minimum yield strength of 37 ksi with good ductility.

Typical Uses
Roll-formed roofing and siding.

Dimensions			
Typical Thickness (Inches)	Maximum .0356"	Typical Width	Maximum 48.5"
	Minimum .013"		Minimum 28"

Maximum and minimum thicknesses outside the typical range stated above may be supplied on an inquiry basis only.

Mechanical Properties			Chemical Composition	
Steel Base	**Guaranteed Minimum**	**Typical**	**Maximum Percent by Weight**	
Longitudinal tensile				
Yield strength, ksi	37	39-59	Carbon (C)	0.20
Tensile strength, ksi	52	54-67	Phosphorus (P)	0.10
Elongation in 2 inch, minimum %	18	20-40	Manganese (Mn)	1.35
Hardness, HRB		50-70	Sulfur (S)	0.04
Supply Condition	**Standard**	**Optional**	**Fabricating Performance (1-Limited to 5-Excellent, NR-Not Recommended)**	
Coating class	AZ50	AZ55	Bending	5
Tension leveling	Leveled		Drawing	NR
Surface conditioning	Not Skin-passed	Skin passed,	Pressing	NR
		(paint line feed)	Pittsburgh Lock Seam	NR
			Roll-forming	5
Chemical treatment	Passivated		Welding **	5
			Painting ***	5
ZINCALUME® Plus	Resin Coated			
Oiling	Not Oiled	Oiled		
Branding	Not Branded			

Optional supply conditions and coating classes may be subject to dimensional restriction.

* Strength for Melted and Poured in USA or High Recycled Content steel may be higher, on average 5-10 ksi.
** Design must allow for some strength reduction near welds.
*** Maximum thickness suitable for organic coil coating is 0.0296". Above .0296 to .0356 considered for non-surface critical finish.

ZINCALUME® Steel Grade 40
Grade Data Sheet

General Description
ZINCALUME® Steel Grade 40 - hot-dip zinc/aluminum alloy-coated structural steel with a spangled surface and guaranteed minimum yield strength of 40 ksi with good ductility.

Typical Uses
Roll-formed roofing and siding.

Dimensions			
Typical Thickness (Inches)	Maximum .0356"	Typical Width	Maximum 48.5"
	Minimum .012"		Minimum 28"

Maximum and minimum thicknesses outside the typical range stated above may be supplied on an inquiry basis only.

Mechanical Properties			Chemical Composition	
Steel Base	**Guaranteed Minimum**	**Typical**	**Maximum Percent by Weight**	
Longitudinal tensile*				
Yield strength, ksi	40	42-55	Carbon (C)	0.25
Tensile strength, ksi	55	55-68	Phosphorus (P)	0.10
Elongation in 2 inch, minimum %	16	26-40	Manganese (Mn)	1.35
Hardness, HRB		50-70	Sulfur (S)	0.04
Supply Condition	**Standard**	**Optional**	**Fabricating Performance (1-Limited to 5-Excellent, NR-Not Recommended)**	
Coating class	AZ50	AZ55	Bending	5
Tension leveling	Leveled		Drawing	NR
Surface conditioning	Not Skin-passed	Skin passed,	Pressing	NR
		(paint line feed)	Pittsburgh Lock Seam	NR
			Roll-forming	5
Chemical treatment	Passivated		Welding **	5
			Painting ***	5
ZINCALUME® Plus	Resin Coated			
Oiling	Not Oiled	Oiled		
Branding	Not Branded			

Optional supply conditions and coating classes may be subject to dimensional restriction.

* Strength for Melted and Poured in USA or High Recycled Content steel may be higher, on average 5-10 ksi.
** Design must allow for some strength reduction near welds.
*** Maximum thickness suitable for organic coil coating is 0.0296". Above .0296 to .0356 considered for non-surface critical finish.

ZINCALUME® Steel Grade 50 (Class 1)
Grade Data Sheet

General Description
ZINCALUME® Steel Grade 50 (Class I) - hot-dip zinc/aluminum alloy-coated structural steel with a spangled surface and guaranteed minimum yield strength of 50 ksi with good ductility.

Typical Uses
Roll-formed roofing and siding.

Dimensions			
Typical Thickness (Inches)	Maximum .0296"	Typical Width	Maximum 48.5"
	Minimum .018"		Minimum 28"
Maximum and minimum thicknesses outside the typical range stated above may be supplied on an inquiry basis only.			

Mechanical Properties			Chemical Composition	
Steel Base	**Guaranteed Minimum**	**Typical**	**Maximum Percent by Weight**	
Longitudinal tensile*				
Yield strength, ksi	50	50-65	Carbon (C)	0.25
Tensile strength, ksi	65	65-75	Phosphorus (P)	0.20
Elongation in 2 inch, minimum %	12	24-35	Manganese (Mn)	1.35
Hardness, HRB		60-80	Sulfur (S)	0.04
Supply Condition	**Standard**	**Optional**	**Fabricating Performance (1-Limited to 5-Excellent, NR-Not Recommended)**	
Coating class	AZ50	AZ55	Bending	3
Tension leveling	Leveled		Drawing	NR
Surface conditioning	Not Skin-passed	Skin passed,	Pressing	NR
		(paint line feed)	Pittsburgh Lock Seam	NR
			Roll-forming	5
Chemical treatment	Passivated		Welding **	5
			Painting ***	5
ZINCALUME® Plus	Resin Coated			
Oiling	Not Oiled	Oiled		
Branding	Not Branded			

Optional supply conditions and coating classes may be subject to dimensional restriction.

* Strength for Melted and Poured in USA or High Recycled Content steel may be higher, on average 5-10 ksi.
** Design must allow for some strength reduction near welds.
*** Maximum thickness suitable for organic coil coating is 0.0296”

ZINCALUME® Steel Grade 50 (Class 2)
Grade Data Sheet

General Description
ZINCALUME® Steel Grade 50 (Class II) - hot-dip zinc/aluminum alloy-coated structural steel with a spangled surface and guaranteed minimum yield strength of 50 ksi with good ductility.

Typical Uses
Roll-formed roofing and siding.

Dimensions			
Typical Thickness (Inches)	Maximum .0296"	Typical Width	Maximum 48.5"
	Minimum .018"		Minimum 28"
Maximum and minimum thicknesses outside the typical range stated above may be supplied on an inquiry basis only.			

Mechanical Properties			Chemical Composition	
Steel Base	**Guaranteed Minimum**	**Typical**	**Maximum Percent by Weight**	
Longitudinal tensile*				
Yield strength, ksi	50	50-65	Carbon (C)	0.25
Tensile strength, ksi	-	65-75	Phosphorus (P)	0.20
Elongation in 2 inch, minimum %	12	22-36	Manganese (Mn)	1.35
Hardness, HRB		65-80	Sulfur (S)	0.04
Supply Condition	**Standard**	**Optional**	**Fabricating Performance (1-Limited to 5-Excellent, NR-Not Recommended)**	
Coating class	AZ50	AZ55	Bending	3
Tension leveling	Leveled		Drawing	NR
Surface conditioning	Not Skin-passed	Skin passed,	Pressing	NR
		(paint line feed)	Pittsburgh Lock Seam	NR
			Roll-forming	5
Chemical treatment	Passivated		Welding **	5
			Painting ***	5
ZINCALUME® Plus	Resin Coated			
Oiling	Not Oiled	Oiled		
Branding	Not Branded			

Optional supply conditions and coating classes may be subject to dimensional restriction.

* Strength for Melted and Poured in USA or High Recycled Content steel may be higher, on average 5-10 ksi.
** Design must allow for some strength reduction near welds.
*** Maximum thickness suitable for organic coil coating is 0.0296"

ZINCALUME® Steel Grade 50 (Class 4)
Grade Data Sheet

General Description
ZINCALUME® Steel Grade 50 (Class IV) - hot-dip zinc/aluminum alloy-coated structural steel with a spangled surface and guaranteed minimum yield strength of 50 ksi with good ductility.

Typical Uses
Roll-formed roofing and siding.

Dimensions			
Typical Thickness (Inches)	Maximum .0296"	Typical Width	Maximum 48.5"
	Minimum .0150"		Minimum 28"

Maximum and minimum thicknesses outside the typical range stated above may be supplied on an inquiry basis only.

Mechanical Properties			Chemical Composition	
Steel Base	**Guaranteed Minimum**	**Typical**	**Maximum Percent by Weight**	
Longitudinal tensile*				
Yield strength, ksi	50	50-65 50-65	Carbon (C)	0.25
Tensile strength, ksi	-	60-70 65-75	Phosphorus (P)	0.20
Elongation in 2 inch, minimum %	12	20-25 22-35	Manganese (Mn)	1.35
Hardness, HRB		60-70 65-77	Sulfur (S)	0.04
Supply Condition	**Standard**	**Optional**	**Fabricating Performance (1-Limited to 5-Excellent, NR-Not Recommended)**	
Coating class	AZ50	AZ55	Bending	3
Tension leveling	Leveled		Drawing	NR
Surface conditioning	Not Skin-passed	Skin passed,	Pressing	NR
		(paint line feed)	Pittsburgh Lock Seam	NR
			Roll-forming	5
Chemical treatment	Passivated		Welding **	5
			Painting ***	5
ZINCALUME® Plus	Resin Coated			
Oiling	Not Oiled	Oiled		
Branding	Not Branded			

Optional supply conditions and coating classes may be subject to dimensional restriction.

* Strength for Melted and Poured in USA or High Recycled Content steel may be higher, on average 5-10 ksi.
** Design must allow for some strength reduction near welds.
*** Maximum thickness suitable for organic coil coating is 0.0296”

ZINCALUME® Steel Grade 80 (Class 1)
Grade Data Sheet

General Description
ZINCALUME® Steel Grade 80 - hot-dip zinc/aluminum alloy-coated structural steel with a spangled surface and guaranteed minimum yield strength of 80 ksi with good ductility.

Typical Uses
Roll-formed roofing and siding.

Dimensions			
Typical Thickness (Inches)	Maximum .0236"	Typical Width	Maximum 48.5"
	Minimum .012"		Minimum 28"

Maximum and minimum thicknesses outside the typical range stated above may be supplied on an inquiry basis only.

Mechanical Properties			Chemical Composition	
Steel Base	**Guaranteed Minimum**	**Typical**	**Maximum Percent by Weight**	
Longitudinal tensile*				
Yield strength, ksi	80	80-120	Carbon (C)	0.20
Tensile strength, ksi	82	90-120	Phosphorus (P)	0.04
Elongation in 2 inch, minimum %	-	0-10	Manganese (Mn)	1.35
Hardness, HRB		85-99	Sulfur (S)	0.04
Supply Condition	**Standard**	**Optional**	**Fabricating Performance (1-Limited to 5-Excellent, NR-Not Recommended)**	
Coating class	AZ50	AZ55	Bending	2
Tension leveling	Leveled		Drawing	NR
Surface conditioning	Not Skin-passed	Skin passed,	Pressing	NR
		(paint line feed)	Pittsburgh Lock Seam	NR
			Roll-forming	4
Chemical treatment	Passivated		Welding **	5
			Painting ***	5
ZINCALUME® Plus	Resin Coated			
Oiling	Not Oiled	Oiled		
Branding	Not Branded			

Optional supply conditions and coating classes may be subject to dimensional restriction.

* Strength for Melted and Poured in USA or High Recycled Content steel may be higher, on average 5-10 ksi.
** Design must allow for some strength reduction near welds.
*** Maximum thickness suitable for organic coil coating is 0.0236”

Safety Data Sheet

ZINCALUME® Steel

Section 1 - Chemical Product and Company Identification

Product name	ZINCALUME® Steel
Manufacturer	Steelscape, LLC 222 West Kalama River Road Kalama, WA 98625
Revision Date	06/01/2015
Reference No.	200000000001
Emergency Contact:	CHEMTREC (24 hours) 1-800-424-9300

Section 2 - Hazards Identification

GHS Label Elements:

Hazard Pictograms:

Signal Word:

Warning

Hazard Statement:

Does not pose a health hazard in its normal form. Inhalation of metal dust and fume may result from further processing by the user, particularly during welding, burning, grinding and machining activities. These potential health hazards should be evaluated by the user. A non-metallic passivation treatment is normally applied based upon customer/end use criteria. These non-metallic coatings may contain hazardous substances of varying amounts. During processing, substances of varying chemical composition and quantity may be generated by the surface passivant. MSDS information regarding the surface passivant shall be supplied to the user upon request.

Carcinogenity:

Certain chromium and nickel compounds as well as organic compounds found in various coating materials have been listed as carcinogens by the NTP, IARC, or OSHA.

Medical Conditions Aggravated by Long Term Exposure:

Individuals with chronic respiratory disorders (i.e., asthma, chronic bronchitis, emphysema, etc.) may be adversely affected by any fume or airborne particulate matter exposure.

Chronic Effects:

Chronic inhalation concentrations of iron oxide fumes or dusts may lead to a benign pneumoconiosis (siderosis). Inhalation of high concentrations of ferric oxide may possibly enhance the risk of lung cancer development in workers exposed to pulmonary carcinogens. Chronic inhalation concentrations of aluminum fumes or dusts may lead to a fibrotic lung condition known as Shaver.s disease; however, evidence for this is not conclusive since affected workers were exposed to other substances (silica) as well. The inhalation of high concentrations of dust from manganese, copper, lead and/or zinc in the respirable particle size range can cause an influenza-like illness termed metal fume fever. Typical symptoms last 12 to 48 hours and are characterized by metallic taste in mouth, dryness and irritation of the throat, followed by weakness, muscle pain, fever and chills. Continuous exposures to high concentrations of manganese can cause central nervous system disorders and .manganese pneumonia.. Fibrosis of lung tissue from manganese exposure has also been reported for products containing manganese only. Overexposure to aluminum dust can cause shortness of breath. Long term inhalation exposure to high concentrations (overexposure) to pneumoconiotic agents may act synergistically with inhalation of oxides, fumes or dusts of this product to cause toxic effects. Prolonged or repeated contact with

unprotected skin may result in skin irritation. Torching or burning operations on steel products with oil or organic coating may produce emissions which can be irritating to the eyes and respiratory tract.

Precautionary Statement:

Inhalation of metal dust and fume may result from further processing by the user, particularly during welding, burning, grinding and machining activities. These potential health hazards should be evaluated by the user.

Section 3 - Composition / Information on Ingredients

Ingredient Name	CAS-No.	Weight%	
		Min	Max
Base Metal			
Iron	7439-89-6	Balance	99.00
Carbon	7440-44-0		0.30
Manganese Compounds (as Mn)	7439-96-5		1.2
Phosphorus	7723-14-0		0.15
Sulfur	7704-34-9		0.05
Silicon	7440-21-3		0.05
Aluminum	7429-90-5		0.1
Note: Base Steel may contain the following trace or residual elements: Chromium(0.10% max). Copper(0.12% max), Molybdenum (0.10% max), Nickel (0.12% max), Columbium (0.06% max), Tin (0.03% max), Titanium (0.06% max), and Vanadium (0.08% max).			
Metallic Coating			
Aluminum	7429-90-5	51.00	58.00
Zinc (Reportable as a fume or dust)	7440-66-6	40.00	48.00
Silicon	7440-21-3	1.30	1.90
Iron	7439-89-6		0.02

Section 4 - First Aid Measures

Eye contact:

Treat any foreign body in eye by flushing with large amounts of water. Seek medical attention immediately.

Skin contact:

Skin hazards are not expected. However, should dermatitis develop, affected area should be washed with mild soap and water. If irritation or other symptoms develop, seek medical attention. Precautions should be taken to protect against sharp steel edges. If the skin is abraded by handling, seek medical attention.

Ingestion:

Ingestion hazards are not expected.

Inhalation:

For treatment of overexposure to fumes and/or particulates, remove exposed individual to fresh air and seek medical attention. Administer artificial respiration or oxygen if breathing is difficult or has stopped.

Section 5 - Fire-Fighting Measures

Not flammable or combustible. Steel products in the solid state present no fire or explosion hazard and do not contribute to the combustion of other materials.

Section 6 - Accidental Release Measures

Not applicable to this metal in its solid state. 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 or disposal in accordance with federal, state, and local regulations.

Section 7 - Handling and Storage

Operations with the potential for generating high concentrations of airborne particulates should be evaluated and controlled as necessary. Practice good housekeeping. Avoid breathing fumes and/or dust.

Section 8 - Exposure Controls / Personal Protection

Respiratory protection:
NIOSH/MSHA approved dust and fume respirators should be used to avoid excessive inhalation of particulates. Appropriate respirator selection depends on the magnitude of exposure.

Hand protection:
Protective gloves should be worn as required for welding, burning or handling operations. If material is supplied with oil or other organic coating, wear protective gloves. However, do not continue to use gloves or work clothing that have become saturated with oil. Wash hands and any additional contact areas with soap and water or waterless hand cleaner.

Eye protection:
Use safety glasses or goggles as required for welding, burning, sawing, brazing, grinding or machining operations.

Engineering measures:
Local exhaust ventilation should be provided when welding, burning, sawing, brazing, grinding or machining to prevent excessive dust or fume exposure.

Personal protection equipment:
Operations with the potential for generating high concentrations of airborne particulates should be evaluated and controlled as necessary. Avoid breathing fumes and/or dust.

Section 9 - Physical and Chemical Properties

Physical State: Solid
Appearance: Silver, bright crystalline appearance.
Odor: None
Vapor Pressure (mm Hg): N/A
Vapor Density (air = 1): N/A
Formula Weight: N/A
Density: N/A
Sp. Gravity(H2O = 1): 7.8000
pH: N/A

Water Solubility: Insoluble
Other Solubilities: N/A
Boiling point/range: N/A
Freezing/Melting Point: N/A
Viscosity: N/A
Refractive Index:
Surface Tension: N/A
% Volatile: N/A
Evaporation Rate:

Section 10 - Stability and Reactivity

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

Hazardous Conditions to Avoid:
Will react with strong acid to liberate hydrogen. Finely divided material may react with water, strong oxidizers, alkaline, and hydrogenated compounds. At temperatures exceeding the melting point of the metallic coating, fumes may be liberated which contain oxides of the metallic coating constituents. At temperatures exceeding the melting point of the base metal, fumes may be liberated which contain oxides of iron and other steel alloying elements.

Section 11 - Toxicological Information

Ingredient Name	LD50 or LC50 Species /Route	OSHA PEL	ACGIH TLV(mg/m3) (TWA unless specified)
Base Metal			
Iron	mouse/oral 5.4 mg/kg	10 Iron Oxide Fume	5 Iron Oxide Fume as Fe
Carbon	No Information	Not Established	Not Established
Manganese Compounds (as Mn)	rat/oral 9 mg/kg	5 ceiling as Mn	5 Dust as Mn 1 Fume as Mn 3 Fume as Mn (STEL)

Phosphorus	No Information	.1 Total	Not Established
Sulfur	No Information	15 Total Dust	13 as SO2
Silicon	No Information	15 Total Dust 5 Respirable Fraction	10 Total
Aluminum	No Information	10 Total Dust 5 Respirable Fraction	10 Metal Dust as Al
Metallic Coating			
Aluminum	No Information	10 Total Dust 5 Respirable Fraction	10 Metal Dust as Al
Zinc (Reportable as a fume or dust)	No Information	5 Fume as ZnO	5 Fume as ZnO
Silicon	No Information	15 Total Dust 5 Respirable Fraction	10 Total
Iron	mouse/oral 5.4 mg/kg	10 Iron Oxide Fume	5 Iron Oxide Fume as Fe

Section 12 - Ecological Information

No data available for product as a whole. However, individual components have been found to be toxic to the environment. Metal dusts may migrate into soil and groundwater and be ingested by wildlife. Lead can be bioaccumulated in plants and water organisms, especially shellfish.

Section 13 - Disposal Consideration

Scrap should be recycled whenever possible. Product dusts and fumes from processing operations should also be recycled, or classified by a competent environmental professional and disposed of in accordance with applicable federal, state or local regulations.

Section 14 - Transport Information

Not listed as a hazardous substance under 49 CFR 172.101.

Section 15 - Regulatory Information

SARA 311/312 Codes (40CFR370): Immediate (acute) health hazard and delayed (chronic) health hazard. SARA 313 (40CFR372.65): Manganese and Lead are subject to SARA 313 reporting requirements. Please note that if you prepackage or redistribute this product to industrial customers, SARA 313 requires that a notice be sent to those customers.

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).

Section 16 - Other Information

Proposition 65 Statement:

WARNING: This product may contain chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm.

This Safety Data Sheet (SDS) has been prepared in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200) and the Supplier Notification Requirements of SARA Title III, Section 313. This SDS represents products which may contain toxic chemicals.

The information contained in this SDS was obtained from sources which are believed to be reliable by the manufacturer. However, the information is provided without any responsibility or warranty, expressed or implied regarding its accuracy or correctness. The conditions or methods of handling, storage, use and disposal of this product are beyond the knowledge of the manufacturer. For this and other reasons, the manufacturer does not assume 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 this product.

Safety Data Sheet

ZINCALUME® Plus Steel

Section 1 - Chemical Product and Company Identification

Product name	ZINCALUME® Plus Steel
Manufacturer	Steelscape, LLC 222 West Kalama River Road Kalama, WA 98625
Revision Date	06/01/2015
Reference No.	200000000004
Emergency Contact:	CHEMTREC (24 hours) 1-800-424-9300

Section 2 - Hazards Identification

GHS Label Elements:

Hazard Pictograms:

Signal Word:

Warning

Hazard Statement:

Does not pose a health hazard in its normal form. Inhalation of metal dust and fume may result from further processing by the user, particularly during welding, burning, grinding and machining activities. These potential health hazards should be evaluated by the user. A non-metallic passivation treatment is normally applied based upon customer/end use criteria. These non-metallic coatings may contain hazardous substances of varying amounts. During processing, substances of varying chemical composition and quantity may be generated by the surface passivant. MSDS information regarding the surface passivant shall be supplied to the user upon request.

Carcinogenity:

Certain chromium and nickel compounds as well as organic compounds found in various coating materials have been listed as carcinogens by the NTP, IARC, or OSHA.

Medical Conditions Aggravated by Long Term Exposure:

Individuals with chronic respiratory disorders (i.e., asthma, chronic bronchitis, emphysema, etc.) may be adversely affected by any fume or airborne particulate matter exposure.

Chronic Effects:

Chronic inhalation concentrations of iron oxide fumes or dusts may lead to a benign pneumoconiosis (siderosis). Inhalation of high concentrations of ferric oxide may possibly enhance the risk of lung cancer development in workers exposed to pulmonary carcinogens. Chronic inhalation concentrations of aluminum fumes or dusts may lead to a fibrotic lung condition known as Shaver.s disease; however, evidence for this is not conclusive since affected workers were exposed to other substances (silica) as well. The inhalation of high concentrations of dust from manganese, copper, lead and/or zinc in the respirable particle size range can cause an influenza-like illness termed metal fume fever. Typical symptoms last 12 to 48 hours and are characterized by metallic taste in mouth, dryness and irritation of the throat, followed by weakness, muscle pain, fever and chills. Continuous exposures to high concentrations of manganese can cause central nervous system disorders and .manganese pneumonia.. Fibrosis of lung tissue from manganese exposure has also been reported for products containing manganese only. Overexposure to aluminum dust can cause shortness of breath. Long term inhalation exposure to high concentrations (overexposure) to pneumoconiotic agents may act synergistically with inhalation of oxides, fumes or dusts of this product to cause toxic effects. Prolonged or repeated contact with

unprotected skin may result in skin irritation. Torching or burning operations on steel products with oil or organic coating may produce emissions which can be irritating to the eyes and respiratory tract.

Precautionary Statement:

Inhalation of metal dust and fume may result from further processing by the user, particularly during welding, burning, grinding and machining activities. These potential health hazards should be evaluated by the user.

Section 3 - Composition / Information on Ingredients

Ingredient Name	CAS-No.	Weight%	
		Min	Max
Base Metal			
Iron	7439-89-6		99.00
Carbon	7440-44-0		0.30
Manganese Compounds (as Mn)	7439-96-5		1.2
Phosphorus	7723-14-0		0.15
Sulfur	7704-34-9		0.05
Silicon	7440-21-3		0.05
Aluminum	7429-90-5		0.10
Metallic Coating			
Aluminum	7429-90-5	51.00	58.00
Zinc (Reportable as a fume or dust)	7440-66-6	40.00	48.00
Silicon	7440-21-3	1.30	1.90
Iron	7439-89-6	0.01	0.02
Surface Coating			
Styrene	100-42-5	45.00	47.00
Water	7732-18-5	40.00	48.00
Styrene Monomer			0.20
Acrylate Monomers			0.20
Cyclic Biocide Halogenated			0.20
The weight percentages of this compound may be below the levels for which reporting of exact percentages is required in Section 313 of SARA 40CFR Part 372.38.			

Section 4 - First Aid Measures

Eye contact:

Treat any foreign body in eye by flushing with large amounts of water. Seek medical attention immediately.

Skin contact:

Skin hazards are not expected. However, should dermatitis develop, affected area should be washed with mild soap and water. If irritation or other symptoms develop, seek medical attention. Precautions should be taken to protect against sharp steel edges. If the skin is abraded by handling, seek medical attention.

Ingestion:

Ingestion hazards are not expected.

Inhalation:

For treatment of overexposure to fumes and/or particulates, remove exposed individual to fresh air and seek medical attention. Administer artificial respiration or oxygen if breathing is difficult or has stopped.

Section 5 - Fire-Fighting Measures

Not flammable or combustible. Steel products in the solid state present no fire or explosion hazard and do not contribute to the combustion of other materials.

Section 6 - Accidental Release Measures

Not applicable to this metal in its solid state. 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 or disposal in accordance with federal, state, and local regulations.

Section 7 - Handling and Storage

Operations with the potential for generating high concentrations of airborne particulates should be evaluated and controlled as necessary. Practice good housekeeping. Avoid breathing fumes and/or dust.

Section 8 - Exposure Controls / Personal Protection

Respiratory protection:

NIOSH/MSHA approved dust and fume respirators should be used to avoid excessive inhalation of particulates. Appropriate respirator selection depends on the magnitude of exposure.

Hand protection:

Protective gloves should be worn as required for welding, burning or handling operations. If material is supplied with oil or other organic coating, wear protective gloves. However, do not continue to use gloves or work clothing that have become saturated with oil. Wash hands and any additional contact areas with soap and water or waterless hand cleaner.

Eye protection:

Use safety glasses or goggles as required for welding, burning, sawing, brazing, grinding or machining operations.

Engineering measures:

Local exhaust ventilation should be provided when welding, burning, sawing, brazing, grinding or machining to prevent excessive dust or fume exposure.

Personal protection equipment:

Operations with the potential for generating high concentrations of airborne particulates should be evaluated and controlled as necessary. Avoid breathing fumes and/or dust.

Section 9 - Physical and Chemical Properties

Physical State: Solid
Appearance: Silver, bright crystalline appearance.
Odor: None
Vapor Pressure (mm Hg): N/A
Vapor Density (air = 1): N/A
Formula Weight: N/A
Density: N/A
Sp. Gravity(H2O = 1): 7.8000
pH: N/A

Water Solubility: Insoluble
Other Solubilities: N/A
Boiling point/range: N/A
Freezing/Melting Point: N/A
Viscosity: N/A
Refractive Index: N/A
Surface Tension: N/A
% Volatile: N/A
Evaporation Rate:

Section 10 - Stability and Reactivity

Chemical Stability:

Stable under normal conditions of use, storage and transport.

Hazardous Conditions to Avoid:

Will react with strong acid to liberate hydrogen. Finely divided material may react with water, strong oxidizers, alkaline, and hydrogenated compounds. At temperatures exceeding the melting point of the metallic coating, fumes may be liberated which contain oxides of the metallic coating constituents. At temperatures exceeding the melting point of the base metal, fumes may be liberated which contain oxides of iron and other steel alloying elements.

Section 11 - Toxicological Information

Ingredient Name	LD50 or LC50 Species /Route	OSHA PEL	ACGIH TLV(mg/m3) (TWA unless specified)
Base Metal			
Iron	mouse/oral 5.4 mg/kg	10 Iron Oxide Fume	5 Iron Oxide Fume as Fe
Carbon	No Information	Not Established	Not Established
Manganese Compounds (as Mn)	rat/oral 9 mg/kg	5 ceiling as Mn	5 Dust as Mn 1 Fume as Mn 3 Fume as Mn (STEL)
Phosphorus	No Information	.1 Total	Not Established
Sulfur	No Information	15 Total Dust	13 as SO2
Silicon	No Information	15 Total Dust 5 Respirable Fraction	10 Total
Aluminum	No Information	10 Total Dust 5 Respirable Fraction	10 Metal Dust as Al
Metallic Coating			
Aluminum	No Information	10 Total Dust 5 Respirable Fraction	10 Metal Dust as Al
Zinc (Reportable as a fume or dust)	No Information	5 Fume as ZnO	5 Fume as ZnO
Silicon	No Information	15 Total Dust 5 Respirable Fraction	10 Total
Iron	mouse/oral 5.4 mg/kg	10 Iron Oxide Fume	5 Iron Oxide Fume as Fe
Surface Coating			
Styrene	No Information	Not Established	Not Established
Water	No Information	Not Established	Not Established
Styrene Monomer	No Information	Not Established	21350 ppm
Acrylate Monomers	No Information	Not Established	525 ppm
Cyclic Biocide Halogenated	No Information	Not Established	Not Established

Section 12 - Ecological Information

No data available for product as a whole. However, individual components have been found to be toxic to the environment. Metal dusts may migrate into soil and groundwater and be ingested by wildlife. Lead can be bioaccumulated in plants and water organisms, especially shellfish.

Section 13 - Disposal Consideration

Scrap should be recycled whenever possible. Product dusts and fumes from processing operations should also be recycled, or classified by a competent environmental professional and disposed of in accordance with applicable federal, state or local regulations.

Section 14 - Transport Information

Not listed as a hazardous substance under 49 CFR 172.101.

Section 15 - Regulatory Information

SARA 311/312 Codes (40CFR370): Immediate (acute) health hazard and delayed (chronic) health hazard. SARA 313 (40CFR372.65): Manganese and Lead are subject to SARA 313 reporting requirements. Please note that if you prepackage or redistribute this product to industrial customers, SARA 313 requires that a notice be sent to those customers.

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).

Section 16 - Other Information

Proposition 65 Statement:

WARNING: This product may contain chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm.

This Safety Data Sheet (SDS) has been prepared in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200) and the Supplier Notification Requirements of SARA Title III, Section 313. This SDS represents products which may contain toxic chemicals.

The information contained in this SDS was obtained from sources which are believed to be reliable by the manufacturer. However, the information is provided without any responsibility or warranty, expressed or implied regarding its accuracy or correctness. The conditions or methods of handling, storage, use and disposal of this product are beyond the knowledge of the manufacturer. For this and other reasons, the manufacturer does not assume 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 this product.

CLICK HERE FOR THE STEELSCAPE ZINCALUME WARRANTY

TRUZINC® STEEL

The following pages describe Steelscape's TruZinc® Steel product information. This Section contains the TruZinc capabilities, Grade Data Sheets, Safety Data Sheets (SDS) and a Technical Bulletin. These documents will serve as references when contemplating fit-for-purpose applications.

The Grade Data Sheets describe, in detail, each of our products' performance and composition characteristics. Typical dimensions, mechanical properties and supply conditions are described for each product.

There is a SDS reference for both the bare bare, resin-coated version of our TruZinc Steel products. Each SDS addresses potential health concerns and effects of prolonged exposure to our products. Ingredients, physical and chemical characteristics, potential physical hazards and special protection information is provided. Spill, leak, fire-fighting and emergency contact information is disclosed.

The Technical Bulletin provides helpful information regarding the effective use of TruZinc Plus Steel. Important application and handling information is described in this bulletin. The fit-for-purpose tips are also an excellent technical reference.

This section will serve as an invaluable tool to both veteran users and first time buyers of TruZinc Steel.

TruZinc® Steel Processing Capabilities

The matrix below was designed to help you determine the TruZinc® Steel products Steelscape is capable of producing on a consistent basis. These capabilities grow and change with each new successful trial order we process to completion. As we become more proficient in producing product outside the stated capacity limits we will expand this matrix accordingly.

	Kalama
Max Input Coil Wt	56,000 #
Max Output Coil Wt	56,000 #
Thickness	0.0100" - 0.047"^
Width	26" - 51"
Coatings	TruZinc/Resin/Oil/ Acrylic Single-Coat Paint/ Passivant*
Entry OD/ID	79.5" max/20" +/- 0.5"
Delivery OD/ID	79.5" max/20" +/- 0.5"
Cores	Not Available
Coatings	G30, G40, G60, G90, G100, G115, G125

^ 0.300" thickness and greater is considered non-surface critical for some product grades and end-uses, both bare and painted. Inquire with a Steelscape Sales Representative for additional information.

* Standard passivant is RoHS complaint

** For heavier coating weights inquire with a Steelscape Sales Representative.

Steelscape is happy to evaluate requests for TruZinc® Steel products not shown on the capability matrix above. Equipment capabilities and hot band supply may impact our production capabilities. Questions regarding TruZinc Steel processing capabilities should be directed to a Steelscape Sales Representative.

TruZinc® Steel Grade CS (Type A)
Grade Data Sheet

General Description
TruZinc® Steel Grade CS (Type A) - hot-dip zinc coated commercial steel with a zero spangle surface and with good ductility. Suitable for bending and moderate forming.

Typical Uses
Roll-formed roofing, rainwater goods, HVAC and general manufacturing.

Dimensions			
Typical Thickness (Inches)	Maximum .039"	Typical Width	Maximum 48.9"
	Minimum .012"		Minimum 28"

Maximum and minimum thicknesses outside the typical range stated above may be supplied on an inquiry basis only.

Mechanical Properties			Chemical Composition	
Steel Base	**Guaranteed Minimum**	**Typical**	**Maximum Percent by Weight**	
Longitudinal tensile				
Yield strength, ksi	-	35-57	Carbon (C)	0.10
Tensile strength, ksi	-	53-65	Phosphorus (P)	0.030
Elongation in 2 inch, minimum %	-	25-40	Manganese (Mn)	0.60
Hardness, HRB	-	50-67	Sulfur (S)	0.035
Supply Condition	**Standard**	**Optional**	**Fabricating Performance (1-Limited to 5-Excellent, NR-Not Recommended)**	
Coating class	G40, G60	G30, G90	Bending	5
Tension leveling	Leveled		Drawing	2
Surface conditioning	Not Skin-passed	Skin passed,	Pressing	2
		(paint line feed)	Pittsburgh Lock Seam	5
			Roll-forming	5
Chemical treatment	Passivated	Not Passivated	Welding *	5
TruZinc Plus	Resin Coated		Painting **	5
Oiling	Not Oiled	Oiled		
Branding	Not Branded			

Optional supply conditions and coating classes may be subject to dimensional restriction.

* Design must allow for some strength reduction near welds.
** Thickness range suitable for organic coil coating is 0.0140" to 0.0359"

TruZinc® Steel Grade CS (Type B)
Grade Data Sheet

General Description
TruZinc® Steel Grade CS (Type B) - hot-dip zinc coated commercial steel with a zero spangle surface and with good ductility. Suitable for bending and moderate forming.

Typical Uses
Roll-formed roofing, rainwater goods, HVAC and general manufacturing.

Dimensions			
Typical Thickness (Inches)	Maximum .039"	Typical Width	Maximum 48.9"
	Minimum .012"		Minimum 28"

Maximum and minimum thicknesses outside the typical range stated above may be supplied on an inquiry basis only.

Mechanical Properties			Chemical Composition	
Steel Base	**Guaranteed Minimum**	**Typical**	**Maximum Percent by Weight**	
Longitudinal tensile				
Yield strength, ksi	-	35-57	Carbon (C)	0.02-0.15
Tensile strength, ksi	-	53-65	Phosphorus (P)	0.030
Elongation in 2 inch, minimum %	-	25-40	Manganese (Mn)	0.60
Hardness, HRB	-	50-67	Sulfur (S)	0.035
Supply Condition	**Standard**	**Optional**	**Fabricating Performance (1-Limited to 5-Excellent, NR-Not Recommended)**	
Coating class	G40, G60	G30, G90	Bending	5
Tension leveling	Leveled		Drawing	2
Surface conditioning	Not Skin-passed	Skin passed,	Pressing	2
		(paint line feed)	Pittsburgh Lock Seam	5
			Roll-forming	5
Chemical treatment	Passivated	Not Passivated	Welding *	5
TruZinc Plus	Resin Coated		Painting **	5
Oiling	Not Oiled	Oiled		
Branding	Not Branded			

Optional supply conditions and coating classes may be subject to dimensional restriction.

* Design must allow for some strength reduction near welds.
** Thickness range suitable for organic coil coating is 0.0140" to 0.0359"

TruZinc® Steel Grade 33
Grade Data Sheet

General Description
TruZinc® Steel Grade 33 - hot-dip zinc coated structural steel with a zero spangle surface and guaranteed minimum yield strength of 33 ksi with good ductility.

Typical Uses
Roll-formed roofing, siding and steel studs.

Dimensions			
Typical Thickness (Inches)	Maximum .039"	Typical Width	Maximum 48.9"
	Minimum .012"		Minimum 28"

Maximum and minimum thicknesses outside the typical range stated above may be supplied on an inquiry basis only.

Mechanical Properties			Chemical Composition	
Steel Base	**Guaranteed Minimum**	**Typical**	**Maximum Percent by Weight**	
Longitudinal tensile*				
Yield strength, ksi	33	38-51	Carbon (C)	0.20
Tensile strength, ksi	45	54-64	Phosphorus (P)	0.04
Elongation in 2 inch, minimum %	20	27-37	Manganese (Mn)	1.35
Hardness, HRB		53-65	Sulfur (S)	0.04
Supply Condition	**Standard**	**Optional**	**Fabricating Performance (1-Limited to 5-Excellent, NR-Not Recommended)**	
Coating class	G40, G60	G30, G90	Bending	5
Tension leveling	Leveled		Drawing	NR
Surface conditioning	Not Skin-passed	Skin passed,	Pressing	NR
		(paint line feed)	Pittsburgh Lock Seam	NR
			Roll-forming	5
Chemical treatment	Passivated	Not Passivated	Welding **	5
			Painting ***	5
TruZinc® Plus	Resin Coated			
Oiling	Not Oiled	Oiled		
Branding	Not Branded			

Optional supply conditions and coating classes may be subject to dimensional restriction.

* Strength for Melted and Poured in USA or High Recycled Content steel may be higher, on average 5-10 ksi
** Design must allow for some strength reduction near welds.
** Thickness range suitable for organic coil coating is 0.0140" to 0.0359"

TruZinc® Steel Grade 37
Grade Data Sheet

General Description
TruZinc® Steel Grade 37 - hot-dip zinc coated structural steel with a zero spangle surface and guaranteed minimum yield strength of 37 ksi with good ductility.

Typical Uses
Roll-formed roofing, siding and steel studs.

Dimensions			
Typical Thickness (Inches)	Maximum .039"	Typical Width	Maximum 48.9"
	Minimum .012"		Minimum 28"

Maximum and minimum thicknesses outside the typical range stated above may be supplied on an inquiry basis only.

Mechanical Properties			Chemical Composition	
Steel Base	**Guaranteed Minimum**	**Typical**	**Maximum Percent by Weight**	
Longitudinal tensile*				
Yield strength, ksi	37	39-54	Carbon (C)	0.20
Tensile strength, ksi	52	52-69	Phosphorus (P)	0.10
Elongation in 2 inch, minimum %	18	26-37	Manganese (Mn)	1.35
Hardness, HRB		50-70	Sulfur (S)	0.04
Supply Condition	**Standard**	**Optional**	**Fabricating Performance (1-Limited to 5-Excellent, NR-Not Recommended)**	
Coating class	G40, G60	G30, G90	Bending	5
Tension leveling	Leveled		Drawing	NR
Surface conditioning	Not Skin-passed	Skin passed,	Pressing	NR
		(paint line feed)	Pittsburgh Lock Seam	NR
			Roll-forming	5
Chemical treatment	Passivated	Not Passivated	Welding **	5
			Painting ***	5
TruZinc® Plus	Resin Coated			
Oiling	Not Oiled	Oiled		
Branding	Not Branded			

Optional supply conditions and coating classes may be subject to dimensional restriction.

* Strength for Melted and Poured in USA or High Recycled Content steel may be higher, on average 5-10 ksi
** Design must allow for some strength reduction near welds.
** Thickness range suitable for organic coil coating is 0.0140" to 0.0359"

TruZinc® Steel Grade 40
Grade Data Sheet

General Description
TruZinc® Steel Grade 40 - hot-dip zinc coated structural steel with a zero spangle surface and guaranteed minimum yield strength of 40 ksi with good ductility.

Typical Uses
Roll-formed roofing, siding and steel studs.

Dimensions			
Typical Thickness (Inches)	Maximum .039"	Typical Width	Maximum 48.9"
	Minimum .012"		Minimum 28"

Maximum and minimum thicknesses outside the typical range stated above may be supplied on an inquiry basis only.

Mechanical Properties			Chemical Composition	
Steel Base	**Guaranteed Minimum**	**Typical**	**Maximum Percent by Weight**	
Longitudinal tensile*				
Yield strength, ksi	40	40-51	Carbon (C)	0.25
Tensile strength, ksi	55	55-63	Phosphorus (P)	0.10
Elongation in 2 inch, minimum %	16	27-37	Manganese (Mn)	1.35
Hardness, HRB		51-66	Sulfur (S)	0.04
Supply Condition	**Standard**	**Optional**	**Fabricating Performance (1-Limited to 5-Excellent, NR-Not Recommended)**	
Coating class	G40, G60	G30, G90	Bending	5
Tension leveling	Leveled		Drawing	NR
Surface conditioning	Not Skin-passed	Skin passed,	Pressing	NR
		(paint line feed)	Pittsburgh Lock Seam	NR
			Roll-forming	5
Chemical treatment	Passivated	Not Passivated	Welding **	5
			Painting ***	5
TruZinc® Plus	Resin Coated			
Oiling	Not Oiled	Oiled		
Branding	Not Branded			

Optional supply conditions and coating classes may be subject to dimensional restriction.

* Strength for Melted and Poured in USA or High Recycled Content steel may be higher, on average 5-10 ksi
** Design must allow for some strength reduction near welds.
** Thickness range suitable for organic coil coating is 0.0140" to 0.0359"

TruZinc® Steel Grade 50 (Class 1)
Grade Data Sheet

General Description
TruZinc® Steel Grade 50 (Class 1) - hot-dip zinc coated structural steel with a zero spangle surface and guaranteed minimum yield strength of 50 ksi with good ductility.

Typical Uses
Roll-formed roofing and decking.

Dimensions			
Typical Thickness (Inches)	Maximum .039"	Typical Width	Maximum 48.9"
	Minimum .019"		Minimum 28"

Maximum and minimum thicknesses outside the typical range stated above may be supplied on an inquiry basis only.

Mechanical Properties			Chemical Composition	
Steel Base	**Guaranteed Minimum**	**Typical <.017" BMT / >.017" BMT**	**Maximum Percent by Weight**	
Longitudinal tensile*				
Yield strength, ksi	50	50-60 / 50-60	Carbon (C)	0.25
Tensile strength, ksi	65	65-70 / 67-73	Phosphorus (P)	0.20
Elongation in 2 inch, minimum %	12	23-36 / 25-31	Manganese (Mn)	1.35
Hardness, HRB		65-75 / 65-75	Sulfur (S)	0.04
Supply Condition	**Standard**	**Optional**	**Fabricating Performance (1-Limited to 5-Excellent, NR-Not Recommended)**	
Coating class	G40, G60	G30, G90	Bending	3
Tension leveling	Leveled		Drawing	NR
Surface conditioning	Not Skin-passed	Skin passed,	Pressing	NR
		(paint line feed)	Pittsburgh Lock Seam	NR
			Roll-forming	5
Chemical treatment	Passivated	Not Passivated	Welding **	5
TruZinc Plus	Resin Coated		Painting ***	5
Oiling	Not Oiled	Oiled		
Branding	Not Branded			

Optional supply conditions and coating classes may be subject to dimensional restriction.

* Strength for Melted and Poured in USA or High Recycled Content steel may be higher, on average 5-10 ksi
** Design must allow for some strength reduction near welds.
** Thickness range suitable for organic coil coating is 0.0157" to 0.0359"

TruZinc® Steel Grade 50 (Class 2)
Grade Data Sheet

General Description
TruZinc® Steel Grade 50 (Class 2) - hot-dip zinc coated structural steel with a zero spangle surface and guaranteed minimum yield strength of 50 ksi with good ductility.

Typical Uses
Roll-formed roofing and siding.

Dimensions			
Typical Thickness (Inches)	Maximum .039"	Typical Width	Maximum 48.9"
	Minimum .0157"		Minimum 28"

Maximum and minimum thicknesses outside the typical range stated above may be supplied on an inquiry basis only.

Mechanical Properties			Chemical Composition	
Steel Base	**Guaranteed Minimum**	**Typical <.017" BMT / >.017" BMT**	**Maximum Percent by Weight**	
Longitudinal tensile*				
Yield strength, ksi	50	50-60 / 50-61	Carbon (C)	0.20
Tensile strength, ksi	-	60-73 / 65-75	Phosphorus (P)	0.10
Elongation in 2 inch, minimum %	12	26-32 / 23-31	Manganese (Mn)	1.35
Hardness, HRB		56-70 / 64-75	Sulfur (S)	0.04
Supply Condition	**Standard**	**Optional**	**Fabricating Performance (1-Limited to 5-Excellent, NR-Not Recommended)**	
Coating class	G40, G60	G30, G90	Bending	3
Tension leveling	Leveled		Drawing	NR
Surface conditioning	Not Skin-passed	Skin passed,	Pressing	NR
		(paint line feed)	Pittsburgh Lock Seam	NR
			Roll-forming	5
Chemical treatment	Passivated	Not Passivated	Welding **	5
TruZinc Plus	Resin Coated		Painting ***	5
Oiling	Not Oiled	Oiled		
Branding	Not Branded			

Optional supply conditions and coating classes may be subject to dimensional restriction.

* Strength for Melted and Poured in USA or High Recycled Content steel may be higher, on average 5-10 ksi
** Design must allow for some strength reduction near welds.
** Thickness range suitable for organic coil coating is 0.0157" to 0.0359"

TruZinc® Steel Grade 50 (Class 4)
Grade Data Sheet

General Description
TruZinc® Steel Grade 50 (Class 4) - hot-dip zinc coated structural steel with a zero spangle surface and guaranteed minimum yield strength of 50 ksi with good ductility.

Typical Uses
Roll-formed roofing and siding.

Dimensions			
Typical Thickness (Inches)	Maximum .039"	Typical Width	Maximum 48.9"
	Minimum .0157"		Minimum 28"

Maximum and minimum thicknesses outside the typical range stated above may be supplied on an inquiry basis only.

Mechanical Properties			Chemical Composition	
Steel Base	**Guaranteed Minimum**	**Typical <.017" BMT** **Typical >.017" BMT**	**Maximum Percent by Weight**	
Longitudinal tensile*				
Yield strength, ksi	50	50-60 50-61	Carbon (C)	0.25
Tensile strength, ksi	-	60-73 65-75	Phosphorus (P)	0.20
Elongation in 2 inch, minimum %	12	26-32 23-31	Manganese (Mn)	1.35
Hardness, HRB		56-70 64-75	Sulfur (S)	0.04
Supply Condition	**Standard**	**Optional**	**Fabricating Performance (1-Limited to 5-Excellent, NR-Not Recommended)**	
Coating class	G40, G60	G30, G90	Bending	3
Tension leveling	Leveled		Drawing	NR
Surface conditioning	Not Skin-passed	Skin passed,	Pressing	NR
		(paint line feed)	Pittsburgh Lock Seam	NR
			Roll-forming	5
Chemical treatment	Passivated	Not Passivated	Welding **	5
TruZinc Plus	Resin Coated		Painting ***	5
Oiling	Not Oiled	Oiled		
Branding	Not Branded			

Optional supply conditions and coating classes may be subject to dimensional restriction.

* Strength for Melted and Poured in USA or High Recycled Content steel may be higher, on average 5-10 ksi
** Design must allow for some strength reduction near welds.
** Thickness range suitable for organic coil coating is 0.0157" to 0.0359"

TruZinc® Steel Grade 57
Grade Data Sheet

General Description
TruZinc® Steel Grade 57 - hot-dip zinc coated commercial steel with a zero spangle surface and with good ductility. Suitable for bending and moderate forming.

Typical Uses
Roll-formed roofing, rainwater goods, HVAC and general manufacturing.

Dimensions			
Typical Thickness (Inches)	Maximum .0237"	Typical Width	Maximum 48.0000"
	Minimum .0150"		Minimum 40.5500"

Maximum and minimum thicknesses outside the typical range stated above may be supplied on an inquiry basis only.

Mechanical Properties			Chemical Composition	
Steel Base	**Guaranteed Minimum**	**Typical**	**Maximum Percent by Weight**	
Longitudinal tensile*				
Yield strength, ksi	57	57-67	Carbon (C)	0.10-0.20
Tensile strength, ksi	65	68-78	Phosphorus (P)	0.025
Elongation in 2 inch, minimum %	12	20-34	Manganese (Mn)	1.20
Hardness, HRB	-	66-80	Sulfur (S)	0.030
Supply Condition	**Standard**	**Optional**	**Fabricating Performance (1-Limited to 5-Excellent, NR-Not Recommended)**	
Coating class	G40	G30, G60, G90	Bending	2
Tension leveling	Leveled		Drawing	NR
Surface conditioning	Not Skin-passed	Skin passed,	Pressing	NR
		(paint line feed)	Pittsburgh Lock Seam	NR
			Roll-forming	3
Chemical treatment	Passivated	Not Passivated	Welding **	4
TruZinc Plus	Resin Coated		Painting ***	5
Oiling	Not Oiled	Oiled		
Branding	Not Branded			

Optional supply conditions and coating classes may be subject to dimensional restriction.

* Strength for Melted and Poured in USA or High Recycled Content steel may be higher, on average 5-10 ksi
** Design must allow for some strength reduction near welds.
** Thickness range suitable for organic coil coating is 0.0140" to 0.0359"

TruZinc® Steel Grade 80 (Class 1)
Grade Data Sheet

General Description
TruZinc® Steel Grade 80 (Class1) - hot-dip zinc coated structural steel with a zero spangle surface and guaranteed minimum yield strength of 80 ksi with good ductility.

Typical Uses
Roll-formed roofing and decking.

Dimensions			
Typical Thickness (Inches)	Maximum .0249"	Typical Width	Maximum 48.9"
	Minimum .012"		Minimum 28"

Maximum and minimum thicknesses outside the typical range stated above may be supplied on an inquiry basis only.

Mechanical Properties			Chemical Composition	
Steel Base	**Guaranteed Minimum**	**Typical**	**Maximum Percent by Weight**	
Longitudinal tensile*				
Yield strength, ksi	80	91-117	Carbon (C)	0.20
Tensile strength, ksi	82	95-120	Phosphorus (P)	0.04
Elongation in 2 inch, minimum %	-	-	Manganese (Mn)	1.35
Hardness, HRB		85-99	Sulfur (S)	0.04
Supply Condition	**Standard**	**Optional**	**Fabricating Performance (1-Limited to 5-Excellent, NR-Not Recommended)**	
Coating class	G40, G60	G30, G90	Bending	2
Tension leveling	Leveled		Drawing	NR
Surface conditioning	Not Skin-passed	Skin passed,	Pressing	NR
		(paint line feed)	Pittsburgh Lock Seam	NR
			Roll-forming	4
Chemical treatment	Passivated	Not Passivated	Welding **	5
TruZinc Plus	Resin Coated		Painting ***	5
Oiling	Not Oiled	Oiled		
Branding	Not Branded			

Optional supply conditions and coating classes may be subject to dimensional restriction.

* Strength for Melted and Poured in USA or High Recycled Content steel may be higher, on average 5-10 ksi
** Design must allow for some strength reduction near welds.
** Thickness range suitable for organic coil coating is 0.0140" to 0.0249"

Safety Data Sheet

TruZinc® Steel

Section 1 - Chemical Product and Company Identification

Product name	TruZinc® Steel
Manufacturer	Steelscape, LLC 222 West Kalama River Road Kalama, WA 98625
Revision Date	06/01/2015
Reference No.	200000000002
Emergency Contact:	CHEMTREC (24 hours) 1-800-424-9300

Section 2 - Hazards Identification

GHS Label Elements:

Hazard Pictograms:

Signal Word:

Warning

Hazard Statement:

Does not pose a health hazard in its normal form. Inhalation of metal dust and fume may result from further processing by the user, particularly during welding, burning, grinding and machining activities. These potential health hazards should be evaluated by the user. A non-metallic passivation treatment is normally applied based upon customer/end use criteria. These non-metallic coatings may contain hazardous substances of varying amounts. During processing, substances of varying chemical composition and quantity may be generated by the surface passivant. MSDS information regarding the surface passivant shall be supplied to the user upon request.

Carcinogenity:

Certain chromium and nickel compounds as well as organic compounds found in various coating materials have been listed as carcinogens by the NTP, IARC, or OSHA.

Medical Conditions Aggravated by Long Term Exposure:

Individuals with chronic respiratory disorders (i.e., asthma, chronic bronchitis, emphysema, etc.) may be adversely affected by any fume or airborne particulate matter exposure.

Chronic Effects:

Chronic inhalation concentrations of iron oxide fumes or dusts may lead to a benign pneumoconiosis (siderosis). Inhalation of high concentrations of ferric oxide may possibly enhance the risk of lung cancer development in workers exposed to pulmonary carcinogens. Chronic inhalation concentrations of aluminum fumes or dusts may lead to a fibrotic lung condition known as Shaver.s disease; however, evidence for this is not conclusive since affected workers were exposed to other substances (silica) as well. The inhalation of high concentrations of dust from manganese, copper, lead and/or zinc in the respirable particle size range can cause an influenza-like illness termed metal fume fever. Typical symptoms last 12 to 48 hours and are characterized by metallic taste in mouth, dryness and irritation of the throat, followed by weakness, muscle pain, fever and chills. Continuous exposures to high concentrations of manganese can cause central nervous system disorders and .manganese pneumonia.. Fibrosis of lung tissue from manganese exposure has also been reported for products containing manganese only. Overexposure to aluminum dust can cause shortness of breath. Long term inhalation exposure to high concentrations (overexposure) to pneumoconiotic agents may act synergistically with inhalation of oxides, fumes or dusts of this product to cause toxic effects. Prolonged or repeated contact with

unprotected skin may result in skin irritation. Torching or burning operations on steel products with oil or organic coating may produce emissions which can be irritating to the eyes and respiratory tract.

Precautionary Statement:

Inhalation of metal dust and fume may result from further processing by the user, particularly during welding, burning, grinding and machining activities. These potential health hazards should be evaluated by the user.

Section 3 - Composition / Information on Ingredients

Ingredient Name	CAS-No.	Weight%	
		Min	Max
Base Metal			
Iron	7439-89-6	Balance	99.00
Carbon	7440-44-0		0.3
Manganese Compounds (as Mn)	7439-96-5		1.2
Phosphorus	7723-14-0		0.15
Sulfur	7704-34-9		0.05
Silicon	7440-21-3		0.05
Aluminum	7429-90-5		0.1
Base metal will vary.			
Metallic Coating			
Aluminum	7429-90-5	0.10	0.50
Zinc (Reportable as a fume or dust)	7440-66-6	99.20	99.5
Antimony & Compounds (as Sb)	7440-36-0	0.01	0.05
Iron	7439-89-6		0.02

Section 4 - First Aid Measures

Eye contact:

Treat any foreign body in eye by flushing with large amounts of water. Seek medical attention immediately.

Skin contact:

Skin hazards are not expected. However, should dermatitis develop, affected area should be washed with mild soap and water. If irritation or other symptoms develop, seek medical attention. Precautions should be taken to protect against sharp steel edges. If the skin is abraded by handling, seek medical attention.

Ingestion:

Ingestion hazards are not expected.

Inhalation:

For treatment of overexposure to fumes and/or particulates, remove exposed individual to fresh air and seek medical attention. Administer artificial respiration or oxygen if breathing is difficult or has stopped.

Section 5 - Fire-Fighting Measures

Not flammable or combustible. Steel products in the solid state present no fire or explosion hazard and do not contribute to the combustion of other materials.

Section 6 - Accidental Release Measures

Not applicable to this metal in its solid state. 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 or disposal in accordance with federal, state, and local regulations.

Section 7 - Handling and Storage

Operations with the potential for generating high concentrations of airborne particulates should be evaluated and controlled as necessary. Practice good housekeeping. Avoid breathing fumes and/or dust.

Section 8 - Exposure Controls / Personal Protection

Respiratory protection:
NIOSH/MSHA approved dust and fume respirators should be used to avoid excessive inhalation of particulates. Appropriate respirator selection depends on the magnitude of exposure.

Hand protection:
Protective gloves should be worn as required for welding, burning or handling operations. If material is supplied with oil or other organic coating, wear protective gloves. However, do not continue to use gloves or work clothing that have become saturated with oil. Wash hands and any additional contact areas with soap and water or waterless hand cleaner.

Eye protection:
Use safety glasses or goggles as required for welding, burning, sawing, brazing, grinding or machining operations.

Engineering measures:
Local exhaust ventilation should be provided when welding, burning, sawing, brazing, grinding or machining to prevent excessive dust or fume exposure.

Personal protection equipment:
Operations with the potential for generating high concentrations of airborne particulates should be evaluated and controlled as necessary. Avoid breathing fumes and/or dust.

Section 9 - Physical and Chemical Properties

Physical State: N/A
Appearance: Silver, bright crystalline appearance.
Odor: None
Vapor Pressure (mm Hg): N/A
Vapor Density (air = 1): N/A
Formula Weight: N/A
Density: N/A
Sp. Gravity(H2O = 1): 7.8000N/A
pH: N/A

Water Solubility: Insoluble
Other Solubilities: N/A
Boiling point/range: N/A
Freezing/Melting Point: N/A
Viscosity: N/A
Refractive Index: N/A
Surface Tension: N/A
% Volatile: N/A
Evaporation Rate:

Section 10 - Stability and Reactivity

Chemical Stabilibity:
Stable under normal conditions of use, storage and transport.

Hazardous Conditions to Avoid:
Will react with strong acid to liberate hydrogen. Finely divided material may react with water, strong oxidizers, alkaline, and hydrogenated compounds. At temperatures exceeding the melting point of the metallic coating, fumes may be liberated which contain oxides of the metallic coating constituents. At temperatures exceeding the melting point of the base metal, fumes may be liberated which contain oxides of iron and other steel alloying elements.

Section 11 - Toxicological Information

Ingredient Name	LD50 or LC50 Species /Route	OSHA PEL	ACGIH TLV(mg/m3) (TWA unless specified)
Base Metal			
Iron	mouse/oral 5.4 mg/kg	10 Iron Oxide Fume	5 Iron Oxide Fume as Fe
Carbon	No Information	Not Established	Not Established
Manganese Compounds (as Mn)	rat/oral 9 mg/kg	5 ceiling as Mn	5 Dust as Mn 1 Fume as Mn 3 Fume as Mn (STEL)

Phosphorus	No Information	.1 Total	Not Established
Sulfur	No Information	15 Total Dust	13 as SO2
Silicon	No Information	15 Total Dust 5 Respirable Fraction	10 Total
Aluminum	No Information	10 Total Dust 5 Respirable Fraction	10 Metal Dust as Al
Metallic Coating			
Aluminum	No Information	10 Total Dust 5 Respirable Fraction	10 Metal Dust as Al
Zinc (Reportable as a fume or dust)	No Information	5 Fume as ZnO	5 Fume as ZnO
Antimony & Compounds (as Sb)	No Information	.5 TWA	.5 TWA
Iron	mouse/oral 5.4 mg/kg	10 Iron Oxide Fume	5 Iron Oxide Fume as Fe

Section 12 - Ecological Information

No data available for product as a whole. However, individual components have been found to be toxic to the environment. Metal dusts may migrate into soil and groundwater and be ingested by wildlife. Lead can be bioaccumulated in plants and water organisms, especially shellfish.

Section 13 - Disposal Consideration

Scrap should be recycled whenever possible. Product dusts and fumes from processing operations should also be recycled, or classified by a competent environmental professional and disposed of in accordance with applicable federal, state or local regulations.

Section 14 - Transport Information

Not listed as a hazardous substance under 49 CFR 172.101.

Section 15 - Regulatory Information

SARA 311/312 Codes (40CFR370): Immediate (acute) health hazard and delayed (chronic) health hazard. SARA 313 (40CFR372.65): Manganese and Lead are subject to SARA 313 reporting requirements. Please note that if you prepackage or redistribute this product to industrial customers, SARA 313 requires that a notice be sent to those customers.

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).

Section 16 - Other Information

Proposition 65 Statement:

WARNING: This product may contain chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm.

This Safety Data Sheet (SDS) has been prepared in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200) and the Supplier Notification Requirements of SARA Title III, Section 313. This SDS represents products which may contain toxic chemicals.

The information contained in this SDS was obtained from sources which are believed to be reliable by the manufacturer. However, the information is provided without any responsibility or warranty, expressed or implied regarding its accuracy or correctness. The conditions or methods of handling, storage, use and disposal of this product are beyond the knowledge of the manufacturer. For this and other reasons, the manufacturer does not assume 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 this product.

Safety Data Sheet

TruZinc® Plus Steel, ReziBond®

Section 1 - Chemical Product and Company Identification

Product name	TruZinc® Plus Steel, ReziBond®
Manufacturer	Steelscape, LLC 222 West Kalama River Road Kalama, WA 98625
Revision Date	07/07/2015
Reference No.	200000000005
Emergency Contact:	CHEMTREC (24 hours) 1-800-424-9300

Section 2 - Hazards Identification

GHS Label Elements:

Hazard Pictograms:

Signal Word:
Warning

Hazard Statement:
Does not pose a health hazard in its normal form. Inhalation of metal dust and fume may result from further processing by the user, particularly during welding, burning, grinding and machining activities. These potential health hazards should be evaluated by the user. A non-metallic passivation treatment is normally applied based upon customer/end use criteria. These non-metallic coatings may contain hazardous substances of varying amounts. During processing, substances of varying chemical composition and quantity may be generated by the surface passivant. MSDS information regarding the surface passivant shall be supplied to the user upon request.

Carcinogenity:
Certain chromium and nickel compounds as well as organic compounds found in various coating materials have been listed as carcinogens by the NTP, IARC, or OSHA.

Medical Conditions Aggravated by Long Term Exposure:
Individuals with chronic respiratory disorders (i.e., asthma, chronic bronchitis, emphysema, etc.) may be adversely affected by any fume or airborne particulate matter exposure.

Chronic Effects:
Chronic inhalation concentrations of iron oxide fumes or dusts may lead to a benign pneumoconiosis (siderosis). Inhalation of high concentrations of ferric oxide may possibly enhance the risk of lung cancer development in workers exposed to pulmonary carcinogens. Chronic inhalation concentrations of aluminum fumes or dusts may lead to a fibrotic lung condition known as Shaver.s disease; however, evidence for this is not conclusive since affected workers were exposed to other substances (silica) as well. The inhalation of high concentrations of dust from manganese, copper, lead and/or zinc in the respirable particle size range can cause an influenza-like illness termed metal fume fever. Typical symptoms last 12 to 48 hours and are characterized by metallic taste in mouth, dryness and irritation of the throat, followed by weakness, muscle pain, fever and chills. Continuous exposures to high concentrations of manganese can cause central nervous system disorders and .manganese pneumonia.. Fibrosis of lung tissue from manganese exposure has also been reported for products containing manganese only. Overexposure to aluminum dust can cause shortness of breath. Long term inhalation exposure to high concentrations (overexposure) to pneumoconiotic agents may act synergistically with inhalation of oxides, fumes or dusts of this product to cause toxic effects. Prolonged or repeated contact with

unprotected skin may result in skin irritation. Torching or burning operations on steel products with oil or organic coating may produce emissions which can be irritating to the eyes and respiratory tract.

Precautionary Statement:

Inhalation of metal dust and fume may result from further processing by the user, particularly during welding, burning, grinding and machining activities. These potential health hazards should be evaluated by the user.

Section 3 - Composition / Information on Ingredients

Ingredient Name	CAS-No.	Weight%	
		Min	Max
Base Metal			
Iron	7439-89-6	Balance	99.00
Carbon	7440-44-0		0.03
Manganese Compounds (as Mn)	7439-96-5		1.2
Phosphorus	7723-14-0		0.15
Sulfur	7704-34-9		0.05
Silicon	7440-21-3		0.05
Aluminum	7429-90-5		0.10
Note: Base Steel may contain the following trace or residual elements: Chromium(0.10% max). Copper(0.12% max), Molybdenum (0.10% max), Nickel (0.12% max), Columbium (0.06% max), Tin (0.03% max), Titanium (0.06% max), and Vanadium (0.08% max).			
Metallic Coating			
Aluminum	7429-90-5	0.10	0.50
Zinc (Reportable as a fume or dust)	7440-66-6	99.2	99.5
Antimony & Compounds (as Sb)	7440-36-0	0.01	0.05
Iron	7439-89-6		0.02
Surface Coating			
Chromium Phosphate	7789-04-0	0.72	3.61
Chromic Acid	1333-82-0	2.78	5.56
Zinc Phosphate	13598-37-3	3.50	12.78
Non-Hazardous			
The weight percentages of this compound may be below the levels for which reporting of exact percentages is required in Section 313 of SARA 40CFR Part 372.38.			

Section 4 - First Aid Measures

Eye contact:

Treat any foreign body in eye by flushing with large amounts of water. Seek medical attention immediately.

Skin contact:

Skin hazards are not expected. However, should dermatitis develop, affected area should be washed with mild soap and water. If irritation or other symptoms develop, seek medical attention. Precautions should be taken to protect against sharp steel edges. If the skin is abraded by handling, seek medical attention.

Ingestion:

Ingestion hazards are not expected.

Inhalation:

For treatment of overexposure to fumes and/or particulates, remove exposed individual to fresh air and seek medical attention. Administer artificial respiration or oxygen if breathing is difficult or has stopped.

Section 5 - Fire-Fighting Measures

Not flammable or combustible. Steel products in the solid state present no fire or explosion hazard and do not contribute to the combustion of other materials.

Section 6 - Accidental Release Measures

Not applicable to this metal in its solid state. 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 or disposal in accordance with federal, state, and local regulations.

Section 7 - Handling and Storage

Operations with the potential for generating high concentrations of airborne particulates should be evaluated and controlled as necessary. Practice good housekeeping. Avoid breathing fumes and/or dust.

Section 8 - Exposure Controls / Personal Protection

Respiratory protection:
NIOSH/MSHA approved dust and fume respirators should be used to avoid excessive inhalation of particulates. Appropriate respirator selection depends on the magnitude of exposure.

Hand protection:
Protective gloves should be worn as required for welding, burning or handling operations. If material is supplied with oil or other organic coating, wear protective gloves. However, do not continue to use gloves or work clothing that have become saturated with oil. Wash hands and any additional contact areas with soap and water or waterless hand cleaner.

Eye protection:
Use safety glasses or goggles as required for welding, burning, sawing, brazing, grinding or machining operations.

Engineering measures:
Local exhaust ventilation should be provided when welding, burning, sawing, brazing, grinding or machining to prevent excessive dust or fume exposure.

Personal protection equipment:
Operations with the potential for generating high concentrations of airborne particulates should be evaluated and controlled as necessary. Avoid breathing fumes and/or dust.

Section 9 - Physical and Chemical Properties

Physical State: Solid
Appearance: Silver, bright crystalline appearance.
Odor: None
Vapor Pressure (mm Hg): N/A
Vapor Density (air = 1): N/A
Formula Weight: N/A
Density: N/A
Sp. Gravity(H2O = 1): 7.8000N/A
pH: N/A

Water Solubility: Insoluble
Other Solubilities: N/A
Boiling point/range: N/A
Freezing/Melting Point: N/A
Viscosity: N/A
Refractive Index: N/A
Surface Tension: N/A
% Volatile: N/A
Evaporation Rate:

Section 10 - Stability and Reactivity

Chemical Stabilibity:
Stable under normal conditions of use, storage and transport.

Hazardous Conditions to Avoid:
Will react with strong acid to liberate hydrogen. Finely divided material may react with water, strong oxidizers, alkaline, and hydrogenated compounds. At temperatures exceeding the melting point of the metallic coating, fumes may be liberated which contain oxides of the metallic coating constituents. At temperatures exceeding the melting point of the base metal, fumes may be liberated which contain oxides of iron and other steel alloying elements.

Section 11 - Toxicological Information

Ingredient Name	LD50 or LC50 Species /Route	OSHA PEL	ACGIH TLV(mg/m3) (TWA unless specified)
Base Metal			
Iron	mouse/oral 5.4 mg/kg	10 Iron Oxide Fume	5 Iron Oxide Fume as Fe
Carbon	No Information	Not Established	Not Established
Manganese Compounds (as Mn)	rat/oral 9 mg/kg	5 ceiling as Mn	5 Dust as Mn 1 Fume as Mn 3 Fume as Mn (STEL)
Phosphorus	No Information	.1 Total	Not Established
Sulfur	No Information	15 Total Dust	13 as SO2
Silicon	No Information	15 Total Dust 5 Respirable Fraction	10 Total
Aluminum	No Information	10 Total Dust 5 Respirable Fraction	10 Metal Dust as Al
Metallic Coating			
Aluminum	No Information	10 Total Dust 5 Respirable Fraction	10 Metal Dust as Al
Zinc (Reportable as a fume or dust)	No Information	5 Fume as ZnO	5 Fume as ZnO
Antimony & Compounds (as Sb)	No Information	.5 TWA	.5 TWA
Iron	mouse/oral 5.4 mg/kg	10 Iron Oxide Fume	5 Iron Oxide Fume as Fe
Surface Coating			
Chromium Phosphate	No Information		
Chromic Acid	No Information	.01	.05
Zinc Phosphate	No Information		
Non-Hazardous			

Section 12 - Ecological Information

No data available for product as a whole. However, individual components have been found to be toxic to the environment. Metal dusts may migrate into soil and groundwater and be ingested by wildlife. Lead can be bioaccumulated in plants and water organisms, especially shellfish.

Section 13 - Disposal Consideration

Scrap should be recycled whenever possible. Product dusts and fumes from processing operations should also be recycled, or classified by a competent environmental professional and disposed of in accordance with applicable federal, state or local regulations.

Section 14 - Transport Information

Not listed as a hazardous substance under 49 CFR 172.101.

Section 15 - Regulatory Information

SARA 311/312 Codes (40CFR370): Immediate (acute) health hazard and delayed (chronic) health hazard. SARA 313 (40CFR372.65): Manganese and Lead are subject to SARA 313 reporting requirements. Please note that if you prepackage or redistribute this product to industrial customers, SARA 313 requires that a notice be sent to those customers.

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).

Section 16 - Other Information

Proposition 65 Statement:

WARNING: This product may contain chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm.

This Safety Data Sheet (SDS) has been prepared in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200) and the Supplier Notification Requirements of SARA Title III, Section 313. This SDS represents products which may contain toxic chemicals.

The information contained in this SDS was obtained from sources which are believed to be reliable by the manufacturer. However, the information is provided without any responsibility or warranty, expressed or implied regarding its accuracy or correctness. The conditions or methods of handling, storage, use and disposal of this product are beyond the knowledge of the manufacturer. For this and other reasons, the manufacturer does not assume 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 this product.

PAINTED STEEL

Steelscape is able to paint a wide variety of paint systems. Like the TruZinc® and ZINCALUME® Steel sections, the following pages describe Steelscape's organic coated (painted) steel product. This section contains the Steelscape paint capabilities, the SDS for painted products, and Pre-Painted Technical Bulletin These documents serve as references when contemplating fit-for-purpose painted applications using our products.

The SDS references the paint systems for both Steelscape metal types and addresses potential health concerns and effects of prolonged exposure to our painted products, or the paint alone. Ingredients, physical and chemical characteristics, potential physical hazards and special protection information is provided. Spill, leak, fire-fighting and emergency contact information is disclosed.

The Pre-Painted Technical Bulletin addresses batch and directionally sensitive paint systems and how best to manage inventory of these products.

Details about our branded, painted steel products including Steelscape Prints®, Rawhide, Vintage® and TruzGuard® can be found at www.steelscape.com. Steelscape offers a portfolio of uniquely painted products offering a multitude of creative design options. Don't be limited to a single color.

Steelscape also offers a standard painted product line called Spectrascape®, available on both ZINCALUME and TruZinc substrate. Spectrascape is available in polyester, silicone polyester and PVDF technology. For more details and warranty information please contact a Steelscape Sales Representative.

PRE-PAINTED STEEL PROCESSING CAPABILITIES

The capability matrix below was designed to help illustrate the painted steel products Steelscape is capable of producing on a consistent basis. These capabilities grow and change with each new successful trial order we process to completion. As we become more proficient in producing product outside the stated capacity limits we will expand this matrix accordingly.

	Kalama	Rancho
Max Entry Coil Wt	58,000 #	ZINCALUME® 44,000 #, TruZinc® 30,000 #, External supplied 20,000 #
Max Output Coil Wt*	33,000 #	20,000 #
Minimum Lineal Footage**	1,600 ft.	1,600 ft.
Thickness***	0.0115" - 0.039"	Steel: 0.008" - 0.032" Al: 0.021" - 0.063"
Width***	26" - 51" (22" trial only)	24" - 58"
Pretreatment	Chemetall 1500	Chemetall 1500
Substrates	TruZinc (galvanized), ZINCALUME (Galvalume®), Cold-Rolled	TruZinc (galvanized), ZINCALUME (Galvalume), Cold-Rolled, Aluminum, Stainless, TMBP, EG
Finish Coatings	Acrylic, Polyester, SMP Fluorocarbon, Plastisol	Acrylic, Polyester, SMP Fluorocarbon, Plastisol
Primer Coatings	Urethane, Epoxy, Polyester	Urethane, Epoxy, Polyester
Other Coatings	Resin/Passivant (standard or RoHS) by rare exception	Resin/Passivant (standard or RoHS) by rare exception
Entry OD/ID	81.5" max/20"	79"/20" or 24" +/- 0.50"
Delivery OD/ID	72" max/20"	64" max/20"
Cores	Available	Available
Reverse Wrap	Available	Available****
Branding Ink	UV	UV
Branding Characters	275 Standard Text (Steelscape, KA_CPL, Date/Time)	250 Standard Text (Steelscape, RA_CPL, Date/Time)
Branding Size	½"	½" max
Branding Location	Bottom - 4" in from edge	Bottom - front, center, back

* If vertical, skidded max weight is 12,500# in Rancho, and 15,000# in Kalama.

** Refer to your Steelscape Sales Representative for minimum lineal footage restrictions.

*** Dimensions are substrate/thickness/width combination dependent.

**** Requires additional processing to reverse wrap (slitter/embosser).

Steelscape is happy to evaluate requests for steel products not on the current capability matrix. Equipment capacities and hot band supply constraints may impact production capability. Questions regarding our painted steel capabilities should be directed to a Steelscape Sales Representative.

Safety Data Sheet

Painted TruZinc® Steel, Steelscape Prints®, TruzGuard®, Vintage®, Vintage® Heritage, Steelscape Textures®

Section 1 - Chemical Product and Company Identification

Product name	Painted TruZinc® Steel, Steelscape Prints®, Dazzle®, Vintage®, Steelscape Textures®
Manufacturer	Steelscape, LLC 222 West Kalama River Road Kalama, WA 98625
Revision Date	06/01/2015
Reference No.	200000000009
Emergency Contact:	CHEMTREC (24 hours) 1-800-424-9300

Section 2 - Hazards Identification

GHS Label Elements:

Hazard Pictograms:

Signal Word:

Warning

Hazard Statement:

Does not pose a health hazard in its normal form. Inhalation of metal dust and fume may result from further processing by the user, particularly during welding, burning, grinding and machining activities. These potential health hazards should be evaluated by the user. A non-metallic passivation treatment is normally applied based upon customer/end use criteria. These non-metallic coatings may contain hazardous substances of varying amounts. During processing, substances of varying chemical composition and quantity may be generated by the surface passivant. MSDS information regarding the surface passivant shall be supplied to the user upon request.

Carcinogenity:

Certain chromium and nickel compounds as well as organic compounds found in various coating materials have been listed as carcinogens by the NTP, IARC, or OSHA.

Medical Conditions Aggravated by Long Term Exposure:

Individuals with chronic respiratory disorders (i.e., asthma, chronic bronchitis, emphysema, etc.) may be adversely affected by any fume or airborne particulate matter exposure.

Chronic Effects:

Chronic inhalation concentrations of iron oxide fumes or dusts may lead to a benign pneumoconiosis (siderosis). Inhalation of high concentrations of ferric oxide may possibly enhance the risk of lung cancer development in workers exposed to pulmonary carcinogens. Chronic inhalation concentrations of aluminum fumes or dusts may lead to a fibrotic lung condition known as Shaver.s disease; however, evidence for this is not conclusive since affected workers were exposed to other substances (silica) as well. The inhalation of high concentrations of dust from manganese, copper, lead and/or zinc in the respirable particle size range can cause an influenza-like illness termed metal fume fever. Typical symptoms last 12 to 48 hours and are characterized by metallic taste in mouth, dryness and irritation of the throat, followed by weakness, muscle pain, fever and chills. Continuous exposures to high concentrations of manganese can cause central nervous system disorders and .manganese pneumonia.. Fibrosis of lung tissue from manganese exposure has also been reported for products containing manganese only. Overexposure to

aluminum dust can cause shortness of breath. Long term inhalation exposure to high concentrations (overexposure) to pneumoconiotic agents may act synergistically with inhalation of oxides, fumes or dusts of this product to cause toxic effects. Prolonged or repeated contact with unprotected skin may result in skin irritation. Torching or burning operations on steel products with oil or organic coating may produce emissions which can be irritating to the eyes and respiratory tract.

Precautionary Statement:

Inhalation of metal dust and fume may result from further processing by the user, particularly during welding, burning, grinding and machining activities. These potential health hazards should be evaluated by the user.

Section 3 - Composition / Information on Ingredients

Ingredient Name	CAS-No.	Weight%	
		Min	Max
Base Metal			
Iron	7439-89-6	Balance	99.00
Carbon	7440-44-0		0.30
Manganese Compounds (as Mn)	7439-96-5		1.2
Phosphorus	7723-14-0		0.15
Sulfur	7704-34-9		0.05
Silicon	7440-21-3		0.05
Aluminum	7429-90-5		0.10
Note: Base Steel may contain the following trace or residual elements: Chromium(0.10% max). Copper(0.12% max), Molybdenum (0.10% max), Nickel (0.12% max), Columbium (0.06% max), Tin (0.03% max), Titanium (0.06% max), and Vanadium (0.08% max).			
Metallic Coating			
Aluminum	7429-90-5	0.1	0.5
Zinc (Reportable as a fume or dust)	7440-66-6	40.00	48.00
Antimony & Compounds (as Sb)	7440-36-0	0.01	0.05
Iron	7439-89-6		0.02
Surface Coating			
Polyester, siliconized polyester, alkyd, fluorocarbon(PVDF),epoxy, urethane, latex or acrylic paints and primers			0.01
Polyvinyl Chloride	9002-86-2		0.01
Polyethylene Film	9002-88-4		0.01
Strontium Chromate-7789-06-2	7789-06-2		0.10
The weight percentages of these compounds are below the levels for which reporting of exact percentages is required in Section 313 of SARA 40CFR Part 372.38			

Section 4 - First Aid Measures

Eye contact:

Treat any foreign body in eye by flushing with large amounts of water. Seek medical attention immediately.

Skin contact:

Skin hazards are not expected. However, should dermatitis develop, affected area should be washed with mild soap and water. If irritation or other symptoms develop, seek medical attention. Precautions should be taken to protect against sharp steel edges. If the skin is abraded by handling, seek medical attention.

Ingestion:

Ingestion hazards are not expected.

Inhalation:

For treatment of overexposure to fumes and/or particulates, remove exposed individual to fresh air and seek medical attention. Administer artificial respiration or oxygen if breathing is difficult or has stopped.

Section 5 - Fire-Fighting Measures

Not flammable or combustible. Steel products in the solid state present no fire or explosion hazard and do not contribute to the combustion of other materials.

Section 6 - Accidental Release Measures

Not applicable to this metal in its solid state. 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 or disposal in accordance with federal, state, and local regulations.

Section 7 - Handling and Storage

Operations with the potential for generating high concentrations of airborne particulates should be evaluated and controlled as necessary. Practice good housekeeping. Avoid breathing fumes and/or dust.

Section 8 - Exposure Controls / Personal Protection

Respiratory protection:
NIOSH/MSHA approved dust and fume respirators should be used to avoid excessive inhalation of particulates. Appropriate respirator selection depends on the magnitude of exposure.

Hand protection:
Protective gloves should be worn as required for welding, burning or handling operations. If material is supplied with oil or other organic coating, wear protective gloves. However, do not continue to use gloves or work clothing that have become saturated with oil. Wash hands and any additional contact areas with soap and water or waterless hand cleaner.

Eye protection:
Use safety glasses or goggles as required for welding, burning, sawing, brazing, grinding or machining operations.

Engineering measures:
Local exhaust ventilation should be provided when welding, burning, sawing, brazing, grinding or machining to prevent excessive dust or fume exposure.

Personal protection equipment:
Operations with the potential for generating high concentrations of airborne particulates should be evaluated and controlled as necessary. Avoid breathing fumes and/or dust.

Section 9 - Physical and Chemical Properties

Physical State: Solid
Appearance: Thin sheet metal color, varies w/ topcoat used.
Odor: None
Vapor Pressure (mm Hg): N/A
Vapor Density (air = 1): N/A
Formula Weight: N/A
Density: N/A
Sp. Gravity(H2O = 1): 7.8000N/A
pH: N/A

Water Solubility: Insoluble
Other Solubilities: N/A
Boiling point/range: N/A
Freezing/Melting Point: N/A
Viscosity: N/A
Refractive Index: N/A
Surface Tension: N/A
% Volatile: N/A
Evaporation Rate: N/A

Section 10 - Stability and Reactivity

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

Hazardous Conditions to Avoid:
Will react with strong acid to liberate hydrogen. Finely divided material may react with water, strong oxidizers, alkaline, and hydrogenated compounds. At temperatures exceeding the melting point of the metallic coating, fumes may be liberated which contain oxides of the metallic coating constituents. At temperatures exceeding the melting point of the base metal, fumes may be liberated which contain oxides of iron and other steel alloying elements.

Section 11 - Toxicological Information

Ingredient Name	LD50 or LC50 Species /Route	OSHA PEL	ACGIH TLV(mg/m3) (TWA unless specified)
Base Metal			
Iron	mouse/oral 5.4 mg/kg	10 Iron Oxide Fume	5 Iron Oxide Fume as Fe
Carbon	No Information	Not Established	Not Established
Manganese Compounds (as Mn)	rat/oral 9 mg/kg	5 ceiling as Mn	5 Dust as Mn 1 Fume as Mn 3 Fume as Mn (STEL)
Phosphorus	No Information	.1 Total	Not Established
Sulfur	No Information	15 Total Dust	13 as SO2
Silicon	No Information	15 Total Dust 5 Respirable Fraction	10 Total
Aluminum	No Information	10 Total Dust 5 Respirable Fraction	10 Metal Dust as Al
Metallic Coating			
Aluminum	No Information	10 Total Dust 5 Respirable Fraction	10 Metal Dust as Al
Zinc (Reportable as a fume or dust)	No Information	5 Fume as ZnO	5 Fume as ZnO
Antimony & Compounds (as Sb)	No Information	.5 TWA	.5 TWA
Iron	mouse/oral 5.4 mg/kg	10 Iron Oxide Fume	5 Iron Oxide Fume as Fe
Surface Coating			
Polyester, siliconized polyester, alkyd, fluorocarbon(PVDF), e poxy, urethane, latex or acrylic paints and primers	No Information	Not Established	Not Established
Polyvinyl Chloride	No Information		
Polyethylene Film	No Information	Not Established	Not Established
Strontium Chromate-7789-06-2	No Information	Not Established	Not Established

Section 12 - Ecological Information

No data available for product as a whole. However, individual components have been found to be toxic to the environment. Metal dusts may migrate into soil and groundwater and be ingested by wildlife. Lead can be bioaccumulated in plants and water organisms, especially shellfish.

Section 13 - Disposal Consideration

Scrap should be recycled whenever possible. Product dusts and fumes from processing operations should also be recycled, or classified by a competent environmental professional and disposed of in accordance with applicable federal, state or local regulations.

Section 14 - Transport Information

Not listed as a hazardous substance under 49 CFR 172.101.

Section 15 - Regulatory Information

SARA 311/312 Codes (40CFR370): Immediate (acute) health hazard and delayed (chronic) health hazard. SARA 313 (40CFR372.65): Manganese and Lead are subject to SARA 313 reporting requirements. Please note that if you prepackage or redistribute this product to industrial customers, SARA 313 requires that a notice be sent to those customers.

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).

Section 16 - Other Information

Proposition 65 Statement:

WARNING: This product may contain chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm.

This Safety Data Sheet (SDS) has been prepared in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200) and the Supplier Notification Requirements of SARA Title III, Section 313. This SDS represents products which may contain toxic chemicals.

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Safety Data Sheet

Painted ZINCALUME® Steel, Steelscape Prints®, Steelscape Textures®, Eternal Collection®, Vintage® Heritage

Section 1 - Chemical Product and Company Identification

Product name	Painted ZINCALUME® Steel, Steelscape Prints®, Steelscape Textures®
Manufacturer	Steelscape, LLC 222 West Kalama River Road Kalama, WA 98625
Revision Date	06/01/2015
Reference No.	200000000008
Emergency Contact:	CHEMTREC (24 hours) 1-800-424-9300

Section 2 - Hazards Identification

GHS Label Elements:

Hazard Pictograms:

Signal Word:
Warning

Hazard Statement:
Does not pose a health hazard in its normal form. Inhalation of metal dust and fume may result from further processing by the user, particularly during welding, burning, grinding and machining activities. These potential health hazards should be evaluated by the user. A non-metallic passivation treatment is normally applied based upon customer/end use criteria. These non-metallic coatings may contain hazardous substances of varying amounts. During processing, substances of varying chemical composition and quantity may be generated by the surface passivant. MSDS information regarding the surface passivant shall be supplied to the user upon request.

Carcinogenity:
Certain chromium and nickel compounds as well as organic compounds found in various coating materials have been listed as carcinogens by the NTP, IARC, or OSHA.

Medical Conditions Aggravated by Long Term Exposure:
Individuals with chronic respiratory disorders (i.e., asthma, chronic bronchitis, emphysema, etc.) may be adversely affected by any fume or airborne particulate matter exposure.

Chronic Effects:
Chronic inhalation concentrations of iron oxide fumes or dusts may lead to a benign pneumoconiosis (siderosis). Inhalation of high concentrations of ferric oxide may possibly enhance the risk of lung cancer development in workers exposed to pulmonary carcinogens. Chronic inhalation concentrations of aluminum fumes or dusts may lead to a fibrotic lung condition known as Shaver.s disease; however, evidence for this is not conclusive since affected workers were exposed to other substances (silica) as well. The inhalation of high concentrations of dust from manganese, copper, lead and/or zinc in the respirable particle size range can cause an influenza-like illness termed metal fume fever. Typical symptoms last 12 to 48 hours and are characterized by metallic taste in mouth, dryness and irritation of the throat, followed by weakness, muscle pain, fever and chills. Continuous exposures to high concentrations of manganese can cause central nervous system disorders and .manganese pneumonia.. Fibrosis of lung tissue from manganese exposure has also been reported for products containing manganese only. Overexposure to

aluminum dust can cause shortness of breath. Long term inhalation exposure to high concentrations (overexposure) to pneumoconiotic agents may act synergistically with inhalation of oxides, fumes or dusts of this product to cause toxic effects. Prolonged or repeated contact with unprotected skin may result in skin irritation. Torching or burning operations on steel products with oil or organic coating may produce emissions which can be irritating to the eyes and respiratory tract.

Precautionary Statement:

Inhalation of metal dust and fume may result from further processing by the user, particularly during welding, burning, grinding and machining activities. These potential health hazards should be evaluated by the user.

Section 3 - Composition / Information on Ingredients

Ingredient Name	CAS-No.	Weight%	
		Min	Max
Base Metal			
Iron	7439-89-6	Balance	99.00
Carbon	7440-44-0		0.30
Manganese Compounds (as Mn)	7439-96-5		1.2
Phosphorus	7723-14-0		0.15
Sulfur	7704-34-9		0.05
Silicon	7440-21-3		0.05
Aluminum	7429-90-5		0.10
Note: Base Steel may contain the following trace or residual elements: Chromium(0.10% max). Copper(0.12% max), Molybdenum (0.10% max), Nickel (0.12% max), Columbium (0.06% max), Tin (0.03% max), Titanium (0.06% max), and Vanadium (0.08% max).			
Metallic Coating			
Aluminum	7429-90-5	51.00	58.00
Zinc (Reportable as a fume or dust)	7440-66-6	40.00	48.00
Silicon	7440-21-3	1.30	1.90
Iron	7439-89-6		0.02
Surface Coating			
Polyester, siliconized polyester, alkyd, fluorocarbon(PVDF),epoxy, urethane, latex or acrylic paints and primers			0.01
Polyvinyl Chloride	9002-86-2		0.01
Polyethylene Film	9002-88-4		0.01
Strontium Chromate-7789-06-2	7789-06-2		0.10
The weight percentages of these compounds are below the levels for which reporting of exact percentages is required in Section 313 of SARA 40CFR Part 372.38			

Section 4 - First Aid Measures

Eye contact:

Treat any foreign body in eye by flushing with large amounts of water. Seek medical attention immediately.

Skin contact:

Skin hazards are not expected. However, should dermatitis develop, affected area should be washed with mild soap and water. If irritation or other symptoms develop, seek medical attention. Precautions should be taken to protect against sharp steel edges. If the skin is abraded by handling, seek medical attention.

Ingestion:

Ingestion hazards are not expected.

Inhalation:

For treatment of overexposure to fumes and/or particulates, remove exposed individual to fresh air and seek medical attention. Administer artificial respiration or oxygen if breathing is difficult or has stopped.

Section 5 - Fire-Fighting Measures

Not flammable or combustible. Steel products in the solid state present no fire or explosion hazard and do not contribute to the combustion of other materials.

Section 6 - Accidental Release Measures

Not applicable to this metal in its solid state. 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 or disposal in accordance with federal, state, and local regulations.

Section 7 - Handling and Storage

Operations with the potential for generating high concentrations of airborne particulates should be evaluated and controlled as necessary. Practice good housekeeping. Avoid breathing fumes and/or dust.

Section 8 - Exposure Controls / Personal Protection

Respiratory protection:
NIOSH/MSHA approved dust and fume respirators should be used to avoid excessive inhalation of particulates. Appropriate respirator selection depends on the magnitude of exposure.

Hand protection:
Protective gloves should be worn as required for welding, burning or handling operations. If material is supplied with oil or other organic coating, wear protective gloves. However, do not continue to use gloves or work clothing that have become saturated with oil. Wash hands and any additional contact areas with soap and water or waterless hand cleaner.

Eye protection:
Use safety glasses or goggles as required for welding, burning, sawing, brazing, grinding or machining operations.

Engineering measures:
Local exhaust ventilation should be provided when welding, burning, sawing, brazing, grinding or machining to prevent excessive dust or fume exposure.

Personal protection equipment:
Operations with the potential for generating high concentrations of airborne particulates should be evaluated and controlled as necessary. Avoid breathing fumes and/or dust.

Section 9 - Physical and Chemical Properties

Physical State: Solid
Appearance: Thin sheet metal color, varies w/ topcoat used.
Odor: None
Vapor Pressure (mm Hg): N/A
Vapor Density (air = 1): N/A
Formula Weight: N/A
Density: N/A
Sp. Gravity(H2O = 1): 7.8000N/A
pH: N/A

Water Solubility: Insoluble
Other Solubilities: N/A
Boiling point/range: N/A
Freezing/Melting Point: N/A
Viscosity: N/A
Refractive Index: N/A
Surface Tension: N/A
% Volatile: N/A
Evaporation Rate: N/A

Section 10 - Stability and Reactivity

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

Hazardous Conditions to Avoid:
Will react with strong acid to liberate hydrogen. Finely divided material may react with water, strong oxidizers, alkaline, and hydrogenated compounds. At temperatures exceeding the melting point of the metallic coating, fumes may be liberated which contain oxides of the metallic coating constituents. At temperatures exceeding the melting point of the base metal, fumes may be liberated which contain oxides of iron and other steel alloying elements.

Section 11 - Toxicological Information

Ingredient Name	LD50 or LC50 Species /Route	OSHA PEL	ACGIH TLV(mg/m3) (TWA unless specified)
Base Metal			
Iron	mouse/oral 5.4 mg/kg	10 Iron Oxide Fume	5 Iron Oxide Fume as Fe
Carbon	No Information	Not Established	Not Established
Manganese Compounds (as Mn)	rat/oral 9 mg/kg	5 ceiling as Mn	5 Dust as Mn 1 Fume as Mn 3 Fume as Mn (STEL)
Phosphorus	No Information	.1 Total	Not Established
Sulfur	No Information	15 Total Dust	13 as SO2
Silicon	No Information	15 Total Dust 5 Respirable Fraction	10 Total
Aluminum	No Information	10 Total Dust 5 Respirable Fraction	10 Metal Dust as Al
Metallic Coating			
Aluminum	No Information	10 Total Dust 5 Respirable Fraction	10 Metal Dust as Al
Zinc (Reportable as a fume or dust)	No Information	5 Fume as ZnO	5 Fume as ZnO
Silicon	No Information	15 Total Dust 5 Respirable Fraction	10 Total
Iron	mouse/oral 5.4 mg/kg	10 Iron Oxide Fume	5 Iron Oxide Fume as Fe
Surface Coating			
Polyester, siliconized polyester, alkyd, fluorocarbon(PVDF),epoxy, urethane, latex or acrylic paints and primers	No Information	Not Established	Not Established
Polyvinyl Chloride	No Information		
Polyethylene Film	No Information	Not Established	Not Established
Strontium Chromate-7789-06-2	No Information	Not Established	Not Established

Section 12 - Ecological Information

No data available for product as a whole. However, individual components have been found to be toxic to the environment. Metal dusts may migrate into soil and groundwater and be ingested by wildlife. Lead can be bioaccumulated in plants and water organisms, especially shellfish.

Section 13 - Disposal Consideration

Scrap should be recycled whenever possible. Product dusts and fumes from processing operations should also be recycled, or classified by a competent environmental professional and disposed of in accordance with applicable federal, state or local regulations.

Section 14 - Transport Information

Not listed as a hazardous substance under 49 CFR 172.101.

Section 15 - Regulatory Information

SARA 311/312 Codes (40CFR370): Immediate (acute) health hazard and delayed (chronic) health hazard. SARA 313 (40CFR372.65): Manganese and Lead are subject to SARA 313 reporting requirements. Please note that if you prepackage or redistribute this product to industrial customers, SARA 313 requires that a notice be sent to those customers.

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).

Section 16 - Other Information

Proposition 65 Statement:

WARNING: This product may contain chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm.

This Safety Data Sheet (SDS) has been prepared in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200) and the Supplier Notification Requirements of SARA Title III, Section 313. This SDS represents products which may contain toxic chemicals.

The information contained in this SDS was obtained from sources which are believed to be reliable by the manufacturer. However, the information is provided without any responsibility or warranty, expressed or implied regarding its accuracy or correctness. The conditions or methods of handling, storage, use and disposal of this product are beyond the knowledge of the manufacturer. For this and other reasons, the manufacturer does not assume 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 this product.

	ZINCALUME® Bare	ZINCALUME® Painted‡	TruZinc® Bare	TruZinc® Painted‡
ORDER ENTRY (in 000's)				
Minimum Order Size~°	50	25	50	25
Order Increments~°	50	25	50	25
Minimum Coil Size	7	7	7	7
Maximum Coil Size	25	20^	50	20^
SURFACE TREATMENT				
Skin Passing	•	•	•	•
Passivation	•		•	
Oil	•		•	
Resin (clear & tinted)+	•		•	

° **BARE COIL:** Widths in the 26"- < 31" range must have a minimum order size of 35K lbs. with additional order increments of 35K lbs. Widths in the 31" - <35" range must have a minimum order size of 40K lbs. with additional order increments of 40K lbs. Widths in the 35" - 38" range must have a minimum order size of 45K lbs. with additional increments of 45K lbs. Please note that we do have significant quantities of steel sourced that have order increments smaller than this stated guideline. We will make every effort to match the quantity you require, but may need to make order quantity adjustments for items using this supply chain.

~ **PAINTED COIL:** Painted steel orders must utilize an entire hot roll coil, based on the bare product width ranges provided above (see the ° footnote). The minimum order size for painted steel is ½ the bare order size IF accompanied by a second order of painted product for the same specification using the remainder of the hot roll coil.

^ If vertical, skidded max weight is 12,500# in Rancho and 15,000# in Kalama.

* For TruZinc and ZINCALUME Steel, .0356 & > is considered non-surface critical. Consult your Steelscape Account Manager for details.

+ Resin coated and mill-applied coated product lead times may vary based on accumulation of a minimum tonnage requirement.

‡ For painted steel thickness >.030", consult your Steelscape Account Manager. Paint systems and color MUST be pre-approved by Steelscape Quality Systems prior to order.

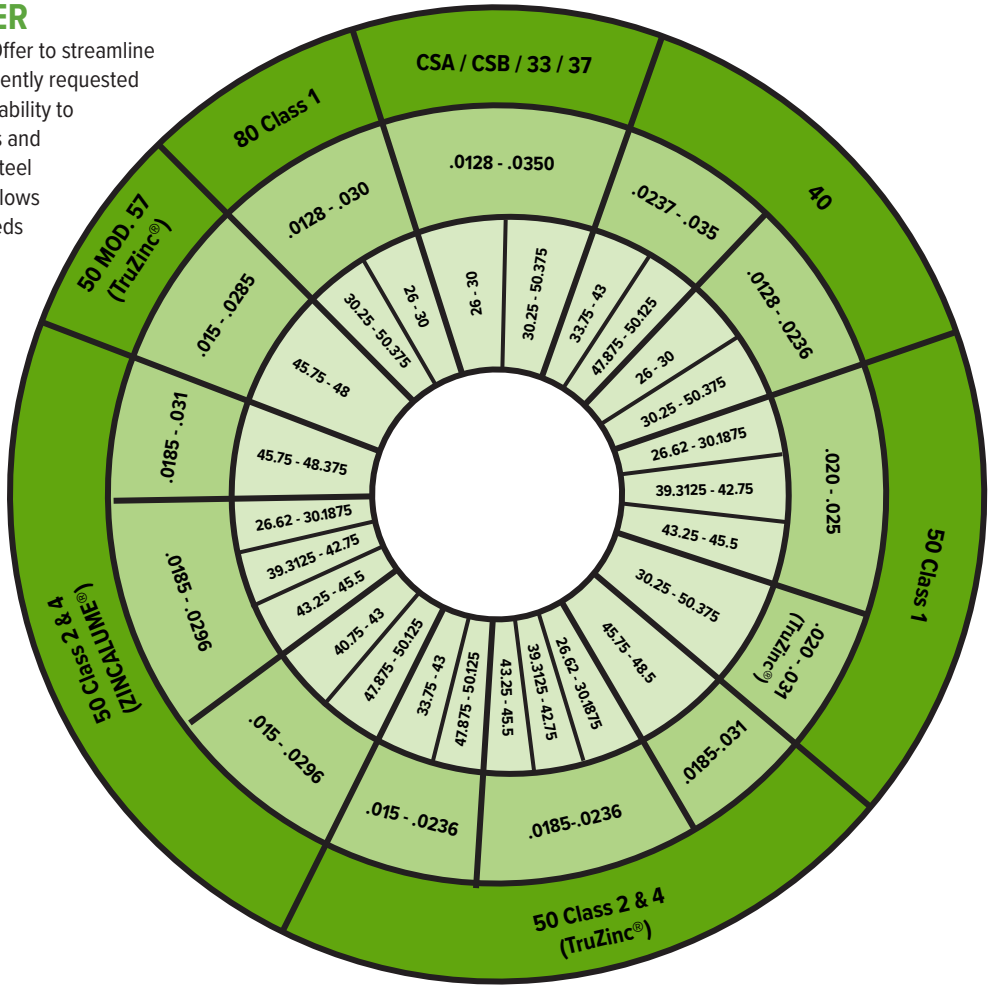
Please reference Steelscape's website, www.steelscape.com, for full offer details on both bare and painted product.

STANDARD PRODUCT OFFER

Steelscape designed the Standard Product Offer to streamline and categorize our many products into frequently requested offerings. This offer maximizes Steelscape's ability to reliably and quickly process customer orders and deliver quality metallic-coated and painted steel products. The Standard Product Offer also allows Steelscape to effectively serve customer needs and deliver superior service.

The Product Offer groups products according to coil thickness, width, metal coating type and product grade. This grouping targets our customers' inventory management, product range and purchasing needs. The offer is a robust selection with very competitive lead-times. Please inquire for products not listed.

This diagram illustrates Steelscape's Standard Product Offer and is subject to change. Steelscape welcomes "trial orders" on a conditional basis.



Wheel Color Key
Material
Thickness
Width Options

Material	Substrate	Thickness	Width Options	Width Limitation
CSA/CSB/33/37	TruZinc/ZINCALUME	.0128 -.0350	26 - 30 30.25 - 50.375	30.25 < X < 30.25
40	TruZinc/ZINCALUME	.0237 - .035	33.75 - 43 47.875 - 50.125	43 < X > 47.875
		.0128 - .0236	26 - 30 30.25 - 50.375	30.25 < X < 30.25
50 Class 1	TruZinc/ZINCALUME	.020 - .025	26.62 - 30.1875 39.3125 - 42.75 43.25 - 45.5	30.1875 < X > 39.3125 42.75 < X > 43.25
	TruZinc	.020 - .031	45.75 - 48	
50 Class 2 & 4	TruZinc	.015 - .0236	33.75 - 43 47.875 - 50.125	43 < X > 47.875
		.0185 - .0236	26.62 - 30.1875 39.3125 - 42.75 43.25 - 45.5	30.1875 < X > 39.3125 42.75 < X > 43.25
		.0185 - .031	45.75 - 48.5	
50 Class 2 & 4	ZINCALUME	.015 - .0296	40.75 - 43 47.875 - 50.125	43 < X > 47.875
		.0185 - .0296	26.62 - 30.1875 39.3125 - 42.75 43.25 - 45.5	30.1875 < X > 39.3125 42.75 < X > 43.25
		.0185 - .031	45.75 - 48.375	
50 Mod. 57	TruZinc	.015 - .0285	45.75 - 48	
80 Class 1	TruZinc/ZINCALUME	.0128 -.0350	26 - 30 30.25 - 50.375	30.25 < X < 30.25

STEELSCAPE VALUE-ADD PROCESSES

Steelscape values innovation and progress. In every industry, there are vast opportunities for advancement, growth and overall improvement both in products and processes. However, in most cases, these opportunities do not come easily. It takes time, effort and dedication to find and develop these opportunities into something that is attainable and real. Steelscape, in an effort to lead the steel industry in this innovative quest, devotes resources to doing just that. And the result over the past several years has been a host of new products and processes that Steelscape is now offering to you.

The following pages outline some of the many additional processes that Steelscape has to offer. While not every new development is listed in the section, it should provide you with a brief look at some of the work Steelscape has been doing over the past few years. We highlight our value-add processes such as slitting, embossing, cut-to-length and mill applied coatings.

To learn more about Steelscape's value-added processes, contact a Steelscape Sales Representative. And, as always, any suggestions for new products or processes are always welcome!

Cut-to-Length Sheet

Steelscape provides Cut-to-Length Sheet as a Value Add Service. The Cut-to-Length line is also capable of shearing material. The following matrix shows the Cut-to-Length capabilities for our only CTL line, located in Kalama, WA.

	Kalama
Max Entry Coil Weight	60,000 #
Max Shear Strength	50 KSI
Max Yield Strength	65 KSI (90 KSI up to .030" thick)
Thickness (T)	0.010" - 0.050" Bare* 0.0101 – 0.030" Painted*
Width	12" - 60"
Max Pallet Weight	15,000 #
Min. Cut Length	36"
Max. Cut Length	120" (up to 150" - trial only)
Entry OD/ID	84"/20" +/- 0.5"
Max Stack Height	24" with skid
Strippable Film**	48" (-0.25"/+0.375")

* Maximum thickness is limited for fluorocarbon paint systems due to concern with scratching top surface upon stacking. Inquire with your Steelscape representative for painted product greater than 0.0236" ordered thickness.

** Standard width is 48", it can be made available in any width up to 60".

Slitting

Steelscape provides Slitting as a Value Add Service to all customers. The following matrix shows our slitting capabilities by facility. Should you have any questions regarding our slitting capabilities, please contact your Steelscape Sales Representative.

	Kalama	Rancho
Max Entry Coil Weight	55,000 #	20,000 #
Max Delivery Weight	55,000 #	20,000 #*
Thickness (T)	0.010" - 0.050"	0.011" - 0.046" Steel 0.032" - 0.063" Alum.
Width	16" - 52"	12" - 52"
Max number Mults	24	20 if .025"<T<.050" 40 if T<.025"
Maximum # sizes per setup	Depends on knives & size of mults	Depends on knives & size of mults
Minimum Slit Width (W)**	2.00"	4.00"
Entry OD/ID***	79" max/20"	64" max/20"
Delivery OD/ID	79" max/20"	64" max/20"
Cores****	W > 10", T < 0.030"	W > 10"
Min. Slit Drop	0.375"	0.375"

* If vertical, skidded maximum weight is 12,500#.

** For smaller widths inquire with your Steelscape Representative.

*** OD max depends on number of mults and crown in the coil.

**** Cores are "all or nothing" for the whole arm of mults (i.e. if one mult on the arm is less than 10", then none of the mults on the arm can have cores). Please inquire for cores < 10" due to safety issues.

Embossing

Embossing is a Value Add Service to all customers. The following matrix shows our embossing capabilities at our Rancho Cucamonga, CA, facility. Should you have any questions regarding our embossing capabilities, please contact your Steelscape Sales Representative.

	Rancho
Pattern	Non-Directional Stucco
Max Entry Coil Wt	30,000 #
Max Output Coil Wt	12,500 #
Thickness	0.0180" - 0.0296"* Steel 0.0320" - 0.040" Aluminum
Width	23.937" - 48.5" Steel 18" - 48.5" Aluminum
Depth	. 007" up to .01" thick
Substrates	TruZinc (HDG), ZINCALUME (Galvalume), CRS, ALUM**
Entry OD/ID	20"
Delivery OD/OD	OD 64"/ID 20"
Cores	Required
Reverse Wrap	Available
Packaging	Vertical Only***

* If outside of this thickness and wider than 48.5", inquire with your Steelscape Representative.

** Grade/hardness restrictions may apply to some substrates. Cannot process Grade 80 steel. Grade 50 above 0.0236" inquire with your Steelscape Representative.

*** Embossed material will collapse if packaged longitudinally.

PRODUCT OPTIONS

Skin Passing

Skin-passing is a critical step to achieving superior surface quality, especially for painted steel products. It is important to define whether a product should be skin-passed when placing an order.

Recommendations for skin-passing are as follows:

- All painted products must be skin-passed. Any question as to skin-passing necessity should be referred to our Sales or Technical Sales Dept. prior to placing an order.
- Resin coated products should not be skin-passed as it is very difficult to measure the resin coating thickness
- Skin-passing produces an extra smooth bare product and is especially beneficial for painted products.

Chemical-Treatment & Oiling

Chemical-treatment and oiling are also critical steps in the metallic coating process. Both processes lengthen finished product shelf life and help to prevent field rejections due to rust. Oil is important in cases where resin is not available and self-lubricating surface characteristics are desired. It is important to specify whether a product should be chemically-treated and/or oiled when placing an order.

Recommendations when chem-treating or oiling are as follows:

- Any questions regarding oiling or chemical-treatment necessity including RoHs compliances should be referred to our Technical Sales Department. We have several options available.
- All resin-coated products (TruZinc® Plus and ZINCALUME® Plus) should not be oiled. Oiling is unnecessary and makes the resin-coated surface too slick.
- Some bare, chemically-treated (non-resin) products require light to medium oiling so adequate lubricating properties are achieved for downstream processing.
- Bare, paint line feed product not painting at Steelscape, may require chemical-treatment to prevent storage and transportation corrosion, consult with our Technical Sales Department.
- All other bare products should be chemically-treated.

Theoretical Minimum Weight

Steelscape provides ZINCALUME® and TruZinc® Steel products on both an actual weight and TMW (theoretical minimum weight) basis. Many of our customers sell their products on a lineal footage basis and it makes sense to purchase the same way. TMW pricing permits customers to pay for the lineal feet of coated steel in a particular coil (or order). If the steel is slightly thicker than the minimum dimensions ordered customers do not pay for the excess. Customers are charged only for the lineal feet received. There is a small extra charge for the added feature of TMW pricing and customers should contact your Steelscape Sales Representative for details.

For customers buying and selling steel on an actual weight basis our standard pricing uses the actual weight of each coil (or order) to calculate the invoiced price. Steelscape calculates the price of TMW products as follows:

TruZinc® Steel

ρst = density of steel and zinc coating = 0.2833 lb/in3
χ = ordered width of steel (inches)
τ = ordered thickness of steel (inches)
δ = actual lineal feet of steel (feet)
Theoretical Minimum Weight (lb) = ρst • χ• τ• δ• 12
Gauge x Width x 12 x .2833 = TMW
Example: ordered width = 48", ordered thickness = 0.019", actual lineal feet in coil = 5,500
TMW = 0.2833 • 48 • 0.019 • 5500 • 12 = 17,052.4 lb

ZINCALUME® Steel

ρst = density of steel = 0.2833 lb/in3
ρZINCALUME = density of zinc-aluminum coating = 0.1355 lb/in3
β = thickness of ZINCALUME AZ50 coating = 0.0016"
χ = ordered width of steel (inches)
τ = ordered thickness of steel (inches)
δ = actual lineal feet of steel (feet)
Theoretical Minimum Weight (lbs) = [ρst • (τ - β) + (β• ρZINCALUME)] • χ• δ• 12
example: ordered width = 48", ordered thickness = 0.019", actual lineal feet in coil = 5,500
TMW = [0.2833 • (0.019 - 0.0016) + (0.0016 • 0.1355)] • 48 • 5500 • 12 = 16,293 lb

Resin Coating

Steelscape offers a clear resin coating on ZINCALUME® Steel product called ZINCALUME® Plus Steel. We also offer a resin coated TruZinc® Steel, TruZinc® Plus. The resin coating is water-based and is 0.031 to 0.060 mils thick. The resin coating is applied in-line to both top and bottom surface. It is formulated to resist finger printing and scuffing during product handling in addition to improving resistance to wet-stack stains occurring during transport and storage. ZINCALUME Plus and TruZinc Plus Steel virtually eliminates the need for roll forming lubricants.

Steelscape requests that customers notify them if any adhesion properties are required of either ZINCALUME Plus or TruZinc Plus steel products at the time of placing an order. Depending on the adhesion properties required, a different resin system may need to be applied.

Several other, specialty resins are available, including tinted products. Please inquire with your Steelscape Sales Representative for additional information.

PACKAGING

Steelscape's products are packaged in a variety of ways. To be most effective we identified the most commonly requested package options and included them within our Standard Packaging Offer.

Standard Packaging - General Descriptions*	Code
Horizontal, Two Eye Bands	110
Horizontal, Paper Wrap, Two Eye Bands	120
Horizontal, Plastic (VCI) Wrap, Two Eye Bands, ID and OD Protection, Core. For painted only. Required for Rail Gondola	140
Vertical, Plastic (VCI) Wrap, Skid, Core	210
Vertical, Plastic (VCI) Wrap, Skid	220
Side Loaded Skid - CTL	807
Vertical, Wrap, Skid, Rubber Mat, Boxcar (3-run 4x4)	410
Vertical, Exhibit Wrap, Skid, Rubber Mat, Boxcar (3-run 4x6)	430

Steelscape will consider non-standard packaging requests on an inquiry basis. All Non-Standard Packaging may be subject to packaging extras. Please consult a Steelscape Sales Representative for more information.

* Wrap type depends upon the facility from which the product is shipped.

SHIPPING POLICY & PROCEDURES

Steelscape realizes the important role transportation plays in getting our product to customers. We have established the following policies and procedures to ensure the product shipped is received in the same condition as when it left our facilities.

Carrier Requirements

- The carrier must supply all necessary dunnage.
- The carrier must have tarps or curtain van.
- The carrier must have chains or straps, and appropriate edge protection.
- The carrier must pay for any dunnage Steelscape supplies to ensure safe and damage-free transit of our product.

NOTE: Steelscape reserves the right to refuse loading any carrier vehicle that arrives unprepared.

Preparing Coils for Transit

- All loads must be protected from weather and the elements before leaving the plant site.
- All coils must be appropriately secured in accordance with local and state laws before transit.

Proper loading protection is an important factor in getting products to customers safely and undamaged.

Drivers may be asked to lay tarp over coils and complete tying down outside the loading area if other trucks are waiting to load.

Required Paperwork

Drivers picking up coils at any Steelscape location will be given a bill of lading. The bill of lading must be received and signed by a representative of our customer. Steelscape requires a copy of this signed bill of lading be included with the carrier invoice. Some shipments will also be accompanied by Mill Test Certifications. The certifications must also arrive with the coils and be received by our customers.

Required Attire

All safety protection mentioned below must be supplied by the carrier and worn by the driver while on Steelscape property.

- **Hard hat**
- **Safety glasses**
- **High visibility vest**
- **Long sleeved shirt**
- **Long pants**
- **Closed-toed shoes**

NOTE: If Steelscape supplies required safety attire to an unprepared carrier, we ask that the supplies are returned prior to leaving our facility. Steelscape places both our safety and the safety of visitors to our facilities as the highest priority. We favor vendors and carriers who honor our safety requirements.

Safety

All drivers will be required to follow the **Exclusion Zone Policy** outlined by Steelscape during the driver safety briefing. Any minors or pets accompanying the driver must remain inside the vehicle cab while the truck is inside the loading area or at anytime the truck is being loaded or unloaded.

Loading Appointments

Customer must notify the Steelscape Dispatcher and acquire a loading appointment at least 24 hours in advance for customer to arrange pick-up. A Steelscape Customer Service Representative can provide the appropriate Steelscape facility's Dispatcher contact information.

Steelscape will attempt to service customer Will-Call shipments received prior to noon on the same day. Same day Will-Call shipments do require that all necessary information is provided to the Steelscape Customer Service Representative and Logistic Group. All Will-Call shipments called in after noon will be scheduled for the following day. An appointment is required for all Will-Calls.

Steelscape Shipping Hours

Kalama, WA – Monday - Sunday, 24 hrs/day.

Rancho Cucamonga, CA - Monday-Sunday, 24 hrs/day.

Variance from these stated shipping hours will be communicated in advance through normal communication channels.

Standard Delivery & Pick-Up Lead Times

Local Deliveries: Next-day for Steelscape releases received by 11:00 AM. Local deliveries are < 150 miles from Steelscape's Point of Production.

Shipments Outside of Local Area: Shipment within two (2) working days for releases received by noon.

Shipments from Outside Warehouses: Same requirements as that of a Steelscape Point of Production.

Delivery/Load Changes: 6-hour notification required.

Requests outside of Steelscape's Shipping Service Offer will be addressed on a case by case basis and accommodated when schedule, workload and inventory accessibility allows.

Outgoing freight charges can be prepaid or collect as established on the order.

Steelscape will target a minimum load weight, based on released coil weights, for semi loads of no less than 45K lbs. and for maxi loads of no less than 58K lbs.

Should a coil not be available for a planned load, efforts will be made to fill the load with coils from another order or load for the same destination. This may require additional material/orders to be released for shipment.

Steelscape Transportation Incoterms

Incoterm	Text Description for Quote
Incoterm: EXW = EX Works " Carrier - Customer arranges " Freight Costs - Customer " Title - Transfers at Shipping Point	**Collect, CUSTWC**
Incoterm: FCA = Free Carrier " Carrier - Steelscape arranges " Freight Costs - Customer " Title - Transfers at Shipping Point	**Collect, Ship Arrange Frt**
Incoterm: CPT = Carriage Paid To " Carrier - Steelscape arranges " Freight Costs - Steelscape " Title - Transfers at Shipping Point	**Prepay, Ship Arrange Frt**

Storage Policy

Steelscape has a finished goods material storage policy for bare and painted, metallic-coated TruZinc® and ZINCALUME® Steel. This policy applies to finished goods of single-bill products only. Storage of toll-processing (customer-owned) product, please reference the Steelscape Toll Processing Offer.

Our policy ensures the reliability and efficiency of Steelscape is maximized through timely conversion of produced material into shipped products. Efficient use of warehouse space is also necessary for reduced Standard Product Offer lead times.

Details of the Steelscape material storage policy for single-bill orders are as follows:

- Finished goods inventory left in Steelscape's possession for more than thirty (>30) days from the order acknowledged Ship Date may be automatically transferred to an off-site warehouse for storage.
- Steelscape's storage fee will commence beginning thirty-one (31) days from the order acknowledged Ship Date.
- The storage fee, which consists of costs that Steelscape incurs in the transfer, storage and handling of each coil, will be $7.50 per ton per month.
- Customers will receive a storage invoice for each thirty (30) day period in which their product remains in Steelscape's off-site warehouse facilities.

Steelscape Account Managers or Customer Service Representatives can address questions regarding Steelscape's finished goods material Storage Policy.

FINISHED MATERIAL - RECEIPT & INSPECTION

Once received, the customer is responsible for unloading all material delivered from Steelscape and inspecting the material for visible damage. The material needs to be stored in a covered/enclosed space to protect the metal from inclement weather, water damage and/or condensation.

Prior to unloading any material with visible damage, the customer must notify the carrier's representative of the damage and note the damage as such on the delivery receipt.

If the material received does not meet the specifications on the packing list, the customer must notify the Steelscape Customer Service Representative immediately. At such time, the issue can be investigated and remedied.

If the quantity of material received by the customer is less than the quantity invoiced or if material received appears damaged in transit, the customer shall give written notice to the agent of the delivering carrier for verification of the shortage or damage. The customer will send copy of the same to Steelscape in addition to the receiving records.

Should the customer fail to notify Steelscape promptly of any issues related to damage upon receipt and/or non-conformance of the material, the material will be considered to have been received in good condition and as ordered. The material will also be considered delivered in accordance with the packing list/shipping documents.

CLAIMS POLICY

Steelscape strives to consistently provide high quality products to meet or exceed our customers' needs. Unfortunately, perfection cannot always be attained and products may not fulfill the requirements. Though we prefer getting the job done right the first time, we strive to make doing business with Steelscape as easy as possible when we don't. To that end, we created a claims policy which delineates our procedures for resolving product quality claims in a timely and satisfactory manner.

Steelscape products will meet or exceed quality criteria as described in the most recent versions of the following standards:

ASTM A568/A568M Steel Sheet, Carbon, High-Strength, Low-Alloy, Hot Rolled and Cold Rolled

ASTM A924/A924M Steel Sheet, Metallic Coated by the Hot Dip Process

ASTM A653/A653M Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy Coated by the Hot Dip Process

ASTM A792/A792M Steel Sheet, 55% Aluminum-Zinc Alloy-Coated by the Hot Dip Process

Claims Policy

Steelscape reserves the right to review any defective coil, cut sheets or formed parts, for a value greater than $2,500, to ensure fast and easy claim resolution, details of the claim should be forwarded to the customer's Technical Service Engineer or Customer Service Representative as soon as possible. Claims may also be submitted online via XtraScape. Steelscape will accept any claim investigation and resolution where the following conditions are met:

Timing (For exceptions see Table 1)

- Twelve (12) months, or less, has transpired from coil dispatch date and submission of claim.

Claim Submission

- Must be in writing and include the following information at the time of submission:
  - ◊ Customer purchase order number
  - ◊ Steelscape sales order number
  - ◊ Steelscape coil number(s)
  - ◊ Thickness
  - ◊ Width
  - ◊ Original coil weight(s)
  - ◊ Rejected coil weight(s)
  - ◊ Rejected weight(s) - weight removed with defect
  - ◊ Description of cause for the rejection
  - ◊ Where in the coil(s) the defect is occurring (edge, middle, top, bottom).
  - ◊ When during the lifecycle of the coil (at receipt, before or after processing) defect was noticed.
  - ◊ Evidence of the defect, including a representative sample of the defective material and a clear photograph of the defective coil. The sample should clearly identify the direction of the coil, as well as the coil number.
  - ◊ The name of a representative within the customer's organization who is able to negotiate final claim resolution.

Some of this required information can be found on the Steelscape Coil Tag located on each coil. Coil identification and traceability is critical to a claim investigation if a coil tag needs to be removed for processing, reattach it to the bore of the coil or write the coil number on the side wall.

Confirmation

- Steelscape reserves the right to review any defective coil for a value greater than $2,500.

Significance

- Value of claim must exceed $500 or 5% (based on net coil weight) of any single coil shipped.

- Claims for accumulated losses on an order will be accepted for consideration if the mass of the claim exceeds 3% of the order mass.

Steelscape reserves the right to view a claimed coil for a period of up to forty-five (45) days from initiation of claim; 90 days for material sold to customers >1,500 miles from plant of material origin. Steelscape also reserves the right to conduct detailed analytical testing on any claimed material which may take greater than 45 days.

Table 1: Claims Reasons and Claim Limitations

Claim Reason	Deadline
Transit Damage	30 Days*
Water Damage	30 Days*
Handling Damage	30 Days*
Breakage, Strain or Cross-break	90 Days*

* See following details for specific limitations

Specific Claim Reasons:

Underweight coils – Steelscape's definition of coil weights is as follows:

- **Underweight coils** shall not comprise more than 20% of an order without customer approval. If Steelscape ships underweight coils in excess of 20% of an order, a claim for underweight coils may be considered.
- **For Bare Product**, where no minimum coil weight is specified, underweight coils are those coils weighing less than 75% of the specified maximum coil weight. Coils weighing more than 75% of the specified maximum coil weight will be considered fit for purpose.
- **For Painted Product**, where no minimum coil weight is specified, underweight coils are those coils weighing less than 50% of the specified maximum coil weight. Coils weighing greater than 50% of the specified maximum coil weight will be considered fit for purpose.

Embossed Coils

Steelscape will not accept claims for embossed difference in appearance when material is mixed by customer.

Steelscape embossed stucco pattern creates peaks and valleys on the embossed strip. The standard orientation for Steelscape embossed product is peaks up on the topside of the strip. There will be differences in appearance in bare embossed panels when viewing two panels side by side, with opposite sides showing (peaks up/top vs. peaks down/bottom). Steelscape will not accept claims for this difference in the appearance when panels are processed or installed with panels' peaks up vs. peaks down by customer.

Painted embossed material can show color variation in the panels if the directionality is reversed panel to panel. This is due to the way light reflects off the peaks and valleys of the embossed surface. This is especially common on higher gloss paint systems. Steelscape will not accept claims where the panels have been processed or installed reverse direction panel to panel by customer.

Steelscape guarantees all embossed product supplied will not have edge wave greater than fifteen (15) I units. When customer requirements are more stringent than fifteen (15) I units, Steelscape will provide product, as agreed. This agreement must be in writing and must be obtained prior to the order acceptance. When Steelscape provides a product that exhibits edge wave greater than either the agreed standard or (15) I units, and the product is unsuitable for the designated end use, Steelscape will consider claims for edge wave.

Water Damage

Steelscape will consider claims for water damage when the claims are submitted within thirty (30) days of receipt of product. Any material received wet upon delivery MUST be noted on the receiver documents and acknowledged by the delivering agent. This must be submitted immediately to Steelscape for review. Any material not noted as damaged or wet, will be considered accepted as prime. Examples of water damage may include; wet cores, visible water or condensation on the inside of packaging, positive moisture tag indicator, visible corrosion (white or black rust on bare product), raised or rough texture of painted surface, and water staining (including yellowish discoloration on resin product).

Storing coils or panels in a manner where they become unprotected from water ingress and condensation will negate Steelscape's responsibility with respect to water damage claims. Where customers order packaging options that Steelscape considers inadequate for the product, and Steelscape forewarns said customer in writing to that end, Steelscape's liability for water damage will be negated.

Surface Condition

The production of coil by the hot dip, metal coating process naturally leads to the formation of some surface imperfections on the product. These imperfections, while not adversely affecting product life, may cause problems when the material is to be post-painted on a coil coating line. Therefore, Steelscape does not recommend the use of non skin-passed product in coil painting applications.

Where skin-passed product is ordered, Steelscape will consider claims for surface imperfections that render the product unsuitable for organic coil coating processes. If coil is ordered as non skin-passed, and subsequently used in organic coil coating, Steelscape will not accept claims for surface imperfections that could reasonably be considered to be removed by the skin-passing operation.

Steelscape will not accept claim for bare or painted hot dip coils with light surface dross as this is a normal part of the metallic coating process.

Flatness

Steelscape will provide material conforming to ASTM standard A924/A924M. When customer requirements demand a product that exceeds these standards, Steelscape must agree, in writing, to provide the material to the customer requirements. Where product does not meet either the ASTM standard or the written undertaking of Steelscape, claims for shape defects will be considered.

Edge Wave

Steelscape guarantees all product supplied will have edge wave less than fifteen (15) I units as defined by ASTM standard A924/A924M. When customer requirements are more stringent than the aforementioned standard, Steelscape will provide product, as agreed. This agreement must be in writing and must be obtained prior to the order acceptance. When Steelscape provides a product that exhibits edge wave greater than either the agreed standard or A924/A924M, and the product is unsuitable for the designated end use, Steelscape will consider claims for edge wave.

Transport Damage

Claims for transit damage on rail car shipments will only be considered if submitted within fourteen (14) days of the material being available for unloading. Full details of the damage and photographs of the material in the rail cars, along with the rail car number, must be provided with the claim submission. Claims for transit damage on material received by truck should be forwarded to Steelscape immediately upon receipt of the product. All other claims for transit damage will be accepted within thirty (30) days of receipt of the material.

Handling Damage

Claims for a product that exhibits handling damage will be accepted for up to thirty (30) days from receipt of the material. Claims must be accompanied by photographs of the damaged product with the Steelscape packaging in place.

Paint Attributes

Steelscape's painted products will be supplied free from defects or imperfections that detract from the performance or aesthetic value of the product. Painted products will comply with the following standards:

Gloss	To paint vendor's specification
Hardness	To paint vendor's specification
Film Thickness	To paint vendor's specification
Reverse impact	To paint vendor's specification
Color	No more than ± 0.5 units on L, A, or B scales from the supplied standard. Not applicable to visual only colors such as micas/metallics.

Steelscape may supply product within tighter specifications, but only when there is prior written agreement from Steelscape to provide such a product. Claims regarding quality concerns with painted products will be accepted for consideration only when the product falls outside these parameters.

Width

Our products will be within width tolerances as defined in ASTM standard A924/A924M.

Thickness

Steelscape's products will be within the ASTM Full Restricted Tolerances - 1" Minimum Edge Distance, as defined in ASTM standard A924/A924M (table shown below). However, Steelscape will provide our product to a tighter thickness tolerance if agreement to provide this product is acknowledged in writing prior to order acceptance by a Steelscape Technical Service Engineer.

	Thickness (Inches)	
Width (Inches)	.010 - .023	>.023 - .045
MINIMUM	**Minimum Tolerances - All Plus**	
> 0 - 32	0.003	0.004
> 32 - 40	0.003	0.004
> 40 - 54	0.003	0.004

NOMINAL	Nominal Tolerances - Plus and Minus	
> 0 - 32	0.002	0.002
> 32 - 40	0.002	0.002
> 40 - 54	0.002	0.002

Thickness is measured on the coated sheet and includes the metallic-coating thickness. Thickness is measured at any point on the sheet not less than 1 inch from a side edge, per ASTM 924-16a, Table 2.

Customers should inquire about any application requiring improved (tighter) tolerances for performance reasons.

Processing Charges

Steelscape's liability shall be limited to the purchase price of the defective material. No other costs associated with the defect will be reimbursed by Steelscape.

Field Failure Claims

Steelscape will consider each field failure claim on an individual basis. Where the product failure is clearly caused by product defects, Steelscape will, at its own option, replace or repair defective product where failure occurs after installation. Replacement cost will be limited to the value of the material only. Any other costs or contingencies will not be considered. This includes, but is not limited to, transport fees, material forming, job installation, removal of defective product, late charges for the job, equipment rental, idle person-hours, or other installation or administrative costs.

Secondary Product

All secondary products sold by Steelscape are sold on an "as is" basis, with no warranty expressed or implied. No quality claims will be accepted on secondary product.

Other Claim Reasons

Steelscape will consider other reasons for quality concerns on an individual basis. Should these occur, the customer must contact either their Account Manager, Customer Service Representative or Technical Services.

Steelscape Claim Responses

Steelscape will respond to the customer within thirty (30) calendar days from the date complete claims information is provided by the customer to the Steelscape Technical Service Engineer. Steelscape's response may include one of the following:

- Acceptance of the rejection and instructions for material disposition.
- Denial of the rejection with adequate explanation for the denial.
- Recommendations for further processing at the customer's facility for purposes of working through the defective material.
- Instructions for the return of the material in question to Steelscape. Some material may be usable with additional processing. Once the material has been reprocessed and the issue resolved, the material will be returned to the customer. Authorized returns to Steelscape must be completed within 120 days of claim acceptance.
- Request for an extension if acceptance or denial cannot be determined within the thirty (30) calendar days. A request for extension will include a reason and the specific timeline for a final response.

The customer will have the opportunity to appeal any denied claim for fourteen (14) calendar days after written denial is provided by Steelscape. All accounting transactions related to the claim will be held until such time that the final disposition of the claim has been made and agreed to by both parties.

Tagged Defect

Steelscape's products may contain a tagged or marked defect. The tags define the start and end point of such a defect. Steelscape will not accept claims on this material when the defect falls within the boundaries of the tags. This defective material can be included in scrap reconciliation with Steelscape or reduced from the price of the coil prior to invoicing. Consideration will be given to any defects outside the tagged area.

Running Minimum Amount of Defect

Wherever possible and practical Steelscape requests that the customer try to process a minimum of 200 ft. of the product before filing a claim. This is due to the fact that some defects may clear up within 200 ft. However, where the defect is obviously evident throughout the coil, no such processing is required.

Segregation and Protection of Claim Coils

Steelscape requires customers to have the defective coils readily available for inspection at a mutually arranged time. The coils may require an inspection on a recoiler unit or rolled out in a safe manner to be inspected by Steelscape representatives. Steelscape requires customers to provide adequate protection of all claim coils to prevent generation of further defects. Steelscape may reduce the claim amount by the amount of any additional induced losses due to inadequate protection.

NOTE: Any unauthorized or unidentified deductions taken by a customer before a claim is disposed of, approved by Steelscape, and settled shall constitute nonpayment with subsequent consequences. Consequences may include, but not limited to, implementation by Steelscape of a credit hold, shipping hold, and/or loss of discount privileges.

STEELSCAPE WEBSITE & XTRASCAPE®

Steelscape has designed an external website that is simple and easy to use. Realizing how important real time information can be, our website strives to inform and assist everyone who logs onto the site. At **www.steelscape.com** customers can learn about everything from the Steelscape company culture to product specifications to current publications.

Steelscape's website also contains our online transaction system - XtraScape. XtraScape provides a vast amount of data on Steelscape orders, coils, shipments and claims. In addition, customers are able to submit online claims submissions. XtraScape is currently available to all active Steelscape customers. To request access to XtraScape, click on the "Register Now" link on our website at **www.steelscape.com.** Customers can also request access by contacting their Steelscape Sales Representative.

CO-OP ADVERTISING POLICY

Steelscape® LLC, in support of partnering with customers, offers financial &/or marketing assistance when customers include reference to Steelscape's trade names &/or corporate brand in a promotional effort.

Steelscape trade names &/or brands include: ZINCALUME®, TruzGuard®, ReziBond®, Spectrascape®, Steelscape Prints®, TruZaics®, TruZinc®, Vintage®, XtraScape®, Steelscape Textures®, Design Solutions®

Details of Steelscape's Co-Op Advertising Policy are listed below:

1.1 Assistance is based on total volume (tons) shipped from Steelscape the previous calendar year.

1.2 Assistance has a maximum value of $5,000 per calendar year with no remaining balance rolled over to the next year.

1.3 The co-op funding provided by Steelscape will not exceed the total cost of the approved promotional effort.

1.4 All promotional efforts must have an **external** audience focus with the purpose of promoting both brands and the generation of leads.

1.5 Promotional efforts supported by this policy may include advertising, special promotions, company brochures, color charts, and meeting sponsorship &/or other efforts as approved in advance by Steelscape.

To qualify for Co-Op Advertising funding support, the promotional effort MUST meet the following:

1.6 **In all cases, the Steelscape trade name &/or brand must be clearly referred to and properly identified with Steelscape as the owner of the brand &/or producer of the product.** Steelscape will provide proper usage of all brand trade names and logos.

1.7 All proposals for co-op funding **MUST** be provided to Steelscape's Marketing Department in writing with the intent of the promotional effort, approximate costs, timing, and proposed usage of the Steelscape trade name &/or brand **PRIOR** to commencement.

1.8 Steelscape's Marketing Department **MUST** review and approve the final draft of any promotional effort utilizing a Steelscape trade name &/or brand **PRIOR** to launching the effort in order to ensure proper usage of the trade name, brand, &/or logo.

1.9 Once final approval from Steelscape's Marketing Department has been received, proof of the final promotional effort along with the accompanying invoice(s) for the promotional effort **MUST** be sent to Steelscape's Marketing Department. Upon receipt of proof and invoice, a reimbursement check will be issued to the customer for the approved funding amount. **Reimbursement of co-op expenses via third-party vendors, debit/ credit memos and/or short-pays on product sales are NOT permitted.**

For any questions regarding Steelscape's Co-Op Policy please contact your Steelscape Account Manager.

Definitions

This section defines the technical terms used in the Service Offer Manual. Unless a term is defined in this section, the most widely-accepted definition appearing in an English dictionary will apply. If any of the following definitions are unclear or you require additional assistance, please contact your Steelscape Sales Representative. Should a term appear in the Service Offer Manual that is not adequately defined, please contact us and we will amend this section as appropriate.

Acknowledged Delivery Date: The date by which Steelscape commits to produce an order and pack it ready for shipment. For orders that are pre-released, this date represents the date by which the order will be produced, packed and shipped. This date is always a Saturday.

Acrylic Paint: Thermoset acrylic and acrylic coatings are based on resins prepared from acrylic and methacrylic esters, acrylic and methacrylic acids and/or styrene. Acrylics can be modified with other resins. Acrylic latex resins are designed to exceed the polyester resin systems in durability, color retention and outdoor exposure tests. Because they utilize waterborne technology, acrylics reduce toxic VOC (volatile organic compounds) when paint is cured. Acrylic paints are typically found on roll formed sections for commercial, agricultural and pre-engineered buildings.

Aged Material: Material that was ordered by a customer and remains in Steelscape's inventory for > 30 days from the order acknowledge date.

ASTM Standards: The American Society for Testing and Materials is an independent standards organization that regularly publishes testing and performance specifications for a wide variety of industrial products. Steel producers in North America provide most common steel products according to specifications laid out in the ASTM standards. Steelscape adheres to these standards.

ASTM Thickness Tolerance: Allowable variation in strip thickness as designated in the ASTM standards.

Auto Release: Pre-authorization has been given for shipment.

AZ35 Coating: 55% Aluminum/45% zinc coating applied at a minimum coating mass of 0.35 oz/ft2 (total, both sides).

AZ50 Coating: ZINCALUME® coating applied at a minimum coating mass of 0.50 oz/ft2 (total, both sides).

AZ55 Coating: ZINCALUME® coating applied at a minimum coating mass of 0.55 oz/ft2 (total, both sides).

Bill of Lading: A document defining freight terms for a shipment, specifying when ownership of material transfers from seller to buyer, together with assignment of freight charges.

Bonderized: A thin layer of Zinc Phosphate on the surface of the sheet that it is a weldable product and that provides a surface
to which paint will readily adhere. This is typically used in rainwater goods.

Branding: A positive identification of product characteristics placed on the coil such as manufacturer, product name, grade, coating, thickness, width and production date. This information may be reproduced at frequent intervals on the bottom side of a coil.

Chromium Passivation (Also Chemical Treating): A surface treatment normally applied to metallic coatings to retard the formation of corrosion products (storage stain) during shipment and storage. It is applied to bare products in-line. Some continuous paint lines may not be able to paint over all types of chromium passivation.

Closed Order: An order which has been shipped complete (within +/- 10%) or has a reason of rejection defined. As noted above the delivery percentage listed can be changed, which will allow the orders to close prior to -10%.

Coil Hardness: The resistance of metallic material to plastic deformation by indentation or penetration.

Coil Number: A unique number, assigned by Steelscape, which identifies a finished coil.

Commercial Steel (CS): Steel sheet intended for applications where product is subjected to bending or moderate forming. Three types of commercial steel exist and are differentiated primarily based on carbon composition limits: Type A (or CSA) which must not contain more than a 0.1% carbon content, Type B (or CSB) which specifies a 0.02 to 0.15% carbon range, and Type C (or CSC) which must not contain more than a 0.08% carbon content.

Cores: A fiber tube located in the bore of a coil, designed to provide protection from handling and mandrel damage.

Credit Terms (.5% 10th, 25th, or Net 30 Days): Standard credit terms under which Steelscape completes commercial transactions. Invoices dated from the 1st to the 15th of the month may be discounted by .5 of 1% if paid by the 25th of the month, and invoices dated from the 16th to the last day of a month may be discounted .5 of 1% if paid by the 10th of the following month. If a discount date falls on a weekend or holiday, the next business day will be acceptable for discounts. As an option to discount, invoices may be paid in 30 days from date of invoice. Postmarks will be used to establish discount dates.

Cross-Break Damage (Also Coil Break or Mandrel Marks): Cross-break is a latitudinal crease extending across the width of the strip, usually found near the inside diameter of the coil.

Customer to arrange: Customer will arrange shipment to or from designated facility.

Cut-To-Length: Sheet steel that is pre-cut to the customers specified length.
CWT (Hundred Weight): Common unit of measure used for commercial transactions in the North American steel industry. Equal to 100 pounds or 1/20th of a short ton.

Drawing: Mechanical forming of steel by tension through or in a die (for example, sheet drawing) and usually carried out at temperatures below the re-crystallization temperature.

Drawing Steel: A grade of steel designated by ASTM as suitable for drawing and other forming applications where very high ductility is required.

Dross: Particles of zinc oxide and other impurities formed on the surface of the metallic coating line pot. Dross is regularly skimmed from the surface of the pot to prevent contact with the steel strip.

Ductility: Relative ability of a metal to deform from a flat condition to a more complex shape, without fracture. Also known as formability or workability.

Dunnage: Wood and other materials used to secure steel coils during transportation. Dunnage allows safe transport while preventing product damage.

Edge Wave: A condition whereby the material at the edge of the strip is slightly longer than the rest of the strip causing a ripple effect at the edge of the strip.

Embossing: The process of inducing a specific depth pattern into the steel base of a strip using textured rolls. Steelscape offers stucco embossing.

End Use: The final use or application of the coated steel product.

Epoxy Paint: Epoxies are known for excellent substrate adhesion and corrosion resistance and have been used in primer applications for years. Poor exterior durability, poor flexibility, and high cost have limited use of epoxies in coil coatings.

Exhibit Wrap: Allows easy and immediate viewing of steel coil color.

Eye-Horizontal: Orientation of a steel coil indicating that the bore or "eye" is positioned horizontal to the ground.

Eye-Vertical: Orientation of a steel coil indicating that the bore or "eye" is positioned vertical to the ground.

Fiber Core: A liner used inside coils to prevent excessive damage from normal handling.

Field Failure: A premature failure of an end product such as fading, corrosion, adherence, etc. while that product is in service.

Film Thickness: Film thickness or dry film thickness (DFT) refers to the thickness of paint film on the strip surface, once the paint has cured. Typical DFT's for painted steel range from 0.0005" (0.5 mil) to 0.0015" (1.5 mil).

Fluorocarbon Paint: Also known as PVDF (Polyvinylidene Fluoride), KYNAR 500® and HYLAR 5000® coatings. The PVDF resin does not absorb UV radiation and therefore does not degrade, chalk or fade like other coatings. Fluorocarbon coatings are the product of choice for exterior durability and demanding end uses.

Forming Steel: Grade of steel designated by the ASTM as suitable for bending, forming and other applications where higher ductility is required.

G30 Coating: TruZinc® steel or hot dipped galvanized coating applied at a minimum coating weight of 0.30 oz/ft2 (total, both sides).

G40 Coating: TruZinc® steel or hot dipped galvanized coating applied at a minimum coating weight of 0.40 oz/ft2 (total, both sides).

G60 Coating: TruZinc® steel or hot dipped galvanized coating applied at a minimum coating weight of 0.60 oz/ft2 (total, both sides).

G90 Coating: TruZinc® steel or hot dipped galvanized coating applied at a minimum coating weight of 0.90 oz/ft2 (total, both sides).

G100 Coating: TruZinc® steel or hot dipped galvanized coating applied at a minimum coating weight of 1.0 oz/ft2 (total, both sides).

Gloss: Gloss represents the luster or visually reflective properties of a surface. Painted steel surfaces are available in a wide variety of glosses

Grade 33 Steel: ASTM annealed structural grade steel with a minimum base metal yield strength of 33 ksi, minimum tensile strength of 45 ksi, and minimum elongation of 20%.

Grade 37 Steel: ASTM annealed structural grade steel with a minimum base metal yield strength of 37 ksi, minimum tensile strength of 52 ksi, and minimum elongation of 18%.

Grade 40 Steel: ASTM annealed structural grade steel with a minimum base metal yield strength of 40 ksi, minimum tensile strength of 55 ksi, and minimum elongation of 16% (based on Grade 40cl1 specifications).

Grade 50 Steel: ASTM annealed structural grade steel with a minimum base metal yield strength of 50 ksi, minimum tensile strength of 65 ksi, and minimum elongation of 12% (based on Grade 50cl1 specifications).

Grade 80 Steel: Stress relieved ASTM structural grade steel with a minimum base metal yield strength of 80 ksi, and a minimum tensile strength of 82 ksi (based on Grade 80cl1 specifications).

Grade Data Sheet: An information sheet furnished on most Steelscape products which provides a general description of the product, typical uses, coil dimension, capabilities, mechanical property specifications as well as typically produced mechanical properties, chemical composition specifications, supply conditions and fabricating performance ratings.

ID or Inside Diameter: A measurement of the inside diameter or bore diameter of a coil.

Incoterm: Is the agreement to freight terms, regarding transfer of ownership, responsibility of freight costs, from which point to where, and for whom bears the risk of damages.

ksi: Measurement typically used to express strength of a material or force per square area - thousand pounds per square inch. (1000 lb/in^2).

Lead Time: A specified and mutually consenting period of time between order placement and order completion to acknowledged delivery date.

LTL (Less than Truck Load): A transit condition that results in less than efficient use of a trucks hauling capacity.

Maximum Coil Size: The maximum size of a finished coil, typically specified by the customer but sometimes limited by Steelscape. This quantity is related to both the physical constraints (e.g. cranes or fork lift carrying capacity) of the customer and Steelscape.

Maximum Order Size: The maximum quantity of a specific gauge, width, grade and paint color combination that Steelscape will accept on orders.

Maximum Skid Weight: The maximum size of a skidded coil, typically specified by the customer but sometimes limited by Steelscape. This quantity is related to both the physical constraints (e.g. cranes or fork lift carrying capacity) of the customer and Steelscape.

Mill Test Certification (MTC): A certification document issued with graded steel orders that includes the product specification & definition, the ship-to and sold-to addresses, the coil numbers, their relative heat chemistry numbers, any product test results pertaining to those coils listed and the heat chemistry analysis on the heat numbers listed.

Minimum Coil Size: The minimum size of a coil, typically specified by the customer but sometimes limited by Steelscape.

Minimum Yield: The minimum yield strength required to meet the mechanical property requirements for a particular grade of metallic coated sheet.

Non-Prime Product: Steelscape products that do not meet our quality standards for "prime" material. Our Secondary products are classified according to the severity of the defect that prevented the "prime" classification. (see "Secondary")
OD or Outside Diameter: A measurement of the outside diameter of coil.

Oiling: Oil is applied to metallic coated coils on the metallic coating lines when requested by our customers. It is supplied in "Light (L)", "Medium (M)" or "Heavy (H)" applications. It provides moderate corrosion resistance while coils move between internal processing lines as well as to customer's facilities.

Open Order: An approved order that has not been shipped complete (within +/- 10%). There are exceptions where coils are in pack and ship status but the order has been shipped complete, the order will appear on the report. Also, the delivery percentage listed above can be changed which will allow orders to stay "open".

Organisol Paint: A plastisol paint with solvents introduced to lower viscosity. These coatings have the same characteristics as plastisol coatings.

Output Width: The final or finished width of a coil as requested by a customer.

Paper Wrap: Coils enclosed with heavy-duty paper for protection during transit and storage.

Passivation: A treatment applied to the surface of bare metallic coated steel to provide greater resistance to corrosion; achieved by the formation of surface chromate, oxide or phosphate layers.

Pittsburgh Lock Seaming: Process used for joining metal sheet without the use of heat through an overlapping - bending process. Typically utilized for joining edges in HVAC and other sheet metal applications.

Plastic Wrap: Coils enclosed by a plastic, rust-inhibiting stretch wrap.

Plastisol Paint: Plastisol coatings are dispersions of finely divided higher molecular weight polyvinyl chloride resins in plasticizers. During the baking process, the finely divided resin particles dissolve in the plasticizers to create a tough plastic film upon cooling. This coating provides extra tough protection when surfaces are exposed to severe weathering or corrosive atmospheres. The main uses of this system are in building components and interior applications. Use in high UV areas is not recommended.

Polyester Paint: Polyester resins are the condensation products of polybasic acids and polyols. Polyesters are sometimes referred to as oil-free alkyds. They may also be modified by the additional reaction of other monomers, such as styrene or acrylic esters. Polyester resins are generally cross-linked with amino resins during baking.

Post-painted Steel: Steel painted after manufacturing or steel processing.

Preferred Coil Size: A coil size that is a direct multiple of Steelscape order increments.

Release: Customer authorization has been given for shipment.

Release Date: A customer-specified date which designates the shipment day for an order. More information on terms and conditions for release dates is provided in Section 4.20 of this manual.

Resin, Clear: A proprietary clear, odorless acrylic coating applied during the manufacturing process for ZINCALUME Plus steel and TruZinc Plus steel.

Reverse Impact Test: A test procedure used to determine coating adhesion to steel strip. A round-tipped, weighted cylinder is dropped from a specified height onto the test sample creating a round dent. The reverse side of the sample is examined for evidence of adhesion loss. This test is commonly used for both metallic and organic coated products.

Reverse Wrap: Processing a painted coil with the top-side or painted side facing the inside of the coil. This procedure protects the finish during certain down-stream processes.

Roll formed Steel: Sheet steel cold formed in a series of rolling stages.

Safety Data Sheet (SDS): SDS's are prepared in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200) and the Supplier Notification Requirements of SARA Title III, Section 313. An information sheet that provides detailed sections of information on products produced at Steelscape facilities.

Secondary Product: Steelscape products that do not meet our quality standards for "prime" material. Our Secondary products are classified according to the severity of the defect that prevented the "prime" classification. (see "Non-Prime")

Securing Coil, Tarping: A process of applying protective covering to shield finished product from dirt and moisture during transit.

Securing Coil, Chaining: A process of applying chains to secure coils to a truck bed according to department of transportation specifications. Chains are applied with edge protectors to prevent damage to coils during transit.

Ship-to Address: The physical location where a customer order is to be delivered. This location can be a final destination or another processing facility. Specification of ship-to addresses are subject to the terms and conditions identified in Section 4.20 of this manual.

Silicone Modified Polyester (SMP): Silicon modified polyesters were developed to improve the exterior durability of early polyester resin paint systems. Early silicon modified polyester contained up to 50% silicon resin, however current versions contain less silicon as resin technology improves.

Skin Passing (Also Surface Conditioning): An in-line rolling process on both ZINCALUME® and TruZinc® steel processing lines that provides an extra smooth surface on the metallic coating. Skin passing is a must for painted products.

Slitting: Dividing a master coil into several narrower multiples.

Spangle: A term describing the finished appearance of TruZinc and ZINCALUME steels, produced with the hot-dipped process. Spangle is often referred to as minimized, regular or spangle-free. In order to provide the best surface for subsequent painting, both TruZinc and ZINCALUME steel have minimized spangle appearances.

Strain Damage: Aging which occurs subsequent to the cold working of an alloy. Strain damage in steel is predominantly due to the presence of uncombined nitrogen and results in a marked decrease in ductility.

Strip Thickness: The total coated thickness (includes metallic coating) of a strip or coil.

Strip Width: The width of the strip as measured edge to edge, perpendicular to the rolling direction of a strip or coil.

Structural Steel: Steel grades specified to meet certain ASTM load requirements ranging from 33-80ksi.

Surface Conditioning: See Skin Passing.

Tagged Defect: A small defect found in the middle of a coil and identified with a specific tag.

Technical Service: Group of metallurgical and organic coating specialists within the Steelscape Sales Department responsible for supporting customer's technical needs including product performance, end-use applications, claims investigation and resolution, together with technical training.

Tension Leveling: An in-line process on both Steelscape metallic coating lines and the Kalama Pickle Line, which induces tension into the strip in excess of the yield strength. Tension leveling results in a flatter product with improved properties for subsequent forming.

TMW (Theoretical Minimum Weight): Pricing practice that effectively charges per square or lineal foot of material as opposed to by weight. This practice is particularly useful for customers that sell products by the lineal foot and are concerned about yield loss due to variation in the gauge (thickness) of purchased steel. Refer to the SOM section for a complete commercial definition of Steelscape's TMW price policy.

Toll Processed Steel (Also Customer-Owned or Double Bill): Steel that is provided by customers to Steelscape for processing. Offer includes painting, slitting, embossing or cut-to-length. This is a core business for Steelscape.

Transit Damage: Damage incurred to a coil during loading, unloading, and/or transport.

Underweight Coil: A coil that fails to meet the customer's minimum weight requirements.

Urethane Paint: Urethane is the term for the chemical linkage between an isocyanate and a hydroxyl group. A urethane can be a polyester urethane (polyurethane), an acrylic urethane or an epoxy urethane. Most coil urethanes are polyester urethanes usually used in primer applications. Urethanes are characterized by having a good flexibility to hardness ratio and a good chemical resistance.

Ultimate Tensile Strength: Typically, the breaking strength or highest strength achieved for materials.

Yield Strength: Yield strength represents the stress at which materials transition from elastic to plastic deformation. Once a material has been loaded past its yield point, it is permanently deformed.

Water Damage: Corrosion of the product due to the ingress of water or moisture.

ASTM SPECIFICATIONS

Organized in 1898, ASTM has grown into one of the largest voluntary standards development systems in the world. ASTM is a not-for-profit organization which provides a forum for producers, users, ultimate consumers, and those having a general interest (representatives of government and academia) to meet on common ground and write standards for materials, products, systems and services.

ASTM standards are developed and used voluntarily. Standards become legally binding only when a government body references them in regulations, or when they are cited in a contract. Any item that is produced and marked as conforming to an ASTM standard must meet all applicable requirements of that standard.

ASTM standards are used by thousands of individuals, companies and agencies. Purchasers and sellers incorporate standards into contracts architects and designers use them in plans; government agencies reference them in codes, regulations and laws; and many others refer to the standards for guidance. Steelscape products are manufactured in accordance with the most recent versions of the respective ASTM standards as listed below:

ZINCALUME® products ASTM A792
TruZinc® products ASTM A653
Cold Rolled ASTM A568
Metallic Coated Steel Sheet ASTM A924

Steelscape produces to many other ASTM standards as required by end use or customer request. For more information, please contact your Steelscape Sales Representative.

Due to ASTM membership requirements and copyright law, Steelscape may not provide copies of ASTM standards.

REGULATIONS AND SUSTAINABILITY

Steelscape strives to stay current on all regulatory and sustainability initiatives and programs within the construction industry. These programs are vast and ever changing, but Steelscape has prepared guidelines and customer letters for the more common items. These documents can be found on our website, www.steelscape.com, and cover the topics listed below;

USGBC LEED Program
Buy American Act/Surface Transportation Assistance Act/State Buy American
Recycled Content
Cool Roof Rating Council
Zinc Run Off

If you need additional information on these programs, or any not listed, please contact your Steelscape Sales Representative.

The information in this Bulletin is current as of February 2025. It is possible that the laws and regulations discussed may change from time to time. While Steelscape will endeavor to issue updates to address regulatory changes, Steelscape disclaims any affirmative obligation to do so. Should you have any questions on the current applicability of any of the laws discussed herein to your product purchases, please contact Steelscape's Technical Services Department or your Account Manager.