



Aluminium-Zinc Metal Coated Steel Strip and Sheet

ACCORDING TO THE OCCUPATIONAL SAFETY AND HEALTH (CLASSIFICATION, LABELLING AND SAFETY DATA SHEET OF HAZARDOUS CHEMICALS) REGULATIONS 2013 (CLASS REGULATIONS)

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

Product Name Aluminium-Zinc Metal Coated Steel Strip and Sheet
 Trade Mark ZINCALUME®, GALVALUME®, TRUECORE®, BlueScope ZACS®, ZACS®
 CAS No. Not applicable.

1.2 Other means of identification

Product code None.
 Alternative names None.
 Synonyms None.

1.3 Recommended use of the chemical and restrictions on use

Identified Use(s) Metal fabrication, building frame, roofing, and wall cladding.
 Uses Advised Against Not known.

1.4 Details of principal suppliers

Company Identification NS BlueScope Malaysia Sdn. Bhd.
 Company Registration number 199101012824 (223136-P)
 Address Lot 1551, Jalan Bukit Kapar, 42200 Kapar,
 Selangor Darul Ehsan, Malaysia
 (603) 3361 6888

Telephone

1.5 Emergency telephone number

Company (603) 3361 6888 (24 hour(s))

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Occupational Safety and Health Not classified as dangerous for supply/use.
 (Classification, Labelling and Safety Data
 Sheet of Hazardous Chemicals)
 Regulations 2013 (CLASS Regulations)

2.2 Label elements

Product Name Aluminium-Zinc Metal Coated Steel Strip and Sheet
 Hazard Pictogram(s) Not applicable.
 Signal Word(s) Not applicable.
 Hazard Statement(s) Not applicable.
 Precautionary Statement(s) P260: Do not breathe dust.
 P280: Wear protective gloves/protective clothing/eye protection/face protection.
 P370: In case of fire and /or explosion, do not breathe fumes.
 Avoid contact with skin.

Additional Information

2.3 Other hazards which do not result in classification

Sharp edges may cause injury. Industrial processes such as grinding or welding can generate dust or fume from this product, which can be hazardous if inhaled.

2.4 Additional Information

None.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Product as supplied: Steel strip with a hot dipped aluminium-zinc alloy coating.

3.1 Substances

Not applicable.

3.2 Mixtures

Base Products				
Ingredients	CAS No.	%W/W	Hazard Statement(s)	Hazard Pictogram(s)
Steel	12597-69-2	100	Not classified	None
Metallic Coating				
Ingredients	CAS No.	%W/W	Hazard Statement(s)	Hazard Pictogram(s)
Aluminium zinc coating	-	50-230 g/m ² total both sides	Not classified	None
Aluminium	7429-90-5	50-60	Not classified	None
Zinc	7440-66-6	Balance	Not classified	None
Silicon	7440-21-3	1-2	Not classified	None
Surface treatment				
Ingredients	CAS No.	%W/W	Hazard Statement(s)	Hazard Pictogram(s)
Hexavalent chromium compounds	Mixture	< 40 mg/m ² per side	Not classified	None
Acrylic Resin, used only on ZINCALUME®, TRUECORE®, BlueScope ZACS®, ZACS®	Mixture	<1g/m ²	Not classified	None



Aluminium-Zinc Metal Coated Steel Strip and Sheet

SECTION 4: FIRST AID MEASURES

Product as supplied: Unlikely route of exposure to inhalation, ingestion and eye and skin contact. The exposure to dust is possible during grinding and welding of product (processing on metal).

4.1 Description of first aid measures

Inhalation	Unlikely route of exposure. If exposed to fumes from welding operations, remove to fresh air.
Skin Contact	Surface Treatments: Skin that has come in contact with chromium surface treatments, dust generated from the resin coating, or water trapped on the strip surface, should be washed immediately with soap and water.
Eye Contact	Processing on metal: If steel splinters enter the eye, obtain medical attention immediately.
Ingestion	Unlikely route of exposure.

4.2 Most important symptoms/effects, acute and delayed

None anticipated.

4.3 Indication of immediate medical attention and special treatment needed, if necessary

No special requirements.

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable Extinguishing media	As appropriate for surrounding fire.
Unsuitable extinguishing media	None known.

5.2 Special hazards arising from the chemical

Combustion products: When burnt or overheated the product and packaging may release combustion products including carbon monoxide and metallic oxides. Base metal is non-combustible. However, under fire conditions, material may decompose and/or burn. Some parts of the packaging are combustible.

5.3 Special protective equipment and precautions for fire fighters

Fire fighters should wear complete protective clothing including self-contained breathing apparatus.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Coils and sheet packs should be picked up with suitable lifting equipment. Individual sheets should be handled with the appropriate gloves to avoid cuts.

6.2 Environmental precautions

Do not release large quantities into the surface water or into drains.

6.3 Methods and material for containment and cleaning up

Collect mechanically and dispose of according to Section 13.

6.4 Reference to other sections

See Also Section 8, 13.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Sharp edges may cause injury. Product is expected to be formed and otherwise fabricated. This may include cutting, welding, painting and powder coating. Product should be picked up with suitable lifting equipment. Wear appropriate gloves to avoid cuts when handling. If welding this product there is a possibility of zinc fume generation. Maintain high standards of personal hygiene i.e., washing hands prior to eating, drinking, smoking or using toilet facilities.

Processing on metal: Provide adequate ventilation. Avoid inhalation of high concentrations of dusts. Use personal protective equipment as required. See Also Section 8.

7.2 Conditions for safe storage, including any incompatibilities

The material as supplied is not known to be hazardous to the environment. Product must be stored and secured to prevent movement during storage and transport.

For more information on storing this product, refer to the document 'Recommended Practices for Storage and Handling of BlueScope Steel's products' available from BlueScope Steel sales office and website.

Storage temperature	Store in a dry environment to prevent corrosion in storage.
Storage life	Stable under normal conditions.
Incompatible materials	Strong acids, strong alkalis.



Aluminium-Zinc Metal Coated Steel Strip and Sheet

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

8.1.1 Occupational Exposure Limits Some components may be released during the welding or cutting operations. Resin dust might be generated from the strip surface during manufacturing operations.

Substance	CAS No.	LTEL (8 hr TWA ppm)	LTEL (8 hr TWA mg/m ³)	STEL (ppm)	STEL (mg/m ³)	Note
Aluminium	7429-90-5		10			Metal dust
			5			Pyro powders, as Al
			5			Welding fumes, as A
Silicon	7440-21-3		10			
Zinc Oxide	1314-13-2		5			Fumes
			10			Dust
Aluminium Oxide	1344-28-1		10			A
Iron oxide	1309-37-1		5			A
Chromium, metals and inorganic compounds, as Cr: Cr VI compounds, water-soluble, TTS			0.05			
Chromium, metals and inorganic compounds, as Cr: Cr VI compounds, water insoluble, TTS			0.01			

Source: Occupational Safety and Health (Use and Standards of Exposure of Chemicals Hazardous to Health) Regulations 2000, Malaysia

A: Values are for particulate matter that does not contain asbestos and <1% crystalline silica.

8.2 Exposure controls

8.2.1. Appropriate engineering controls No special requirement is required for the product as supplied. The resin may contain both water soluble and water insoluble chromium VI compounds at levels below 1%. During slitting or roll forming operations on resin-coated product, abrasion and/or excessive drag pad pressure on the steel surface can generate resin dust.
Processing on metal: For processing operations that generate dust or fumes, the use of engineering controls may be necessary to maintain air concentrations below the relevant exposure standards.

8.2.2. Individual protection measures, such as personal protective equipment



Eye Protection

Not normally required.

Processing on metal: Wear protective eyewear (goggles, face shield, or safety glasses). Final choice of appropriate eye/face protection will vary according to individual circumstances



Skin protection

Wear protective gloves.

Cut resistant gloves should be worn when handling strip or sheet steel, to avoid cuts from splinters, burrs or sharp edges. A rubber dipped glove may be necessary to avoid skin contact with chromium surface treatments if the surface is wet. Breakthrough time of the glove material: refer to the information provided by the gloves' producer.



Respiratory protection

Normally no personal respiratory protection is necessary.

Processing on metal: An approved dust mask should be worn. In case of high airborne concentrations, wear suitable positive pressure respiratory protection equipment.



Thermal hazards

Not applicable.

8.2.3. Environmental Exposure Controls Do not release large quantities into the surface water or into drains.



Aluminium-Zinc Metal Coated Steel Strip and Sheet

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	Thin steel coil or sheet with metallic silver or metallic blue appearance.
Odour	Not applicable.
Odour threshold	Not applicable.
pH	Not applicable.
Melting Point (°C)	Approximately 1500°C for base steel. Approximately 600°C for coating.
Initial boiling point and boiling range	Not applicable.
Flash Point	Not applicable.
Evaporation rate	Not applicable.
Flammability (solid, gas)	Non-combustible.
Upper/lower flammability or explosive limits	Not applicable.
Vapour pressure	Not applicable.
Vapour density	Not applicable.
Specific Gravity	7.85
Solubility	Solubility (Water) : Insoluble in water. Solubility (Other) : Soluble in acids and the coating is also soluble in strong alkali.
Partition coefficient: n-octanol/water	Not applicable.
Auto-ignition temperature	Not applicable.
Decomposition Temperature (°C)	Not available.
Viscosity	Not applicable.

9.2 Other information

None.

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity

Stable under normal conditions of use.
Refer to Section 10.3

10.2 Chemical Stability

Stable under normal conditions of storage and handling.

10.3 Possibility of hazardous reactions

Contact of metallic coating with acids and alkalis liberates hydrogen gas.

10.4 Conditions to avoid

None anticipated when used as intended.

10.5 Incompatible materials

Strong acids, strong alkalis.

10.6 Hazardous decomposition products

When burnt or overheated the product and packaging may emit carbon monoxide, metallic oxides and other products of combustion.



Aluminium-Zinc Metal Coated Steel Strip and Sheet

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity - Ingestion	Product as supplied: Unlikely route of exposure.
Acute toxicity - Skin Contact	Low acute toxicity.
	The surface treatment used for corrosion protection contains small quantities of chromium VI compounds.
Acute toxicity - Inhalation	Product as supplied: Unlikely route of exposure.
	The resin may contain both water soluble and water insoluble chromium VI compounds at levels below 1%. During slitting or roll forming operations on resin-coated product, abrasion and/or excessive drag pad pressure on the steel surface can generate resin dust.
	Inhalation of product vapours may cause irritation of the nose, throat and respiratory system. If welding this product there is a possibility of zinc fume generation.
Skin corrosion/irritation	Product as supplied: Not classified.
	Processing on metal: Dust may cause irritation.
Serious eye damage/irritation	Product as supplied: Non-irritant.
	Processing on metal: Dust may have irritant effect on eyes.
Skin sensitization data	Extended skin contact with resin coating dust created during slitting and/or roll forming operations may lead to chromium sensitization in sensitive individuals. Skin contact with water that has been trapped against the strip surface for extended periods of time may also lead to chromium sensitization in sensitive individuals
	Not classified.
Respiratory sensitization data	Not classified.
Germ cell mutagenicity	No evidence of mutagenic effects.
Carcinogenicity	No evidence of carcinogenicity.
Reproductive toxicity	No evidence of reproductive effects.
Lactation	Not classified.
STOT - single exposure	None anticipated.
STOT - repeated exposure	None anticipated.
Aspiration hazard	Not classified.

11.2 Symptoms related to the physical, chemical and toxicological characteristics

None anticipated.

11.3 Delayed and immediate effects and also chronic effects from short and long term exposure

Treat symptomatically.

11.4 Numerical measures of toxicity (such as acute toxicity estimates)

Ingestion : Not classified.

Skin Contact : Not classified.

Inhalation : Not classified.

SECTION 12: ECOLOGICAL INFORMATION

12.1 Ecotoxicity

Toxicity - Aquatic invertebrates	Low toxicity to invertebrates.
Toxicity - Fish	Low toxicity to fish.
Toxicity - Algae	Low toxicity to algae.
Toxicity - Sediment Compartment	Not classified.
Toxicity - Terrestrial Compartment	No ecological data is available for this material.

12.2 Persistence and degradability

The methods for determining the biological degradability are not applicable to inorganic substances.

12.3 Bioaccumulative potential

The product has no potential for bioaccumulation.

12.4 Mobility in soil

No information available.

12.5 Other adverse effects

Not known.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Disposal Method

Dispose at suitable refuse site.

Dispose of contents in accordance with local, state or national legislation.



Aluminium-Zinc Metal Coated Steel Strip and Sheet

SECTION 14: TRANSPORT INFORMATION

Not classified as hazardous for transport.

14.1 UN number

Not applicable

14.2 UN proper shipping name

Not applicable

14.3 Transport hazard class(es)

Not applicable

14.4 Packing Group, if applicable

Not applicable

14.5 Environmental hazards

Not classified as a Marine Pollutant.

14.6 Transport in bulk according to Annex II of Marpol and the IBC Code

No information available

14.7 Special precautions for user

Not known

SECTION 15: REGULATORY INFORMATION

This SDS has been prepared in accordance to The Industry Code of Practice on Chemical Classification and Hazard Communication 2019 (ICOP - Part 1) and The Occupational Safety and Health (Classification, Labelling and Safety Data Sheet of Hazardous Chemicals) Regulations 2013 (CLASS Regulations).

15.1 Safety, health and environmental regulations specific for the product in question

Part 1 List of Classified Chemical, ICOP Not listed

SECTION 16: OTHER INFORMATION

The following sections contain revisions or new statements: 1-16

Date of preparation 20/06/2022

Date of revision -

LEGEND

Acronyms

CAS : Chemical Abstracts Service
 LTEL : Long term exposure limit
 STEL : Short term exposure limit
 STOT : Specific Target Organ Toxicity

Other information deems necessary by a supplier
 Key literature references and sources for data used
 to compile the SDS

None.
 Occupational Safety and Health (Classification, Labelling and Safety Data Sheet of Hazardous Chemicals) Regulations 2013 (CLASS Regulations)

Occupational Safety and Health (Use and Standards of Exposure of Chemicals Hazardous to Health) Regulations 2000, Malaysia.

Disclaimers

All reasonably practicable steps have been taken to ensure this Safety Data Sheet and the health, safety and environmental information contained therein is accurate as at the date specified above. No warranty or representation, express or implied is made as to the accuracy or completeness of the data and information in this Safety Data Sheet or to the fitness of the product for any particular purpose. Any implied warranty or condition (statutory or otherwise) is excluded except to the extent that such exclusion is prohibited by law. Without prior written advice from NS BlueScope Malaysia Sdn. Bhd., the product should not be used other than for the stated application(s). It is the user obligation to evaluate and use this product safely, to satisfy itself of the suitability of the product for its own particular purpose, and to comply with all applicable laws and regulations. Unless otherwise prohibited by law, NS BlueScope Malaysia Sdn. Bhd. accepts no liability or responsibility for any loss, damage or injury resulting from use or misuse of the product, from any failure to adhere to recommendations, reliance of the information in this Safety Data Sheet or from any hazards inherent in the nature of the product. Purchasers of the products for supply to a third party for such third-party use or onward supply, have a duty to take all necessary steps to ensure that any person handling or using the product is provided with the information in this Safety Data Sheet. You can contact NS BlueScope Malaysia Sdn. Bhd. to ensure that this Safety Data Sheet is the most current version available. Alteration of this Safety Data Sheet is strictly prohibited.