The Brock Metal Company Ltd

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The Brock Metal Company Limited

ZINC ALLOY SPECIFICATIONS FOR

GALVANIZING

BROCK

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Supplying the galvanizing industry for over 30 years with specialist alloys, Brock Metal has an excellent reputation for supplying very tightly monitored, high quality metal.

Our range of alloy products are designed for use as additions to the primary metal bath. Alloys can be developed and tailored to meet the specific customer requirements and then, through our full traceability system, maintained. All Galvanizing additions are available as both primary and secondary grades. The track record, systems and traceability at Brock Metal are second to none and ensure the highest level of confidence in our products at the design, specification and production stages.

All of our Zinc alloys are manufactured from primary or virgin Zinc conforming to SHG (Super High Grade) or Zn1 grades which are 99.995% pure and themselves conform to international specifications such as EN1179. Our quality assurance systems are fully accredited to ISO 9001.

Unlike other metals, a number of generic terms for zinc alloys have developed which still leads to considerable confusion to galvanizers and specifiers, so we strongly encourage the identification of alloys through the relevant EN or International standard classifications listed in this booklet.

Cover galvanising photos kindly supplied by Wedge Group Galvanizing

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Zn Al Master Alloys
(G5, G10, G15, G20)

Standard Aluminium inclusions in a hot dip galvanizing bath can be successfully adjusted by the use of Master Alloys, to accommodate important variations needed by different processes. It allows for rapid increases in the Aluminium levels without interfering with the coating process or the fundamental bath contents. Produced as a 5, 10, 15 or 20% Aluminium.

Chemical Analysis:

Alloying additions		Impurities	
Aluminium G5	5% Nominal	Mg	0.03
Aluminium G10	10% Nominal	Cu	0.03
Aluminium G15	15% Nominal	Fe	0.05
Aluminium G20	20% Nominal	Sn	0.002
		Pb	0.01
		Cd	0.005
		Si	0.015
		Zn	Reminder

Zn Ni Master Alloys

Nickel inclusions in a hot dip galvanizing bath can be successfully adjusted by the use of these Master Alloys, to accommodate important variations needed by different processes. Produced as a 0.5 or 1% Nickel addition.

Chemistry:	Min	Max
0.5% Ni	0.45	0.55
1% Ni	0.95	1.05

Impurities:	0.5% Ni	1% Ni
Al	0.005	0.005
Mg	0.005	0.005
Cu	0.001	0.005
Fe	0.005	0.005
Sn	0.005	0.005
Pb	0.01	0.02
Cd	0.003	0.003
Zn	Remainder	Remainder

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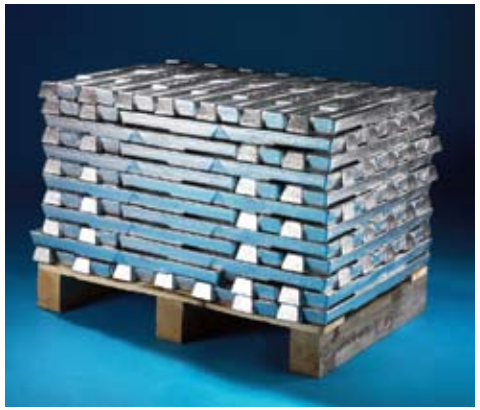
Technigalva NA Zn Ni 2Al

A 2% Nickel Master Alloy manufactured from Z1 Zinc 99.995% in either block or ingot form. Principally used as a master alloy to add controlled amounts of Nickel to hot dip galvanizing baths to improve the quality of galvanised coatings

Chemistry:	
Ni	2% Nominal
Al	0.080 Nominal

Impurities:	
Mg	0.005
Cu	0.01
Fe	0.05
Sn	0.005
Pb	0.02
Cd	0.003
Zn	Remainder



Technigalva NS Zn Ni 2

A 2% Nickel Master Alloy manufactured from Z1 Zinc 99.995% in either block or ingot form. Principally used as a master alloy to add controlled amounts of Nickel to hot dip galvanizing baths to improve the quality of galvanised coatings.

Chemistry:	
Ni	2% Nominal

Impurities:	
Al	0.005
Mg	0.005
Cu	0.01
Fe	0.05
Sn	0.005
Pb	0.02
Cd	0.003
Zn	Remainder

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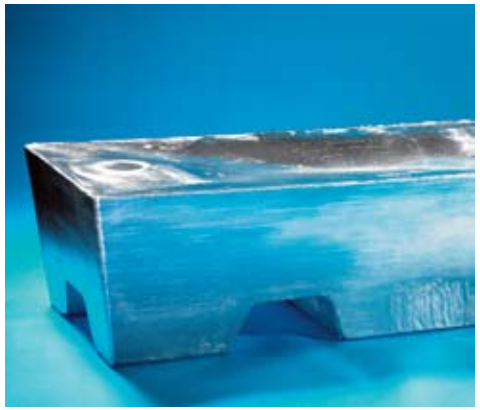

Zn Ni Bi Master Alloys

Nickel and Bismuth inclusions in a hot dip galvanizing bath can be successfully adjusted by the use of these Master Alloys, to accommodate important variations needed by different processes.

Chemistry:		
	Min	Max
Ni	0.47	0.53
Bi	0.12	0.18

Impurities:		
	0.5% Ni	1% Ni
Al	0.005	0.005
Mg	0.005	0.005
Cu	0.001	0.005
Fe	0.005	0.005
Sn	0.005	0.005
Pb	0.01	0.02
Cd	0.003	0.003
Zn	Remainder	Remainder

Zn Sb Master Alloys

(2%, 5%, 10%)

Antimony inclusions in a hot dip galvanizing bath can be successfully adjusted by the use of these Master Alloys, to accommodate important variations needed by different processes. Produced as a 2, 5 or 10% Antimony addition.

Available in 500 or 1,000Kg's bundles

Impurities:	
Mg	0.005
Cu	0.001
Fe	0.05
Sn	0.005
Pb	0.020
Cd	0.003
Zn	Remainder

Galfan Alloys

Galfan 5 – 7 is a galvanizing alloy addition for Steel strip plating plants, in the hot dip galvanizing process. Both the Aluminium and the Mischmetal (Cerium and Lanthanum) are variable to satisfy steel plant individual requirements for their process. Galfan gives the ability to produce coated steel with a thinner, brighter and more corrosive resistance coating that a standard galvanizing process allows.

Indicative Chemistry: Aluminium, Cerium and Lanthanum are variable to satisfy individual steel plant requirements

Al	4-7.5%
Ce & La	0.03-0.10%

Impurities:	
Fe	0.075
Si	0.015
Pb	0.005
Cd	0.005
Sn	0.002
Others each	0.02
Others Total	0.04
Zn	Remainder

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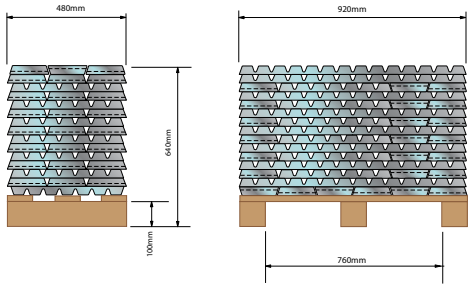
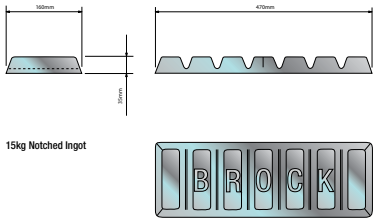
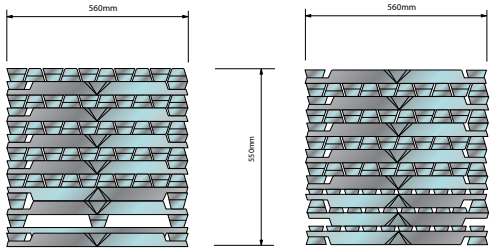
STANDARD INGOTS AND PACKS





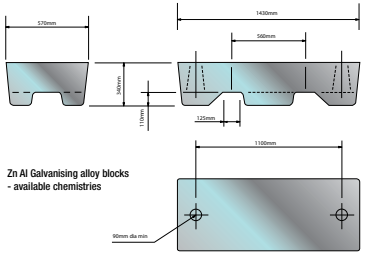
15kg Notched Ingot

Side line ingot pack - available in G5 galvanizing alloys and other alloys on request.
Nominal pack weight - 1000Kgs. Supplied - Banded wrapped on wooden pallets.

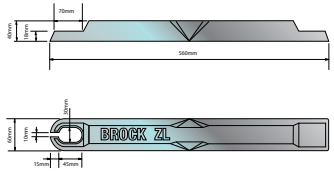


Standard slotted pack - 750kgs as drawn or 1000kgs at 700mm high
Available for ZL2, ZL3, ZL5 - hooked feeder bar ingots
Supplied banded and plastic wrapped

Available in 500 or 1,000Kg's bundles



Dimensions: 1.42 x 0.58 x 0.45 metres
1,000 Kg's = 50Kg's



Standard Feeder bar or hooked ingot - 7Kg nominal weight

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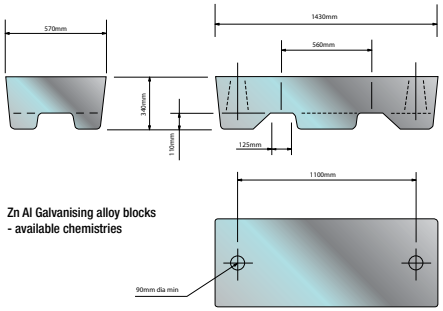
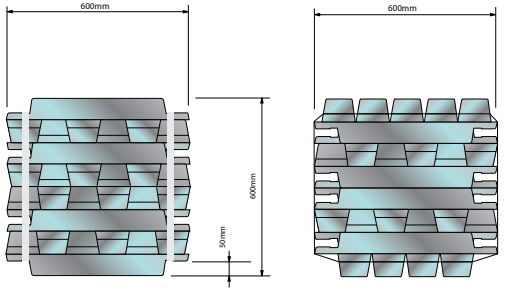
STANDARD INGOTS AND PACKS

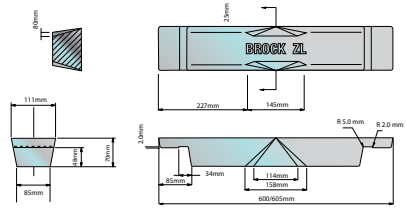


Dimensions: 1.42 x 0.58 x 0.45 metres
1,000Kg's = 50Kg's approx.

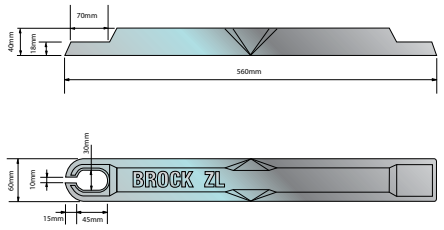


Standard Ingot Pack - 24Kg Ingot - 1000Kg

Dimensions: 0.6 x 0.3 x 0.6 metres
Ingots: 23.5Kg's = 1Kg approx
Bundle: 1058Kg = 45Kg's approx

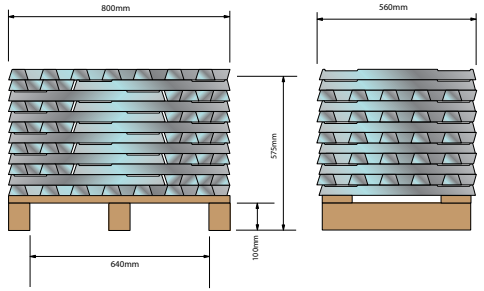


24kg Ingot



Standard Feeder bar or hooked ingot - 7Kg nominal weight

Available in 500 or 1,000Kg's bundles



Standard pack on wooden pallet - 1000kg
Available for supply ZL2, ZL3, ZL5, Standard ingot and hooked or feeder bar ingot.