



NA-B

NOBLE BASIC ADDITIVES

This basic silver additive creates Silver Alloys that possesses good tarnish resistance at a purity of 92.5%. Suitable universally for versatility in manufacturing of various purity of silver in 80-97% The most cost efficient tarnish resistant silver alloys.

Product Code	NA-B	NS-B
Product Name	NOBLE BASIC ADDITIVES	NOBLE SILVER 925 Basic Alloys (Final Mix with Silver
PHYSICAL PROPERTIES		
Density, g/cm ³	9.7	
Grain Size, μm	160	
OPTICAL PROPERTIES		
Colour		
L*		98.41
a*		0.08
b*		8.92
THERMAL PROPERTIES		
Liquidus, °C		450
Coefficient of Thermal Expansion 10-6 / °C		
MECHANICAL PROPERTIES		
Ultimate tensile strength, Mpa	150	150
Elongation, %		35
Hardness, as cast, HV		80
Hardness, annealed, HV		35
Hardness, age- hardened, HV		85
Hardness, after reduction (70%		0
ELECTRICAL PROPERTIES		
Electrical conductivity (m/Ωmm ²)		0
CHEMICAL PROPERTIES		
Tarnish Resistance		0
Ultraviolet Test		0
Fire Scale Resistance		0
Sweat Test		0
Corrosion Resistance		0
PROCESSING & TECHNICAL PROCEDURES		
General Technical Understanding	0	Noble Silver Basic Additives is suitable for various caratage of silver alloys. It contains special ingredients that are tarnish resistant and fire scale resistant. Manufacturing Silver with this silver additive is similar to conventional casting, rolling, wire-drawing and post processing treatments.
Mixing Temperature, °C	990	
Instructions/ Directions for Use	0	1) Add this Noble Silver Master Alloys NS925-MA in pellet form for making Noble Silver of purity 80-97%. To manufacture silver alloys of 92.5% purity, use 92.5 weight % of fine silver & 7.5 weight % of Noble Silver Master Alloys NS-925 MA. To provide for an extra allowance for better purity. Example: 1000 grams of 2) Place the Noble Silver NS925-MA master alloys into the crucible first and top up the crucible with 99.9% Fine Silver. 3) sprinkle borax flux or silver soldering flux on top of the pre-mix 4) Melt this mixture, preferably in a vacuum system and ensure that the mixing temperature is not more than 1040 °C 5) Stir this molten mixture with a carbon rod before pouring.

Unique Characteristics

Good Tarnish Resistance.

Purpose

A lower cost Additives for manufacturing Silver alloys of 80-97% into sheet metals and cast metals

Category

Basic

Supply Forms

Pellets

Manufacturability

Casting/Sheet Production/ Wire-Drawing

Patent

PCT/SG2010/000435 Patent Pending

Content, Wt%

Copper (5-10), Zinc(50-90), Proprietary

ROHS compliance

Yes

Substance Free

Nickel

Industry Standards/ Testing

		6) Noble Silver will scavenge for any impurities. Remove any residues.
		7) To ensure homogeneity in alloys after casting, always quench quickly.
		8) This mixing process will form the final product of Noble Silver 925 Alloys
Recycling/ Remelting		For recycling of the silver, add 25% fresh mixture of Noble Silver 925 Alloys
Casting		
Systems Type		Any, preferably Vacuum
Casting Temperature °C		960-1020
Investment/Lost Wax Casting Temperature, °C		960-1020
Flask/Cylinders Preparation Temperature °C		500
Centrifugal Casting Temperature, °C	0	960-1020
Ingot Mould Casting Temperature, °C	0	500
Ingot Mould Preparation Temperature, °C	0	0
Vacuum Casting Temperature, °C	0	0
Gravity Casting Temperature, °C	0	0
Continuous Casting Temperature, °C	0	0
POST PROCESSING PROPERTIES		
Investment Removal Instructions		soak in hot water
Pickling		Most standard investment removers will successfully remove the investment powder. The best solutions are the sulfuric and hydrofluoric based products. It is better not to use acid solutions, which do not contain sulfur. You can use citric acid at 10%-15% At 60°C changing the solution frequently.
Quenching		
Annealing		
Post Annealing Quench		Annealing at 300 °C for a maximum of 15 mins
Hardening		0
Softening		0
Age Hardening		Age -hardening at 300 °C for 20 mins
WORKING PROPERTIES		
Sheet Rolling		
Pouring Temperature		1000
Maximum Reduction,%		30-40
Wire-Drawing		
Pouring Temperature		1020
Maximum Reduction,%		40
Soldering		As per normal methods
Flux		As per normal methods
Weldability		As per normal methods
Finishing Properties		
Tumbling		As per normal methods
Polishing		As per normal methods
Plating		As per normal methods

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