

Ref MA8

METALLISATION – NICKEL ALUMINIDE

General properties :

- *The coatings have superb adhesion, superior to that of any other available material.*
- *This powder is applied in layers to offer good resistance to natural corrosion, oxidation and fretting, are easy to machine and give a lovely finish.*
- *With an expansion coefficient that is acknowledged to be between that of metals and ceramics and which has high surface roughness, the raw sprayed deposit comprises an excellent anchor layer for other types of coating. This ultimately means that the need for surface preparation of parts by spray abrasion is removed.*

Applications :

- *Petro-chemical industries : cracking towers*
- *Mechanical welding : brazing or welded assembly*
- *Pumps : seals/connectors, sealing surfaces, shafts, gland surfaces*
- *Undercoat for anchoring all types of coatings, in particular for ceramics*
- *Coating that offers very good resistance to fretting.*

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PROPERTIES	
Name	Nickel Aluminide
Symbol	Ni Al
Composition %	Ni < 93.5 TAO < 1 Al 4 – 5.5
Bulk density	7.13
Average porosity %	< 5
Hardness	250 HB
Coefficient of expansion	11×10^{-6}
Maximum working temperature °C	900
Melting temperature °C	1425
Electrical resistivity 10 ⁻⁶ W cm	
Thermal conductivity Kcal dry -1° cm ² cm	

MACHINING BY TOOL	BLANK	FINISH
Type of tool	BN	
Depth of travel mm	0.1	
Travel mm / lathe	0.05	
Lubricant	Oil 20%	
Cutting speed m/mn	120	
Ra µm	1.6 - 2	

ABRASIVE MACHINING	BLANK	FINISH
Abrasive	BN	SIC39C
Grain	80 – 100	80
Grade	100	K
Binding agent		Vitrified
Depth of travel µm	5	20
Travel m/mn	0.5	
Lubricant	oil	Water + detergent
Speed of part m/mn	20	20
Wheel speed m/s	40	30
Ra µm	0.8	0.8

TREATMENTS AND IMPREGNATIONS

The information provided may be subject to variation depending on individual supplies and applications.
Therefore, any information detailed in this technical sheet is provided in good faith and for guidance only. We cannot be held liable.