

Ref MA1

METALLISATION - ALUMINIUM

General properties :

- *Good machining properties*
- *Contains properties to diffuse to 800°C in steels and to protect the steels up to that temperature*
- *Provides good protection against oxidation in the presence of weaknesses (industrial atmosphere, combustion gases).*
- *Good protection against numerous chemical agents and hot water.*
- *Resistance to oxidation :*
 - Up to 600°C in most instances (sulphurous gas)*
 - Up to 800°C after thermal treatment by diffusion.*

Applications :

- *Protection for metal parts : bridges, tanks, metal chimneys and tubes, coke quenching wagons, electrical resistance.*
- *Petroleum industry.*
- *Reloading drums and cylinders in the sugar, cellophane and cellulose industries.*
- *Reproduction of shapes, repair or production of moulds and electrodes.*
 - Repair of foundry defects.*

TECHNICAL SHEET Ref MA1

PROPERTIES	
Name	Aluminium
Symbol	Al
Composition %	Si < 0.3 Fe < 0.4 Al > 99.5
Bulk density	2.5
Average porosity %	5 to 20
Hardness	35 HB
Coefficient of expansion	24 x 10 ⁻⁶
Maximum working temperature °C	600 – 800 after diffusion
Melting temperature °C	650
Electrical resistivity 10 ⁻⁶ W cm	10
Thermal conductivity Kcal dry -1° cm ² cm	

MACHINING BY TOOL	BLANK	FINISH
Type of tool	WCK05	
Depth of travel mm	0.2	
Travel mm / lathe	0.2	
Lubricant	Lubricating oil suitable for Al	
Cutting speed m/mn	120	
Ra µm	1.6	

ABRASIVE MACHINING	BLANK	FINISH
Abrasive		
Grain		
Grade		
Binding agent		
Depth of travel µm		
Depth m/mn		
Lubricant		
Speed of part m/mn		
Wheel speed m/s		
Ra µm		

TREATMENTS AND IMPREGNATIONS

Diffusion by thermal treatment
Carbonation
Impregnations
Paints
Impact treatment

*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.*