### COMEFI METALLI SRL - 10078 Venaria Reale (To) - C.so Vercelli, 13 tel.011 6474089 fax 011 6813911

## **General characteristics**

## >> Alloy 5083 <<

Aluminium Magnesium alloy, used for heavy duty laminates and plates, low extrudability, good mechanical resistance, good corrosion resistance in marine environment

It is mainly used in laminated form It is usually available in states H111 and H24

## Minimal mechanical characteristics at ambient temperature

#### Laminates and tapes

State	Rm	Rp0.2	Hardnes
	(Nmm <sup>2</sup> )	(Nmm <sup>2</sup> )	S
	( )	( /	Hb
0	275	125	75
H111	285	135	77
H22	340	215	89
H24	370	250	99
H26	390	280	106

# **Physical characteristics**

Density: 2,66 g/cm<sup>3</sup> a 20 °C thermal conductivity at 20 °C: 120 W/m °C (state T0 ) Modulus of elasticity: 70000 N/mm<sup>2</sup> Fusion temperature : 574 - 638 Thermal. dilatation coefficient : 23.40 Chart with hardnesses expressed in HB



## **Technological characteristics:**

Workability at utensil machines: sufficient Formability: low in H26 state; sufficient inn H111 state Weldability: good (TIG – MIG) Anodisation behaviour : good Resistance to corrosion : excellent

## Typical uses

Hydraulic constructions, parts of railway, naval and military vehicles, rpressure containers, applications in which the combination through welding is required

	France	Germany	Italy	USA	Great Britain		Al - Mg - Si		
	5083	AlMg4.5 Mn	9005/5 ex 7790	5083	5083				
Chemical composition of alloy 5083 in %									
<u>Cu</u>	Fe	<u>Mn</u>	Mg	<u>S</u> i	<u>Zn</u>	<u>Cr</u>	<u>T</u> i	<u>Pb</u>	
0.1	0.4	0.40 1.0	4.0 4.9	0.4	0.25	0.25	0.15		

Correspondence between international designations Alloy of the family