

Algoma AR225 Plate

Properties	
Type of Steel	Carbon Steel
End Use	Moderate wear applications
Plate Thickness	0.236" (6 mm) to 1" (25.4 mm), greater thicknesses may be available upon request
Melting Practice	Fine Grain fully killed Practice
Chemical Composition Heat Analysis (%)	
C	0.30 – 0.45
Mn	1.10 – 1.65
P (Max)	0.025
S (Max)	0.025
Cr	0.10 ⁽¹⁾
Mo	0.10 ⁽¹⁾
Si	0.15 – 0.35
Cu	0.10 ⁽¹⁾
Ni	0.10 ⁽¹⁾
Typical C.E. ⁽²⁾	0.63
Condition of Supply	As-Rolled (No Heat Treatment performed)
Typical Surface Brinell Hardness (HB) ⁽³⁾	0.25" (6.35 mm) Plate Thickness 224 0.5" (12.7 mm) Plate Thickness 218

(1) Residual element. Not intentionally added.

(2) $C + Mn/6 + (Cr+Mo+V)/5 + (Ni+Cu)/15$

(3) ALGOMA AR225 plate is produced to a specified chemical composition only and no specific mechanical properties are intended or implied. Typical value is shown for information purposes only. Mechanical properties and hardness are not reported. Prior notification is required if hardness must be reported.

ALGOMA AR225 plate is not intended for structural applications and should not be used as load-bearing members.

Weldability

Low hydrogen electrodes of E90XX and E100XX types are suitable but it is recommended that the vanadium content of weld metal should not exceed 0.05%. Suggested preheat temperatures are 150°C (300°F) for thicknesses up to 12.5 mm (0.5") and 200°C (400°F) for thicknesses over 12.5 mm (0.5").

Formability

Cold forming is possible if care is used. Edge preparation is essential and the material temperature should not be less than 20°C (68°F). Hot forming at a temperature of at least 815°C (1500°F) is the recommended procedure. A reduction of hardness may occur.

Cutting

ALGOMA AR225 can be gas cut satisfactorily. However, preheating the surface to 260°C (500°F) is recommended to prevent hardening at cut edges. This hardened edge, if present, may be prone to cracking when subjected to bending during fabrication or to restrained welding conditions.



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