PRODUCT **DATA SHEET**

Bisalloy ARMOUR

BISALLOY® ARMOUR HTA400 STEEL

Introduction

BISALLOY® Armour HTA400 steel (High Toughness Armour) - a quenched and tempered steel armour plate, possessing very good weldability, suitable for use in both military and civil applications where high rates of shock loading and resistance to penetration by ballistic projectiles are required.

Brinell hardness

Thickness (mm)	Specification	Typical
5 - 50[1]	370-430 HB	400 HB

[1] Other thicknesses may be available on application

Tensile properties

Property	Typical
0.2% Proof Stress	1080 MPa
Tensile Strength	1250 MPa
Elongation in 50 mm GL	14%

Charpy impact values

Thickness (mm)	Test Piece	Test Temp	Min. Energy (Transverse)	Min. Energy (Longitudinal)
5	10 x Thk	-40°C	By Agreement	By Agreement
6 - <8	10 x 5	-40°C	9J	9J
8 - <12	10 x 7.5	-40°C	13J	13J
≥12	10 x 10	-40°C	17J	17J

Chemistry

Product chemical analyses are taken on a per-heat basis. Chemical analysis is as follows:

Chemical composition

Thickness (mm)	Weight %	C	P[2]	Mn	Si	S[2]	Ni	Cr	Mo	B	CE(IIW)	CET
5 - 50	Maximum	0.32	0.020	1.50	0.60	0.005	0.50	1.20	0.30	0.002	0.61*	0.40*

* Typical for 12mm plate

[2] P + S ≤ 0.020

Thickness tolerance

Thickness (mm)	Special Tolerance
5 - 25	-0.0 + 1.0
>25 - 50	-0.0 + 1.2

Test frequency

Per Plate	Per Batch	By Agreement
Hardness	Charpy (L), Charpy (T)	Thickness, Tensile, Ballistic Properties, Product Analysis

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Other

Equivalent Specification	Surface Finish
NIL	Shotblasted

Fabrication

For advice on fabrication refer to relevant Bisalloy technical brochures.
Contact Bisalloy direct or visit www.bisalloy.com

PLEASE NOTE: Every care has been taken to ensure the accuracy of information contained in this manual which supersedes earlier publications, however Bisalloy Steels shall not be liable for any loss or damage whatsoever caused from the application of such information. Typical values are provided for reference information only and no guarantee is given that a specific plate will provide these properties. Information is subject to change without notice. **Published August 2025**

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