

# Rockhard 450 – Technical Datasheet

## 1. Chemical & Mechanical Properties

Property	Value
Carbon (C)	≤ 0.25%
Manganese (Mn)	≤ 1.60%
Sulphur (S)	≤ 0.010%
Phosphorus (P)	≤ 0.025%
Silicon (Si)	≤ 0.70%
Chromium (Cr)	≤ 1.50%
Molybdenum (Mo)	≤ 0.50%
Boron (B)	≤ 0.005%
Yield Strength (YS)	≥ 1100 MPa
Tensile Strength (TS)	1400 – 1600 MPa
Elongation (%)	≥ 10
Hardness (HB)	420 – 480
Impact Test	30J min at -40°C

## 2. Equivalent / Alternative Grades

Standard	Grade	C (%)	Mn (%)	P (%)	S (%)	Si (%)	Cr (%)	Mo (%)	B (%)	YS (MPa)	TS (MPa)	Elongation (%)	Hardness (HB)
EN 10029 / EN 10051	Hardox 450	≤0.25	≤1.60	≤0.025	≤0.010	≤0.70	≤1.50	≤0.50	≤0.005	≥1100	1400-1600	≥10	420-480
ASTM A656 / ASTM A514	AR450	≤0.25	≤1.60	≤0.025	≤0.010	≤0.70	≤1.50	≤0.50	≤0.005	≥1100	1400-1600	≥10	420-480
JIS G3106	SM450	≤0.25	≤1.60	≤0.030	≤0.010	≤0.70	≤1.50	≤0.50	≤0.005	≥1100	1400-1600	≥10	420-480

<b>ISO 3580</b>	AR4 50	≤0. 25	≤1. 60	≤0. 030	≤0. 010	≤0. 70	≤1. 50	≤0. 50	≤0. 005	≥1 10 0	14 00- 16 00	≥10	420- 480
<b>DIN 1710 2</b>	Har dox 450	≤0. 25	≤1. 60	≤0. 025	≤0. 010	≤0. 70	≤1. 50	≤0. 50	≤0. 005	≥1 10 0	14 00- 16 00	≥10	420- 480

### 3. Common Applications

- Loader buckets
- Chutes and conveyors
- Heavy-duty industrial wear parts
- Wear-resistant components in construction machinery

### 4. Standard Conformance

Proprietary abrasion-resistant steel grade engineered for superior wear resistance and durability.

Commonly used in heavy machinery requiring higher hardness and toughness than Rockhard 400.

### 5. Disclaimer

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