

# DATA SHEET



## Finkl Steel

### MPX<sup>®</sup> HIGH QUALITY PREHARDENED ALLOY STEEL

#### TYPICAL APPLICATIONS

- Mud pump fluid end blocks
- Ancillary oil & gas components
- Alternative to 4130

#### GENERAL

##### Delivery Condition:

Hardened and Tempered, EFVD

**MPX<sup>®</sup>** is a Cr-Ni-Mo alloy steel that was specifically engineered to increase through-hardenability and eliminates a multitude of challenges that come with post-machining part heat treatment. **MPX<sup>®</sup>** simplifies the production process and lowers manufacturing costs without compromising quality and performance.

The balanced chemistry and through-hardenability of **MPX<sup>®</sup>**, together with Finkl Steel's industry-leading forging practices, achieves the optimal combination of strength and toughness through large cross-sections. This through-hardenability allows for the heat treatment of **MPX<sup>®</sup>** to be done as a forged bar that can be immediately cut and machined directly into finished parts.

**MPX<sup>®</sup>** creates value by lowering costs, increasing efficiency, and shortening production lead-times.

Finkl Steel Houston stocks **MPX<sup>®</sup>** in a variety of sizes that are available for immediate shipment.

Note: Provided technical data and information in this data sheet are typical values. Normal variations in chemistry, size and conditions of heat treatment may cause deviations from these values. We suggest that information be verified at time of enquiry or order. For additional data or metallurgical assistance, please contact us.

#### Typical Chemical Analysis\* - % weight

C	Mn	Si	Cr	Ni	Mo
0.32	1.30	0.30	1.90	0.60	0.45

\*Patent pending

#### Tensile Properties

Tensile Strength ksi (MPa)	Yield Strength ksi (MPa)	Elongation %	Reduction of Area %	Hardness HBW
125 (860)	100 (690)	15	40	255-321

#### Impact Properties

Charpy V-notch Impact Strength at -4 °F (-20 °C)	
Longitudinal Ft-Lb (J)	Transverse Ft-Lb (J)
35 (47)	25 (34)

Reported properties are typical values for a full-size 24" x 24" (0.6m x 0.6m) prehardened bar tested at quarter thickness and width. Other ranges are available.

#### KEY CHARACTERISTICS

- Water quenched and fully tempered
- High through-hardenability
- Excellent low-temperature fracture toughness over a wide range of available strengths
- Fully martensitic, fine grain microstructure
- Low sulfur and phosphorous content and superior microcleanliness
- 100% ultrasonically inspected and certified defect free

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