



ELLWOOD

YOUR METALS PARTNER, FROM MELT TO DISTRIBUTION



EXELL™ 4330MOD

High-Toughness Alloy Steel

ExELL™ 4330Mod is a chromium-nickel-molybdenum alloy steel which has been developed especially for forging applications where the tooling or application operates at less than 400° F.

ExELL™ 4330Mod is characterized by:

- Room temperature toughness greater than 40 ft-lbs
- Steel produced using ultra-clean ladle metallurgy and vacuum degassing
- Melted and manufactured in the USA

ExELL™ 4330Mod is a high-toughness alloy developed for lower temperature forging environment applications. The material is often recommended for upgrades to OEM

forging equipment components. The superior hardenability of ExELL™ 4330Mod enables excellent through hardness characteristics in section sizes greater than 25" in thickness.

Since the alloy achieves its “upper-shelf” impact toughness at room temperature, the material is especially suited for rams, bolsters, and sow blocks that operate at room temperature. The material may also be suited for some forging applications where die heating is difficult or impractical and when lower temperature die toughness is required.

ExELL™ 4330Mod is supplied in the prehardened condition at 38-42 HRC. Various temper hardness ranges are available.



APPLICATIONS

ExELL™ 4330Mod offers solutions for:

- Press Bolsters
- Press Rams
- Sow Blocks
- Die Holders
- Piston Rods
- Die Cassettes

TYPICAL ANALYSIS

C	0.33
Si	0.25
Mn	0.47
Ni	2.60
Cr	1.05
Mo	0.53
V	0.10



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HEAT TREATMENT (General Recommendations)

STRESS RELIEVING

- It is recommended to stress relieve between rough and finish machining or after welding to minimize any movement in service.
- Heat slowly to 1000°F and hold for two hours at temperature. Cool freely in air.
- ExELL™ 4330Mod is supplied in the pre-hardened condition and requires no separate heat treatment. For annealing or re-heat treating instructions, please contact ELLWOOD Specialty Metals - USA direct at 800.932.2188.

CAPABILITIES

ELLWOOD Specialty Metals - USA is a fully integrated producer of a wide range of specialty tool steels. Our ExELL™ grades are melted using an ultra-high powered electric arc furnace and advanced ladle metallurgy practices and vacuum degassing to produce ultra-clean steels.

Our high quality steel is further improved by industry leading open-die forging capabilities and expertise. Highly controlled forging and heat treating processes are utilized to consistently provide steels with optimum properties including: product uniformity, cleanliness, machinability, polishability, strength, toughness, hardenability and other steel properties. All conducted in ISO 9001 certified production facilities.



This information is intended to provide general data on our products, their uses and is based on our knowledge at the time of publication. No information should be construed as a guarantee of specific properties of the procedures described or suitability for a particular application. ELLWOOD Specialty Metals - USA reserves the right to make changes in practices which may render some information outdated or obsolete. ELLWOOD Specialty Metals - USA should be consulted for current information and/or capabilities.

QUALITY ASSURANCE

ELLWOOD Specialty Metals - USA is committed to providing products and services that consistently meet or exceed all quality and performance expectations. We will provide customer and technical service that will ensure complete satisfaction.

ELLWOOD Specialty Metals - USA will establish product programs to fully support industry or customer requirements. Our extensive stock programs are supported by short mill lead times of custom forged products.

Customized stock programs can be available for specific customer needs.

