



# ELLWOOD

YOUR METALS PARTNER, FROM MELT TO DISTRIBUTION



## EXELL™ MOLDALLOY

ExELL™ MoldAlloy is a chromium-nickel-molybdenum alloy steel which has been developed especially for high strength plastic mold applications.

ExELL™ MoldAlloy is characterized by:

- Good through hardening in large cross-sections
- High hardness to resist abrasive plastic resins
- Good machining and EDM properties
- Good polishing and texturing capability
- Easy repair welding



## High Strength Mold Steel

ExELL™ MoldAlloy is manufactured in a fully integrated manufacturing facility for specialty tool steels. The facilities are state-of-the-art with advanced steel making capabilities that include an ultra-high power electric arc furnace with subsequent ladle refining, as well as vacuum degassing for the most complete and modern ladle metallurgy technology. New high powered open die forging presses, heat treat and machining equipment complete the die steel manufacture in ISO 9001 facilities.

ExELL™ MoldAlloy is supplied in the prehardened condition of Rockwell C 38-42. Surface ground finishes can be supplied. Please inquire for block size availability.

## APPLICATIONS

ExELL™ MoldAlloy offers solutions for:

- Molds running abrasive plastic resins
- Mold inserts subject to high stresses
- No heat treatment cost, time, and distortion risk
- Lower cost than alternative tool steel alloys
- Can be surface treated for wear performance

### TYPICAL ANALYSIS

C	0.45
Si	0.25
Mn	0.95
Ni	0.55
Cr	1.60
Mo	0.30
V	0.10



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## HEAT TREATMENT (General Recommendations)

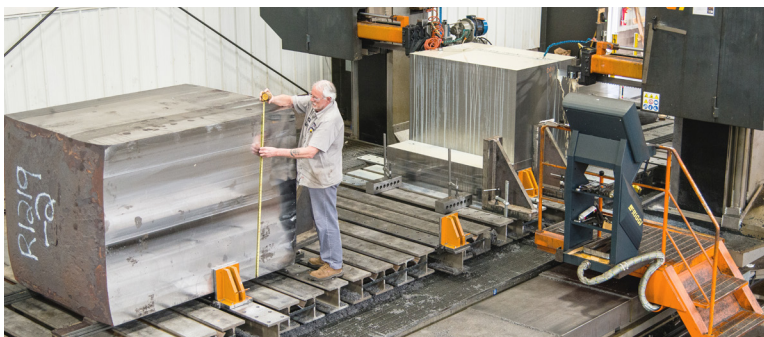
### STRESS RELIEVING

- 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™ MoldAlloy 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 made with advanced steel making capabilities which include an ultra-high powered electric arc furnace with subsequent state-of-the-art ladle refining and vacuum degassing equipment for the most complete and modern ladle metallurgy.

Our steel making expertise and capability is further enhanced from a long forging history with optimum forging and heat treating practices to develop very special material characteristics of product uniformity, cleanliness, machinability, polishability, strength, toughness, hardenability and other steel properties. All this from production facilities certified to ISO 9001.



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.

