

### TYPICAL CHEMICAL ANALYSIS AND PHYSICAL PROPERTIES

	Wearalloy 400	Wearalloy 450	Wearalloy 500
Carbon	.12/.16	.18/.26	.27/.30
Mang. (max.)	1.55	1.20	.95
Phos. (max.)	.025	.025	.025
Sulphur (max.)	.005	.005	.005
Silicon	.35/.55	.40/.55	.45/.55
Boron	.0005/.005	.0005/.005	.0005/.005
Chrome (max.)	.55	.65	.75
Nickel (max.)	.35	.35	.35
Moly (max.)	.55	.60	.65
BHM Hardness	388-430	444-475	477-544
Yield (psi.)	156,000	170,000	182,000
Tensile (psi.)	194,000	206,000	235,000
Elongation in 2"	19% - 23%	18% - 23%	17% - 23%
Color Code	Yellow/Red	Yellow/Blue	Yellow/Purple

**Thickness:** 1/8" through 4"

**Widths:** 48" through 96"

**Lengths:** 96" through 288"



### APPLICATIONS

#### Aggregate, Construction, and Mining

Drag Slat Conveyor Liners	Crusher Liners	Cone Crusher Main Frame Liners	Hopper Liners
Transfer Points	Screed Plates	Mold Board Liners	Underground Miners
Scraper Liners	Feeders	Skid Plates	Truck Bed Liners
Drag Line Bucket Liners	Chute Liners	Asphalt Plant Ductwork	Jaw Crusher Cheek Plates
Loader Bucket Liners	Shovel Bucket Liners	Rock Box Liners	Hammers
Screen Decks	Cutting Edges	For Pulp and Paper Industry Applications - See Page 5	

# GENERAL TECHNICAL INFORMATION

**Wearalloy 400, 450, and 500** are heat treated, quenched, and tempered alloy steels that are used in applications where shock and abrasion are the primary cause of failure. Wearalloy 400 (388 - 430 BHN) and Wearalloy 450 (440 - 470 BHN) provide excellent resistance to impact and sliding abrasion. Wearalloy 500 (475 - 544 BHN) handles severe abrasion and moderate impact.

## DRILLING AND MACHINING:

Wearalloy 400, 450, and 500 can be machined or drilled with high speed carbide tools at low speeds. As the hardness level of the plate increases, it is necessary to decrease the cutting speed and feed depth.

## WELDING:

For welding Wearalloy plate, we recommend that low hydrogen electrodes be used; such as E-70XX, E-80XX, E-90XX, E-100XX, and E-110XX. As conditions warrant, pre-heating is recommended on all thicknesses.

## SHEARING AND PUNCHING:

Wearalloy 400 can be sheared or punched in thicknesses up to 1/4". flame cutting is recommended on thicker plate and on our Wearalloy 450 and 500.

## FORMING

Wearalloy 400 and 450 can be cold formed in a press brake or rolls. At sharper bends, forming should be performed with the axis of bend at right angles to the rolling direction or cross grain of the plate. Remove rough edges on plate by grinding prior to forming. It is necessary to allow for a bending radius of 3 to 5 times that of ordinary steel. Minimal cold forming can be performed on our Wearalloy 500 with proper equipment.

## FABRICATION:

Please contact our engineering department for quotes on any fabrications requiring our wear resistance steels.



## CONVERSION TABLE

Thickness	Lbs. per Sq. Ft.
1/8"	5.11
3/16"	7.66
1/4"	10.21
3/8"	15.32
1/2"	20.42

Thickness	Lbs. per Sq. Ft.
5/8"	25.53
3/4"	30.63
1"	40.84
1 - 1/4"	51.05
1 - 1/2"	61.26

Thickness	Lbs. per Sq. Ft.
1 - 3/4"	71.47
2"	81.68
2 - 1/2"	102.10
3"	122.52
4"	163.36