

# Molex® #7

## Oil Hardening, Decarb-Free Tool Steel

A superior quality oil hardening tool steel with exceptional toughness and the ability to develop a high degree of hardness, **Molex #7** exhibits relatively low distortion in heat treatment and good non-galling characteristics.

**Molex #7** is one of the most widely used tool and die steels available in heavy industry. **Molex #7** should be considered as an upgrade in applications that typically call out for 0-1, L-6 or 52100.

### Advantages

- **100% Decarb-Free (Pre-Machined)**
- **Superior Machinability**
- **Excellent Toughness**
- **Good Wear Resistance**

### Typical Applications

Backer Plates	Threading Dies
Boring Tools	Guide Rollers
Bushings	Hammers
Collets	Machine Parts
Die Blocks	Piston Rings
Drills	Punches



(Past Protected Trade Name of Ludlow Steel Company – Terra #10)

### Thermal Treatment Summary\*

**Annealing** - Vacuum furnace or pack in sealed container. Heat slowly to 1425°F / 1450°F. Hold for 1 hour per inch of thickness. Cool slowly in furnace. Expected hardness is 212 BHN.

**Hardening** - Heat slowly to 1475°F / 1500°F. Hold for uniformity. Oil quench. Pre-heat to 1200°F / 1250°F. Cool slowly. At 125°F/150°F begin tempering. Do not allow to cool to ambient room temperature.

**Tempering** - Temper immediately after quenching. Hold at tempering temperature for no less than 2 hours. Tool and punches are normally tempered at 350°F/400°F for max. hardness.

#### Tempering Chart

- 800°F typical hardness Rockwell 50 “C”.
- 1000°F typical hardness Rockwell 44 “C”.
- 1200°F typical hardness Rockwell 30 “C”.

\*Above values are typical and are not guaranteed.

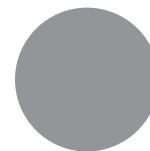
### Sizes Available\*



**Squares**  
1/4” to 12”



**Flats**  
1/4” to 1/2” Thick  
4” to 12” Width



**Rounds**  
1/4” to 16”

\*Modified analysis may be required for certain size configurations.

### Lengths Available

Custom Cut To Lengths  
10 Ft to 12 Ft Random Lengths

### Typical Surface Condition\* (Pre-Machined)

Ground Top and Bottom (+.015”/+.035” oversize)  
Sides Saw Cut (+1/8” oversize)  
Length Saw Cut (+1/4” oversize)

\*As Delivered