



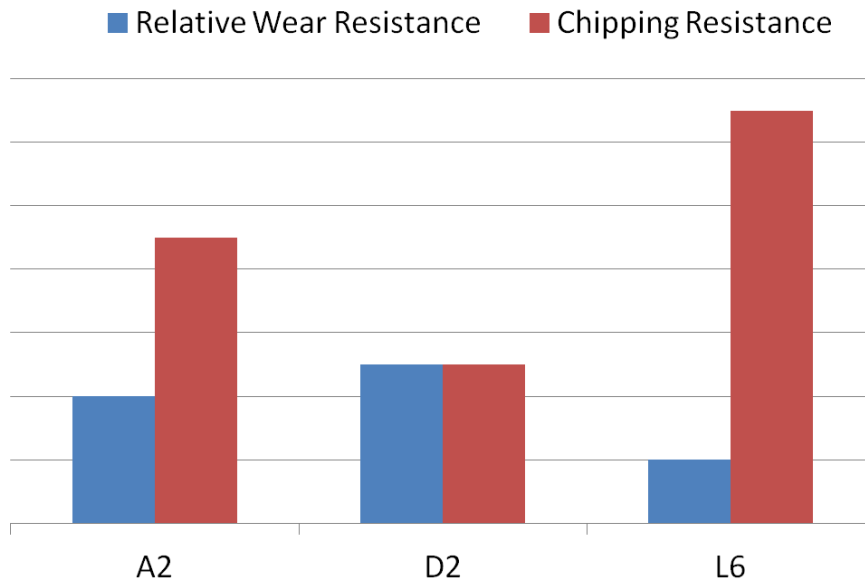
Technical Information: L6

L6 IS AN OIL HARDENING, COLD WORK TOOL STEEL.
L6 IS CHARACTERIZED BY HIGH TOUGHNESS AND RELATIVELY HIGH HARDNESS.
L6 IS USED IN APPLICATIONS REQUIRING A HIGH LEVEL OF IMPACT TOUGHNESS.

TYPICAL CHEMICAL COMPOSITION

| | | | |
|------------|-------|-----------|-------|
| CARBON | 0.75% | CHROMIUM | 0.80% |
| MOLYBDENUM | 0.30% | SILICON | 0.25% |
| NICKEL | 1.50% | MANGANESE | 0.70% |

SBSM TOOL STEEL PROPERTIES COMPARISON



PHYSICAL PROPERTIES

MODULUS OF ELASTICITY.....30 PSI X 10⁶(207 GPA)
 DENSITY..... 0.284 LB/IN³
 ANNEALED HARDNESS.....200-229 BRINELL HARDNESS (BHN)
 MACHINABILITY.....SIMILAR TO O1 TOOL STEEL



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HEAT TREATMENT

ANNEALING

HEAT TO 1400°F, HOLD TWO HOURS
SLOW COOL 20°F/HOUR TO 1100°F
THEN AIR OR FURNACE COOL TO ROOM TEMPERATURE

STRESS RELIEVING

PERFORMED PRIOR OR AFTER MACHINING TO MINIMIZE DISTORTION IN HEAT TREATING
1100/1200°F, HOLD TWO HOURS
THEN AIR COOL TO ROOM TEMPERATURE

HARDENING

OIL QUENCHING REQUIRED.

HIGH HEAT (AUSTENITIZING)

1500/1550°F FOR 20 MINUTES AT HEAT.

QUENCH

QUENCH IN OIL TO 150°F .

TO MINIMIZE DISTORTION, PARTS MAY BE REMOVED AT 400°F THEN AIR COOLED.
TEMPER IMMEDIATELY FOLLOWING QUENCH WHEN MATERIAL REACHES 150°F OR BELOW.

TEMPERING

MINIMUM 400°F TEMPERING TEMPERATURE REQUIRED.
DOUBLE TEMPERING IS REQUIRED.
AIR COOL TO ROOM TEMPERATURE BETWEEN TEMPERS.

TYPICAL HEAT TREAT RESPONSE

| TEMPERING TEMP | | HARDENING |
|----------------|-----|---------------------------|
| °F | °C | TEMP |
| As QUENCHED | | 1500°F 815°C 63/65 HRC |
| 400 | 205 | 61 HRC |
| 500 | 260 | 59 HRC |
| 600 | 315 | 58 HRC |
| 700 | 371 | 55 HRC |
| 800 | 427 | 52 HRC |
| 900 | 510 | 49 HRC |
| 1000 | 538 | 45 HRC |