

# LKM2312

## 塑胶模具钢

Plastic Mould Steel

- ▶▶ 良好加工性 Good Machinability
- ▶▶ 预硬材料 Prehardened Steel
- ▶▶ 中小型模架及模板 Small to Medium Size Mould Base and Mould Plate



## LKM2312 简介 Introduction

LKM2312是参照美国AISI P20+S及德国W.Nr 1.2312所开发之预加硬塑胶模具钢，为龍記集團全球采购之产品。通过严格的质量体系，确保品质符合相关标准之要求。LKM2312钢材成分中加入了适量的易切削元素S(硫)，使之特别适用于快速加工之普通塑胶模具及模架。

LKM2312 is a pre-hardened plastic mould steel developed by LKM through her global sourcing channels with reference to the US standard AISI P20+S and the German Standard W.Nr 1.2312. It is subject to strict quality control to ensure that the requirements of the related standard are met. With Sulphur content added, LKM2312 possesses good machinability which is suitable for mould base requiring high productivity during machining.

### 供货状态 (原材表面硬度) Delivered Hardness From Steel Mill (Measured at Surface)

LKM2312

预硬至HB280-325 Prehardened to HB280-325

### 参照标准

- AISI P20+S (硫)
- W.Nr 1.2312

### Comparable Standard

- AISI P20+S
- W.Nr 1.2312

### 化学成分(%) Chemical Composition (Percentage by Mass)

碳 C	锰 Mn	铬 Cr	钼 Mo	硫 S
0.37	1.45	1.9	0.2	适量

### 应用

- ✓ 大批量快速加工之中等批量普通塑胶模具及模架

### Application

- ✓ Mould base/plate with requirement of high strength and high volume/speed machining for plastic injection mould

### 物理性能 Physical Properties

温度(°C) Temperature	20-100	20-200	20-300	20-400	20-500
热膨胀系数 [10 <sup>-6</sup> m/(m x K)] Coefficient of Thermal Expansion	12.2	12.9	13.5	13.9	14.2



温度(°C) Temperature	20	350	700
热传导率 [W/(m x K)] Thermal Conductivity	39.5	36.5	33.0

### ▶▶ 纯度 Purity

B (氧化铝类) Alumina Type	C (硅酸盐类) Silicate Type	D (球状氧化物类) Globular Oxide Type
≤2.0	≤2.0	≤2.0

### ▶▶ 超声波检测

☞ SEP 1921-Test Group 3, Class C/c

### ▶▶ Ultrasonic Testing

☞ SEP 1921- Test Group 3, Class C/c

### ▶▶ 焊接处理

- ☞ 焊接前预热温度: 350°C
- ☞ 焊接使用专业焊枝 (LKM牌号Z04-P07-XX)
- ☞ 焊接后在550°C作去应力处理

### ▶▶ Welding

- ☞ Preheating temperature: 350°C
- ☞ Welding rod: LKM Z04-P07-XX
- ☞ Stress relieving temperature after welding: 550°C

### ▶▶ 表面处理

☞ 可以通过氮化、镀铬或PVD等表面处理提高模具表面的硬度, 延长模具的使用寿命

### ▶▶ Surface Treatment

☞ Suitable for all nitriding processes, hard chromium plating and PVD coating to increase surface hardness and improve mould life.



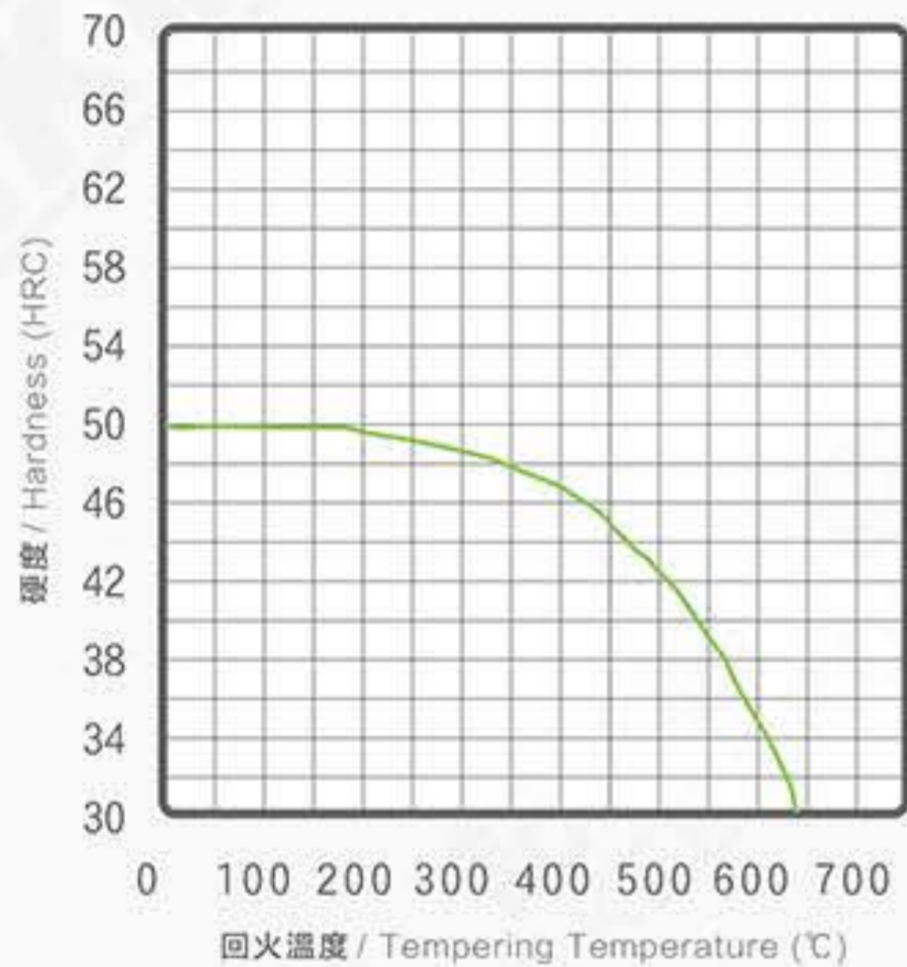


## 热处理工艺 Heat Treatment

锻造 Forging	软性退火 Annealing	淬硬 Quenching	回火 Tempering
1080-800°C	740-760°C	840-880°C	580-680°C

回火图 (试样尺寸 :  $\varnothing 25 \times 50\text{mm}$ ; 油淬温度 : 850°C)

Tempering Curve (Sample dimension:  $\varnothing 25 \times 50\text{mm}$ ; Quenched at 850°C by Oil)



**LKM**® 龍記集團  
LUNG KEE GROUP



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