

LKM2311

塑胶模具钢

Plastic Mould Steel

➤➤ 预硬材料 Prehardened Steel

➤➤ 中小型模具 Small to Medium Size Plastic Injection Mould



LKM2311 简介 Introduction

LKM2311是参照美国AISI P20及德国W.Nr 1.2311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。

LKM2311 is a pre-hardened plastic mould steel developed by LKM through her global sourcing channels with reference to the US standard AISI P20 and the German Standard W.Nr 1.2311. It is subject to strict quality control to ensure that the requirements of the related standard are met.

LKM2311主要用于一般要求之塑胶模具、塑胶模具下模件、高强度要求之模架。

LKM2311 is mainly used for general requirement of the plastic injection mould, core/movable part of plastic injection mould and mould base with high strength requirement.

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

LKM2311

预硬至HB280-325 Prehardened to HB280-325

参照标准

- Q AISI P20
- Q W.Nr 1.2311

Comparable Standard

- Q AISI P20
- Q W.Nr 1.2311

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

碳 C	锰 Mn	铬 Cr	钼 Mo
0.37	1.45	1.9	0.2

应用

- ✓ 长期生产之塑胶模模架
- ✓ 中小批量之塑胶模下模件
- ✓ 压铸模架

Application

- ✓ Mould base/plate with high strength requirement for plastic injection mould
- ✓ Core/movable part of plastic injection mould without high surface finish requirement
- ✓ Mould base for die casting die

物理性能 Physical Properties

温度(°C) Temperature	20-100	20-200	20-300
热膨胀系数 [10 ⁻⁶ m/(m x K)] Coefficient of Thermal Expansion	11.1	12.9	13.4

温度(℃) Temperature	20	200	300
热传导率 [W/(m x K)] Thermal Conductivity	34.2	33.8	32.0

▶▶ 纯洁度 Purity

A (硫化物类) Sulfide Type	B (氧化铝类) Alumina Type	C (硅酸盐类) Silicate Type	D (球状氧化物类) Globular Oxide Type
≤1.5	≤2.0	≤2.0	≤2.0

▶▶ 超声波检测

(☞) SEP 1921-Test Group 3, Class D/d

▶▶ Ultrasonic Testing

(☞) SEP 1921- Test Group 3, Class D/d

▶▶ 焊接处理

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

▶▶ Welding

- ☀ Preheating temperature: 350℃
- ☀ Welding rod: LKM Z04-P07-XX
- ☀ Stress relieving temperature after welding: 550℃

▶▶ 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

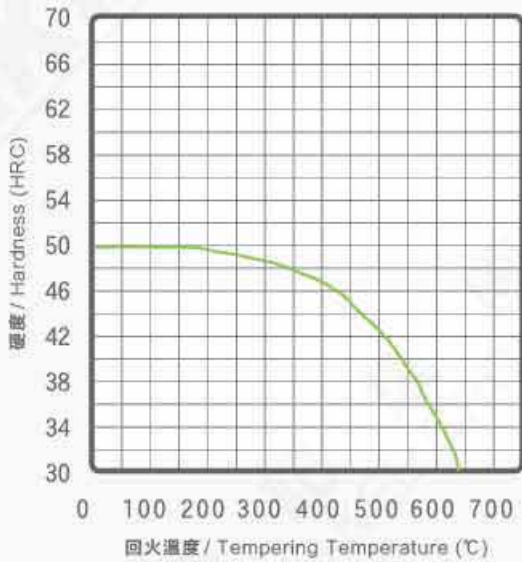


热处理工艺 Heat Treatment

锻造 Forging	软性退火 Annealing	淬硬 Quenching	回火 Tempering
1050-800°C	710-740°C	840-880°C	550-680°C

回火图 (试样尺寸 : $\varnothing 25 \times 50\text{mm}$; 油淬温度 : 880°C)

Tempering Curve (Sample dimension: $\varnothing 25 \times 50\text{mm}$; Quenched at 880°C by Oil)



LKM® 龍記集團
LUNG KEE GROUP



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