

# CN420/420H

## 国产防锈塑胶模具钢

Stainless Plastic Mould Steel (China Made)

具防锈性 Anti-Rusting Property

需要防锈之模架 Mould Base/Plate With Anti-Rusting Requirement

## CN420/420H 简介 Introduction

CN420/CN420H是属于龍記集團国产模具钢系列中之防锈塑胶模具钢，参照美国AISI 420及德国W.Nr 1.2083而开发。CN420为退火态，可以热处理加硬至HRC46-52，用于既需要防锈又有耐磨要求的模具。

CN420H为预加硬材料，不需要再做热处理，用于对模具耐磨性要求一般，但需防锈之塑胶模具。

CN420/CN420H are stainless plastic mould steel developed by LKM through her sourcing channels in China with reference to the US standard AISI 420 and the German standard W.Nr 1.2083. CN420 is delivered in annealed condition; it can be hardened to HRC46-52 and is suitable for plastic injection mould requiring both corrosion and wear resistance.

CN420H is a pre-hardened material and does not require further heat treatment process; it can be used for plastic injection mould with mild requirement for wear resistance but demanding corrosion resistance.

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

CN420

软性退火至 $\leq$ HB240 Annealed to HB240 (max.)

CN420H

预硬至HB280-330 Prehardened to HB280-330

### 参照标准

- AISI 420
- W.Nr 1.2083

### Comparable Standard

- AISI 420
- W.Nr 1.2083

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

碳 C	锰 Mn	铬 Cr
0.38	0.5	13.0

### 应用

- ✓ 一般要求及较细型非复杂塑胶模具
- ✓ 需要防锈之模架

### Application

- ✓ Small size plastic injection mould of non-complicated structure without high surface finish requirement
- ✓ Mould base/plate with anti-rusting property

## 物理性能 Physical Properties

温度 (°C) Temperature	20-100	20-200	20-300	20-400
热膨胀系数 [10 <sup>-6</sup> m/(m x K)] Coefficient of Thermal Expansion	10.5	11.0	11.0	11.5

温度 (°C) Temperature	20	350	700
热传导率 [W/(m x K)] Thermal Conductivity	20	23.0	26.2

## 纯度 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
≤2.0	≤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

- ☀ 焊前需要预热处理，预热温度：200-250℃
- ☀ 焊接使用专用焊枝（LKM牌号Z04-A08-XX）
- ☀ 焊后热处理工序：
  - ▶ CN420：如在退火态焊接，焊后在780℃去应力退火
  - ▶ CN420：如在淬硬态焊接，焊后以低于先前回火温度20-30℃作去应力处理
  - ▶ CN420H：焊后在600℃去应力回火

## Welding

- ☀ Preheating temperature: 200-250℃
- ☀ Welding rod: LKM Z04-A08-XX
- ☀ Heat Treatment after Welding:
  - ▶ CN420: Annealed condition: Soft-anneal at 780℃
  - ▶ CN420: Hardened condition: Temper at 20-30℃ below the last tempering temperature
  - ▶ CN420H: Temper at 600℃

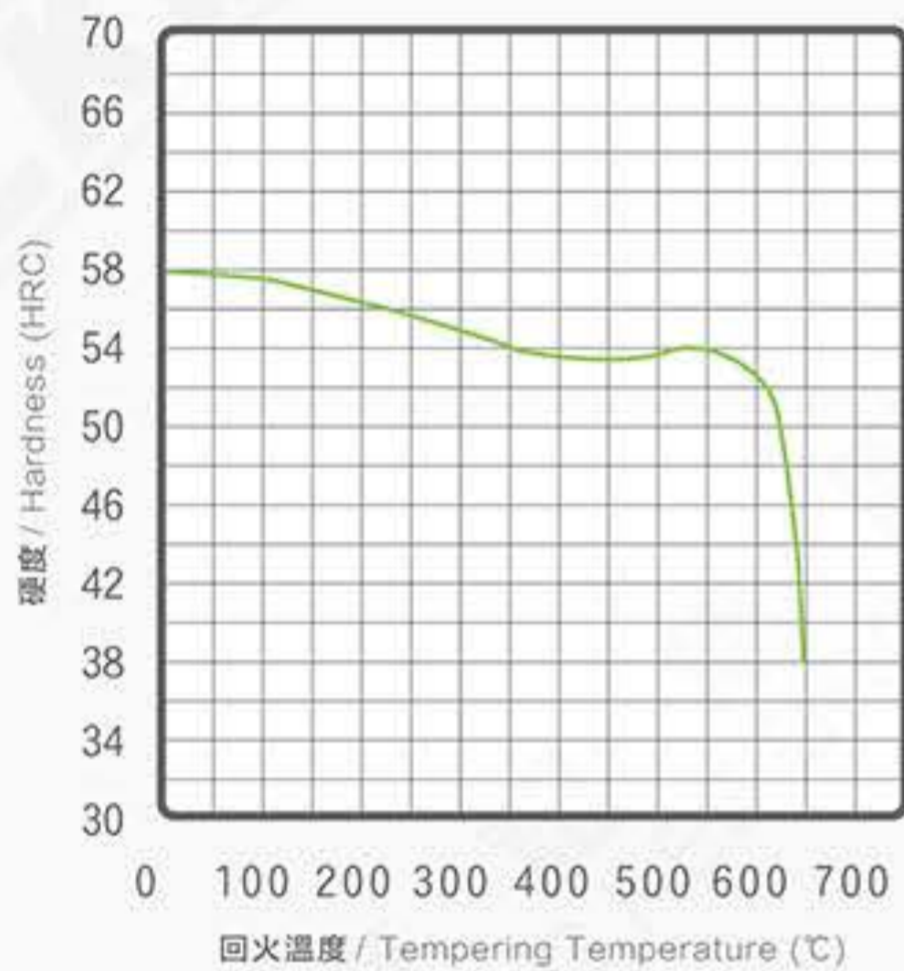


## 热处理工艺 Heat Treatment

锻造 Forging	软性退火 Annealing	淬硬 Quenching	回火 Tempering
1050-850℃	760-800℃	1000-1030℃	250-570℃

回火图 (试样尺寸 :  $\varnothing 25 \times 50\text{mm}$ ; 油淬温度 :  $1020^\circ\text{C}$ )

Tempering Curve (Sample dimension:  $\varnothing 25 \times 50\text{mm}$ ; Quenched at  $1020^\circ\text{C}$  by Oil)



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LUNG KEE GROUP



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