

# CN H13

## 国产热作模具钢

Hot Work Steel (China Made)

良好淬透性 Good Hardenability

一般应用之塑胶模具、行位、斜顶及热流道板

Through-Hardened Plastic Injection Mould, Slider, Lifter and Hot Runner System



## CN H13 简介 Introduction

CN H13是属于龍記集團国产模具钢系列之热作模具钢，参照美国AISI H13及德国W.Nr 1.2344标准而开发。该钢种具有良好的淬透性、耐高温性和耐磨性，可以用于无腐蚀性要求之长寿命塑胶硬模和机械构件。

CN H13 is a hot work tool steel developed by LKM through her sourcing channels in China with reference to the US standard AISI H13 and the German standard W.Nr 1.2344. This material possesses good hardenability, heat resistance and wear resistance; It can be used for plastic injection mould for non-corrosive resin and machinery components.

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

CN H13

软性退火 ≤HB225 Annealed to HB225 (max.)

### 参照标准

- Q AISI H13
- Q W.Nr 1.2344

### Comparable Standard

- Q AISI H13
- Q W.Nr 1.2344

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

碳 C	硅 Si	锰 Mn	铬 Cr	钼 Mo	钒 V
0.38	1.00	0.40	5.00	1.30	1.00

### 应用

- ✓ 一般应用之塑胶模具
- ✓ 行位 / 斜顶
- ✓ 热流道板

### Application

- ✓ Through-hardened plastic injection mould for non-corrosive resin
- ✓ Slider and lifter for plastic injection mould
- ✓ Hot runner system plate

### 物理性能 Physical Properties

温度(°C) Temperature	20-100	20-200	20-300	20-400	20-500	20-600	20-700
热膨胀系数 [10 <sup>-6</sup> m/(m x K)] Coefficient of Thermal Expansion	10.9	11.9	12.3	12.7	13.0	13.3	13.5

温度(°C) Temperature	20	350	700
热传导率 [W/(m x K)] Thermal Conductivity	25.2	27.0	30.3



## ▶▶▶ 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 D/d

## ▶▶▶ Ultrasonic Testing

(☞) SEP 1921- Test Group3, Class D/d

## ▶▶▶ 焊接处理

- ☀ 焊前需要预热处理，预热温度：325℃
- ☀ 焊接使用专用焊枝（LKM牌号Z04-H04-XX）
- ☀ 焊后热处理工序：
  - ▶ 如在退火态焊接，焊后在850℃去应力退火
  - ▶ 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

## ▶▶▶ Welding

- ☀ Preheating temperature: 325℃
- ☀ Welding rod: LKM Z04-H04-XX
- ☀ Heat Treatment after Welding:
  - ▶ Annealed condition: Soft-anneal at 850℃
  - ▶ Hardened condition: Temper at 20-30℃ below the last tempering temperature

## ▶▶▶ 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



## ▶▶▶ 良好耐磨性

☀ CN H13可以通过热处理加硬至HRC44-52之常用硬度,适用于添加玻纤、需要较高耐磨性或长寿命要求之塑胶模具

## ▶▶▶ Good Wear Resistance

☀ CN H13 could be hardened to HRC44-52, it is suitable for making plastic injection mould moulding abrasive/filled materials or for long production run

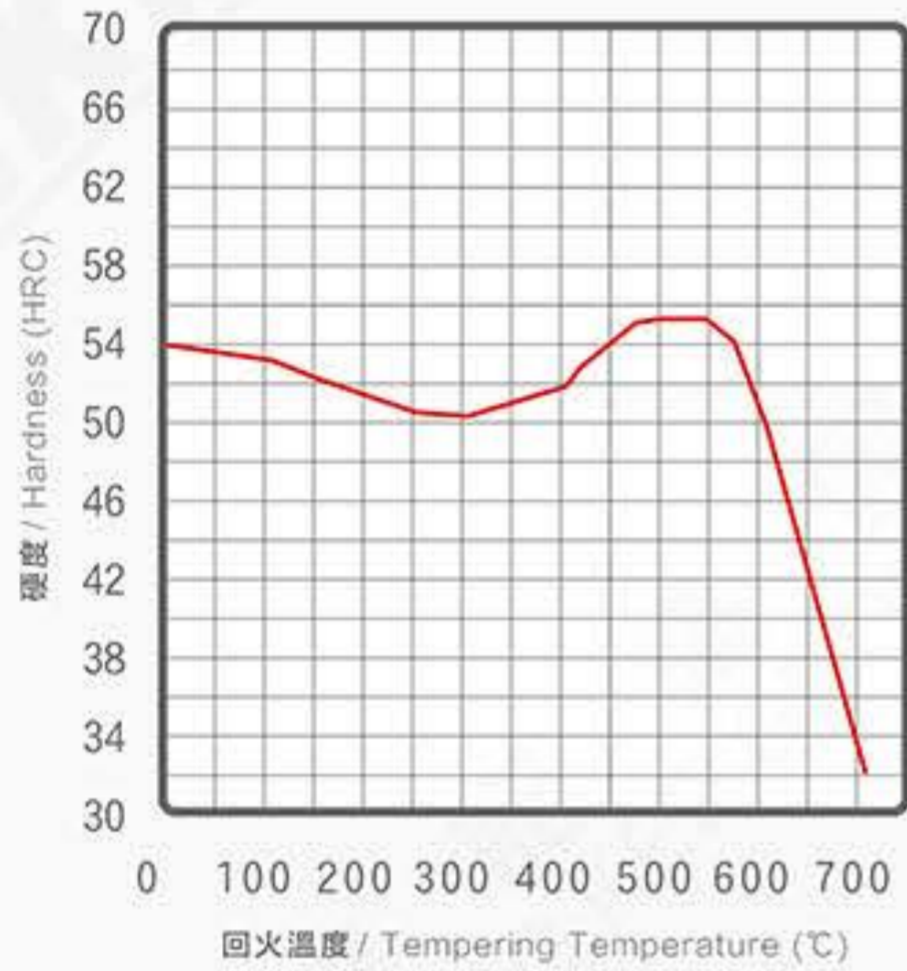


## 热处理工艺 Heat Treatment

锻造 Forging	软性退火 Annealing	淬硬 Quenching	回火 Tempering
1050-850°C	820-840°C	1020-1050°C	520-700°C

回火图 (试样尺寸 :  $\varnothing 25 \times 50\text{mm}$ ; 油淬温度 : 1030°C)

Tempering Curve (Sample dimension:  $\varnothing 25 \times 50\text{mm}$ ; Quenched at 1030°C by Oil)



**LKM**® 龍記集團  
LUNG KEE GROUP



### 集团总公司 (HEAD OFFICE)

#### 龙记五金有限公司 LUNG KEE METAL LTD

香港新界沙田安群街1号京瑞广场2期15楼A室  
Unit A,15/F, Kings Wing Plaza 2, No.1 On Kwan Street,  
Sha Tin, New Territories, Hong Kong  
接单部 电话 Tel : (852) 2341 2321, 传真 Fax : (852) 2343 0990

网址 : [WWW.LKM.COM.CN](http://WWW.LKM.COM.CN)

电邮 : [LKMSALES@LKM.COM.HK](mailto:LKMSALES@LKM.COM.HK)

#### 河源龙记金属制品有限公司

HEYUAN LUNG KEE METAL PRODUCTS CO LTD

中国广东省河源市高新技术开发区龙记大道  
Long Ji Da Dao, Hi-tech Development Zone, Heyuan,  
Guangdong Province, China  
电话 Tel : (86) 0762-3210 502 传真 Fax : (86) 0762-3210 501

#### 杭州龙记金属制品有限公司

HANGZHOU LUNG KEE METAL PRODUCTS CO LTD

中国浙江省杭州市萧山区杭州江东工业园区江东三路7711号  
7711 Jiangdong 3rd Road, Hangzhou Jiangdong Industrial  
Park, Xiaoshan District, Hangzhou, Zhejiang Province, China  
电话 Tel : (86) 0571-8213 3281 传真 Fax : (86) 0571-8213 3280

09/2015 Ref:S063