

# 金属硅粉安全技术说明书

## Material Safety Data Sheet of Silicon Metal Powder

### 第一部分 化学品及企业标识

#### Section 1: Chemical product and company identification

1、 化学品中文名：金属硅粉；

Chinese name of the chemical product: Silicon Metal Powder

2、 企业名称：成都锦淳金属材料有限公司

Company name: Chengdu Jinchun Metallic Materials Co., Ltd.

地 址：中国四川成都龙泉驿区驿都西路 3666 号

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### 第二部分 成分/组成信息

#### Section 2: Composition / information on ingredients

相对分子质量：28.09000

Molecular Weight: 28.09000

化学类别：金属粉体

Chemical Type: Metallic Powder

Chemical	CAS No	Ratio
Si	7440-21-3	> 99%
Fe	7439-89-6	< 0.3%
Al	7429-90-5	< 0.3%
Ca	7440-70-2	< 0.05%

### 第三部分 健康影响

#### Section 3: Health Effects

避免吸入与食入。

Avoid inhalation and ingestion

### 第四部分 危险性概述

#### Section 4: Hazards Overview

危险性类别：无危险性

Dangerous cargo grade: Not dangerous.

侵入途径：吸入、皮肤接触

Inhalation methods: Inhalation、skin contact

环境危害：无资料

Environmental Hazard: N/A

燃爆危险：无资料。

**Explosion conditions:**N/A.

## 第五部分 急救措施

### Section 5: First Aid Measures:

**皮肤接触:** 用肥皂水及清水彻底冲洗皮肤

**Skin Contact:** Wash exposed area with soap and water. Get medical advice if irritation develops.

**眼睛接触:** 用大量流动清水或生理盐水彻底冲洗，严重时洗后就医。

**Eye Contact:** Immediately flush eyes with plenty of water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get medical attention.

**吸入:** 迅速脱离现场至空气新鲜处。

**Inhalation:** Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

**食入:** 饮足量温水，催吐，就医。

**Ingestion:** Give several glasses of water to drink to dilute. If large amounts were swallowed, get medical advice.

## 第六部分 消防措施

### Section 6: Fire Fighting Measures

**灭火方法及灭火剂:** 使用干燥惰性颗粒状物质（如干砂）石棉被等灭火材料，轻轻围盖；避免扬起粉尘；

**Fire-fighting measures and extinguishing media:** The use of inert dry granular material (sand Rujan) fire-fighting materials such as asbestos were gently covered in circle; up to avoid dust;

**灭火注意事项及措施:** 消防人员穿戴全身消防防护服；严禁用水灭火；

**Fire-fighting comments and measures:** Fire-fighters must wear Fire-fighting protective clothes. Water and carbon dioxide kind extinguishers are forbidden.

## 第七部分 操作处置与储存

### Section 7: Handling and storage:

**操作处置注意事项:** 建议操作人员佩戴自吸过滤式防尘口罩，戴化学安全防护眼镜，穿防静电工作服。远离火种、热源，工作场所严禁吸烟。配备相应品种和数量的消防器材及泄漏应急处理设备。倒空的容器可能残留有害物质。

**Handling:** Operators must pass special trade, obey the operating rules. Suggest operators wear filter-type dust-proof respirator, chemical safe goggles, static-free working clothes. Far away from sources of ignition and heat and smoking is not allowed in working area. Apply

explosion prevention ventilation system and equipment. Avoid power flying and contact with oxidant, acids and alkalis. Load and unload slightly and protect package from breaking out. Prepare the related suitable extinguisher with full quantity and accidental release handling devices. It may leave harmful materials in emptied out containers.

**储存注意事项:** 储存于干燥、通风的库房。远离火种、热源。包装密封。应于氧化剂、酸、碱类分开存放，切忌混储。配备相应的品种和数量的消防器材；储区应备有合适的材料收集收容泄漏物。

**Storage:** Store in dry and ventilated warehouse. Be far away from sources of ignition and heat. Stored in separated place against oxidant, acids and alkalis and shouldn't be swapped. Use explosion prevention ventilation and lighting devices. Be not stored in long time to avoid out of date. Prepare the related suitable extinguisher with full quantity; There are suitable containers to pick up the leaking powder.

## 第八部分 暴露控制/人体防护

### Section 8: Exposure controls / personal protection

中国 MAC ( $\text{mg}/\text{m}^3$ ) : 未制定标准 China MAC  
( $\text{mg}/\text{m}^3$ ) : NO Standard 前苏联 MAC ( $\text{mg}/\text{m}^3$ ) :  
2[AL]

Te former Soviet Union MAC ( $\text{mg}/\text{m}^3$ ) : 2[AL]

美国 TLV-TWA: 未制定标准 TLVTN:ACGIH  $10\text{mg}/\text{m}^3$ [粉尘],  $5\text{mg}/\text{m}^3$ [焊接烟雾]  
USA TLV-TWA: NO Standard TLVTN:ACGIH  $10\text{mg}/\text{m}^3$ [dust]/  $5\text{mg}/\text{m}^3$  [welding smoke]

美国 TLV-STEL: 未制定标准 TLVWN: 未制定标准

USA TLV-STEL: NO Standard TLVWN: NO Standard

**监测方法:**

**工程控制:** 密闭操作，加强通风。提供淋浴和安全设备。

**Project Control:** Operation in a closed devise, be well ventilated in the workshop. Supply the shower and safety devise.

**呼吸系统防护:** 可能接触其粉尘时，必须佩戴自吸过滤式防尘口罩。必要时，佩戴空气呼吸器。

**Respiratory tract protection:** must wear protective mask when contacting the powder, if necessary, wear air-purifying respirators

**眼睛防护:** 戴化学安全防护眼镜。

**Eye Protection:** Use chemical safety goggles.

**身体防护:** 穿防静电工作服。

**Body protection:** wear antistatic working clothes.

**手防护:** 戴防静电作业防护手套。

**Hands' protection:** wear antistatic gloves.

**其他防护:** 工作场所禁止吸烟、进食和饮水，饭前要洗手。工作完毕，淋浴更衣。注意个人卫生。实行就业前和定期体检，防止尘肺。

**Additional information:** No smoking, eating and drinking in the workshop, wash the hands before eating. Wash thoroughly and change the clothing after handling. Do physical examination regularly if contacting the powder with a long time.

## 第九部分 理化特性

### Section9: Physical /chemical properties

**外观与性状:** 灰黑色粉状颗粒

**Appearance:** Fine, Gray and black powder.

沸点 (°C) : 2355

**Boiling point (°C) :2355**

熔点 (°C) : 1410

**Melting point (°C) : 1410°C**

相对密度 (水=1) : 2.33 (振实)

**Relative density: 2.33**

相对蒸汽密度 (空气=1) : 无资料

**Relative density of steam (air=1): No Data**

饱和蒸汽压 (KPa) : 无资料

**Saturated vapor pressure: No Data**

燃烧热 (kJ/mol) : 无资料

**Burning hot: No Data**

临界温度 (°C) : 无意义

**Critical temperature (°C): Meaningless**

临界压力 (MPa) : 无意义

**Critical press (MPa): meaningless**

闪点: 无资料

**Flash point: No Data**

辛醇/水分配系数: 无资料

**octanol/water partion coefficient: No Data**

引燃温度 (°C) : 无资料

**Ignition Temperature (°C): No Data**

爆炸上限: 无资料

**Explosion max limit: No Data**

溶解性: 不溶于水, 不溶于硝酸, 溶于稀盐酸, 硫酸。

**Solubility: Insoluble in water, insoluble in nitric acid, soluble in dilute hydrochloric acid, sulfuric acid.**

主要用途: 焊接材料, 粉末冶金行业等。

**Mainly applications:** Welding materials, powder metallurgy, etc.

第十部分 稳定性和反应活性

## Section 10. Stability and Reactivity

稳定性: 稳定

**Stability:** Stable

聚合危害: 不能发生

**Hazardous Polymerization:** Will not occur.

避免接触条件: 火种、热源

**Avoid contact:** fire, heat.

**Conditions to Avoid:** flames, heat, moisture

禁忌物: 稀盐酸, 硫酸

**Taboo:** Dilute hydrochloric acid, sulfuric acid.

第十一部分 毒理学资料

## Section 11 Toxicological Information

急性毒性: **LD50:** 无资料

**LC50:** 无资料

Acute toxicity: **LD50:** No Data

**LC50:** No Data

刺激性: 对眼睛轻度刺激

**Irritation:** light stimulate to eyes

致敏性: 无资料

**Allergenicity:** No Data

亚急性和慢性毒性: 无资料

**Sub-acute and chronic toxicity:** No Data

致突变性: 无资料

**Mutagenicity:** No Data

致畸性: 无资料

**Teratogenicity:** No Data

致癌性: 无资料

**Carcinogenicity:** No Data

## 第十二部分 生态学资料

### Section 12 Ecological Data

生物效应: 该物质对环境无危害。

**Biological effect:** This substance is no harmful to environment.

生物降解性: 无资料

**Biodegradable:** No Data

非生物降解性: 无资料

**Non-biodegradable:** No Data

生物富集: 无资料

**Bioconcentration:** No Data

环境迁移: 无资料

**Environmental migration:** No Data

## 第十三部分 废弃处理

### Section 13 Waste Disposal

废气物性质: 不属于危险废弃物

**Waste characters:** not belong to hazardous waste

废弃方法: 除之前应参阅国家和地方有关法规。若可能回收使用, 也可安全掩埋法处置

**Waste:** must follow the laws of the Country and location before dispose it. If can recycling, also can bury safety.

废弃注意事项: 建议操作人员佩戴自吸过滤式防尘口罩。

**Disposal attentions:** Suggest the operator wear self-priming and filter to dust mask.

## 第十四部分 运输信息

### Section 14 Transport Data

危险货物编号: 无

**Dangerous goods Code:** Not dangerous.

IMO/IMDG: The product is not subject to IMO IMDG Code.

#### 第十五部分 法规信息

##### Section 15 Regulatory Information

该产品不含任何化学物质，尽管在编制文件过程中需要采取合理的谨慎措施，但我们不提供任何保证，也不对所含信息的完整性作出任何陈述，也不对这些信息的适用性承担任何责任。每个人都应该根据自己的具体需求安排信息的可分性的确定。

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#### 第十六部分 其他信息

##### Section 16 Other Information

修订部门：成都锦淳金属材料有限公司研发&检测中心

Department: Research & Inspection Center of Chengdu Jinchun Metallic Materials Co.,Ltd.

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