



Test Report  
检测报告

No.: S241224070001-2  
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# MSDS

## 化学品安全技术说明书

**Sample Name:** Lead-free Tin Paste(Solder Paste)

样品名称: 无铅锡浆

**Tested Model:** RL-406S

主测型号: RL-406S

**Additional Model:** SP-X、SP-50、SP-60, RL-404、RL-404S、RL-406、HW31、HW32、HW33、HW34、HW35、HW36、HW37、HW38、HW39、HW40、HW31S、HW32S、HW33S、HW34S、HW35S、HW36S、HW37S、HW38S、HW39S、HW40S

附加型号: SP-X、SP-50、SP-60, RL-404、RL-404S、RL-406、HW31、HW32、HW33、HW34、HW35、HW36、HW37、HW38、HW39、HW40、HW31S、HW32S、HW33S、HW34S、HW35S、HW36S、HW37S、HW38S、HW39S、HW40S

**Customer:** Guangzhou Sunshine Electronics Technology Co.,Ltd

客户名称: 广州歆讯电子科技有限公司

**Customer Address:** 16th Floor, No. 9 Baihesha Road, Liwan District, Guangzhou

客户地址: 广州市荔湾区白鹤沙路 9 号 16 层

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## Material Safety Data Sheet

### 化学品安全技术说明书

#### Section 1 - Chemical Product and Company Identification

#### 第一项：化学品名称和制造商信息

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**Trademark:** Quick, Sunshine, RELIFE

商标品牌: Quick, Sunshine, RELIFE

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客户地址: 广州市荔湾区白鹤沙路 9 号 16 层

**Manufacturer:** Foshan Xinheng Technology Co., Ltd.

制造商名称: 佛山新恒科技有限公司

**Manufacturer Address:** 5th Floor, Building 3, Liandong Intelligent Manufacturing Park, No. 105, Shilong North Road,Nanhai District,Foshan City

制造商地址: 佛山市南海区桂城街道石龙北路 105 号联东智造园 3 座 5 楼

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## Section 2 - Hazards Identification

### 第二项：危害信息

**Fatalness grade:** In accordance with Regulation (EC) No. 1272/2008, the sample is not divided into dangerous article.

危险性类别：根据指令(EC) No. 1272/2008，该样品未被划分为危险品。

**Classification of the substance or mixture:**

物质或混合物的分类：

This product is not classified as hazardous according to the GHS(The Globally Harmonized System of Classification and Labelling of Chemicals)

根据 GHS(全球化学品统一分类和标签制度)，该产品未被列为危险产品。

**GHS Label elements, including precautionary statements:**

**GHS 标签元素，包括预防声明：**

**Pictogram(s):** No pictogram is used

象形图：无象形图使用。

**Signal Word:** No signal word is used.

信号词：无信号词使用。

**Hazard Statement:** No hazard statement.

危险说明：无危险说明。

**Precautionary statements:** No precautionary statement

预防性声明：没有预防性声明。

**Description of any hazards not otherwise classified:** No additional information available

任何未分类的危险的描述：没有其他信息

**Invasion route:**

侵入途径：

**Skin contact:** Under normal circumstances, it is harmless to use.

皮肤接触：正常情况下使用无害。

**Eyes contact:** Under normal circumstances, it is harmless to use.

眼睛接触：正常情况下使用无害。

**Inhalation:** Long-term inhalation of tin fumes or dust can cause tin pneumoconiosis (or tin dusting disease)

吸入：长期吸入锡烟或锡尘可引起锡尘肺病（或锡尘病）

**Ingestion:** It can cause our stomach upset if we swallowed.

摄入：吞食可引起肠胃不适。

**Health hazards:** Lead-free solder paste and its inorganic compounds are low-toxic items, and in general, as long as they are properly protected, there is no obvious harm to the human body in a short time. Long-term inhalation of tin smoke or tin dust can cause tin pneumoconiosis (or tin dust disease).

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**健康危害:** 无铅锡膏及其无机化合物是属于低毒物品,一般情况只要防护得当,对人体在短时间无明显危害。长期吸入锡烟或锡尘可引起锡尘肺病(或锡尘病)。

**Environment hazards:** Do not release materials into the surrounding environment unless permitted by the government.

**环境危害:** 若无政府许可,勿将材料排入周围环境

**Burn & burst danger:** The sample is not combustible.

**燃爆危险:** 样品不可燃。

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### Section 3 –Composition/Information on Ingredient

#### 第三项：组成信息

Pure  Admixture   
纯品  混合物

##### Composition:

化学成分:

Chemical Name 化学名称	CAS No. 化学文摘 登陆号	Composition (in% by weight) 成份重量百分比
Flux 助焊剂  Skin sensitization, Category 1, H317 皮肤致敏物 类别 1, H317	8050-09-7	11.5%
Tin power 锡粉	7440-31-5	87.5%
CLP		
Classification 分类 Concentration 浓度<=100%		
Value 数值	Control Parameters 控制参数	Basis 依据
TWA	2 mg/m <sup>3</sup>	USA. Occupational Exposure Limits (OSHA)- Table Z-1 Limits for Air Contaminants 美国职业暴露 限值(OSHA)-表 Z-1 空气污染物限值
TWA	2 mg/m <sup>3</sup>	USA.ACGIH Threshold Limit,Values(TLV) 美国 ACGIH 阈值限值 (TLV)
TWA	2 mg/m <sup>3</sup>	USA.OSHA-TABLEZ-1 Limits for Air Contaminants- 1910.1000 美国 OSHA -表 z -1 空气污染物限值 1910.1000
TWA	2 mg/m <sup>3</sup>	USA. NIOSH Recommended Exposure Limits 美国 NIOSH 建议的暴露限值
Silver(Ag) 银(Ag)	7440-22-4	0.3%
Copper(Cu) 铜(Cu)	7440-50-8	0.7%

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## Section 4 - First Aid Measures

### 第四项：急救措施

**Skin touch:** If the solder paste adheres to clothing or the body, please wipe it off as soon as possible with an alcohol containing solvent.

皮肤接触：若焊膏粘附在衣物或身体时，请尽快用含酒精的溶剂把焊膏擦掉。

**Eyes touch:** Lifting the upper and lower eyelids(Remove contact lenses if possible), flush the eyes with plenty of water or saline water. Get medical aid.

眼睛接触：提起眼睑（如可能易行，摘除隐形眼镜），用流动清水或生理盐水冲洗。就医。

**Inhalation:** If exposure to fumes from overheating, move to fresh air immediately. Keep the respiratory tract smooth. Use oxygen if available. Get medical aid.

吸入：如果暴露在过热产生的烟雾中，迅速脱离现场至空气新鲜处。保持呼吸道通畅。如呼吸困难，给输氧。就医。

**Ingestion:** Rinse your mouth. Do not induce vomiting. Get medical aid.

食入：漱口，禁止催吐。立即就医。

**Advice for protecting rescuers:** Move patients to a safe place. Consult a doctor. Present this chemical safety technical manual to the on-site doctor for review.

对保护施救者的忠告：将患者转移到安全的场所。咨询医生。出示此化学品安全技术说明书给到现场的医生看。

**Special reminder for doctors:** No data available.

对医生的特别提示：无资料

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## Section 5 - Fire Fighting Measures

### 第五项：消防措施

**Danger characteristic:** No special combustion and explosion characteristics.

危险特性: 未有特殊的燃烧爆炸特性。

**Hazardous combustion products:** Decomposition product unknown

有害燃烧产物: 分解产物不明。

**Fire-Fighting method & media:** The staff must equip with filtermask (full mask) or isolated breathing apparatus. The staff must wear the clothes which can defense the fire and the toxic gas. Put out the fire in the upwind direction. Remove the container to the open space as soon as possible. Spray water on the containers in the fireplace to keep them cool until finish extinguishment. If the container in the fire has discolored or made a sound from the safety pressure relief device, it must be evacuated immediately. Media: hazy water, foam, powder, CO<sub>2</sub>, sandy clay.

**灭火方法及灭火剂:** 消防人员必须佩戴过滤式防毒面具(全面罩)或隔离式呼吸器、穿全身防火防毒服，在上风向灭火。尽可能将容器从火场移至空旷处。喷水保持火场容器冷却，直至灭火结束。处在火场中的容器若已变色或从安全泄压装置中产生声音，必须马上撤离。灭火剂: 雾状水、泡沫、干粉、二氧化碳、砂土

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## Section 6 –Accidental Release Measures

### 第六项：泄露应急处理

**Personnel protection measures, protective equipment, and emergency response procedures:** Clean the spill into a covered container and, if appropriate, first moisten to prevent dust. Personal protective equipment: P2 filter respirator for harmful particulate matter.

**人员防护措施、防护装备和应急处置程序:** 将泄漏物清扫进有盖的容器中, 如果适当, 首先润湿防止扬尘。个人防护用具: 适用于有害颗粒物的 P2 过滤呼吸器。

**Environmental protection measures:** contain leaks to avoid polluting the environment. Prevent spills from entering sewers, surface water and groundwater.

**环境保护措施:** 收容泄漏物, 避免污染环境。防止泄漏物进入下水道、地表水和地下水。

**Containment and removal methods of leaking chemicals and disposal materials used:**

**泄漏化学品的收容、清除方法及所使用的处置材料:**

**Small amount of leakage:** Collect the leaking liquid in a sealable container as much as possible. Absorb with sand, activated carbon or other inert material and transfer to a safe place. Do not flush down the drain.

**小量泄漏:** 尽可能将泄漏液体收集在可密闭的容器中。用沙土、活性炭或其它惰性材料吸收, 并转移至安全场所。禁止冲入下水道。

**Large leakage:** build a embankment or dig a pit to contain it. Seal the drainage pipe. Cover with foam to inhibit evaporation. Transfer to a tank truck or special collector with an explosion-proof pump for recycling or transport to a waste disposal site.

**大量泄漏:** 构筑围堤或挖坑收容。封闭排水管道。用泡沫覆盖, 抑制蒸发。用防爆泵转移至槽车或专用收集器内, 回收或运至废物处理场所处置。

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## Section 7 - Handling and Storage

### 第七项：操作和储存

**Handling:** Welding paste is affected by temperature and humidity, so it is recommended to work indoors at 23-25 °C with a humidity of 60%. Do not touch directly with your hands. Only suitable for use in the welding industry. Please use protective equipment during work, such as protective gloves, protective glasses, etc; After welding work, please wash your hands and mouth before meals; Solder paste should be avoided as much as possible from contaminating the workbench or bed surface, and should be carefully removed. Please clean the remaining solder paste with a solvent containing alcohol as soon as possible to avoid difficulty in cleaning over time. Except for the thinner used for solder paste, other diluents cannot be used, otherwise the performance of the product cannot be fully utilized; Please avoid inhaling the vapor sprayed during reflux: Please avoid bringing solder paste into the body due to skin contact or oral ingestion. Staff who have not received work guidance are not allowed to use. Do not let children touch the solder paste

**操作注意事项:** 焊膏会受温度及湿度影响，故建议室内工作环境在 23~25°C，湿度 60% 为佳。请勿直接用手触摸。只适宜在焊接工业使用。工作进行中请使用防护用具，如防护手套，防护眼镜等;焊接工作后，饭前请洗手和口;焊膏要尽量避免沾污工作台或者床面，并应小心清除。遗留的焊膏请尽快用含有酒精的溶剂清洗，以免时间长了不容易清洗:除了焊膏专用的稀释剂不能使用其它稀释剂，否则不能发挥制品的性能;请避免吸入回流进行时喷出的蒸气:请避免因皮肤接触或者口服而把焊膏带入体内。未曾受过工作指导的工作人员请勿使用请勿让小孩触摸焊膏。

**Storage:** Store in a cool and ventilated warehouse. Stay away from sparks and heat sources. Please store the the solder paste in a temperature of 1 to 10°C, do not place in sunlight. Keep away from fire and heat. Keep the container sealed. It should be stored separately from oxidants, acids, and alkalis, and should not be stored together. Prohibit the use of mechanical equipment and tools that are prone to generating sparks. The storage area should be equipped with emergency response equipment for leaks and appropriate containment materials.

**储存注意事项:** 储存于阴凉、通风的库房。请保存焊膏于温度(1 至 10 度)的环境中，不可放置于阳光照射处。远离火种、热源。保持容器密封。应与氧化剂、酸类、碱类分开存放，切忌混储。禁止使用易产生火花的机械设备和工具。储区应备有泄漏应急处理设备和合适的收容材料。

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## Section 8 - Exposure Controls, Personal Protection

### 第八项：接触控制和个人防护措施

**Maximum admissible concentration:** No standard yet

最高容许浓度: 未制定标准

**Monitoring Method:** EN 14042 Guidance on procedures for assessing exposure to chemical or biological agents in workplace air

监测方法: EN 14042 工作场所空气 用于评估暴露于化学或生物试剂的程序指南

**Engineering Control:** Prevent dust from spreading! Workspaces are recommended to be separated from other workspaces. Closed operation to prevent leakage. Enhance ventilation. Set up automatic alarm device and emergency ventilation facilities. Set up emergency evacuation channels and necessary drainage areas. Set up red area warning line, warning mark and Chinese warning description, and set up communication alarm system. Safety shower and eye washing facilities are available

**工程控制:** 防止粉尘扩散！作业场所建议与其它作业场所分开。密闭操作，防止泄漏。加强通风。设置自动报警装置和事故通风设施。设置应急撤离通道和必要的泻险区。设置红色区域警示线、警示标识和中文警示说明，并设置通讯报警系统。提供安全淋浴和洗眼设备

**Respiratory Protection:** When the concentration in the air exceeds the standard, wear a filter gas mask (half mask). In case of emergency rescue or evacuation, you should wear an air breathing apparatus.

**呼吸系统防护:** 空气中浓度超标时，佩戴过滤式防毒面具（半面罩）。紧急事态抢救或撤离时，应该佩戴携气式呼吸器。

**Eyes Protection:** Wear protective chemical safety glasses.

眼睛防护: 戴化学安全防护眼镜。

**Body Protection:** Wear an antiseptic penetration suit

身体防护: 穿防毒物渗透工作服。

**Hands Protection:** Wear rubber oil-resistant gloves.

手防护: 戴橡胶耐油手套。

**Other Protections:** No smoking in the workplace. Keep good habit of hygiene. Shower and eye washing facilities are available.

其他防护: 工作现场禁止吸烟。保持良好的卫生习惯。提供淋浴和洗眼设施。

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## Section 9 - Physical and Chemical Properties

### 第九项：物理和化学特性

**Appearance:** Cream

外观: 膏状物

**Color:** Gray

颜色: 灰色

**Odour:** Odorless

气味: 无臭

**pH:** No data available.

pH:无资料

**Boiling point/range:** No data available.

沸点/范围:无资料

**Melting point/range:** 220 °C

熔点/范围:220 °C

**Flashpoint:** > 60 °C

闪点:> 60 °C

**Density:** 4.5~4.6

密度: 4.5~4.6

**Upper flammable(explosive) limits in air-Lower (vol%)-UEL:** No data available.

空气中的可燃(爆炸)上限(体积%):无资料

**Vapour pressure:** No data available.

气压:无资料

**Solubility in water:** insoluble in water

水溶性:不溶于水

**Partition coefficient((n-octanol / water):** No data available.

分配系数(正辛醇/水): 无资料

**Viscosity:** No data available.

粘度:无资料

**Vapour density:** No data available.

蒸汽密度:无资料

**Evaporation rate:** No data available.

蒸发速度:无资料

**Ignition temperature:** No data available.

燃点温度:无资料

**Chemical properties:** Preparation

化学品属性: 配制品

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## Section 10 - Stability and Reactivity

### 第十项：稳定性和反应性

**Stability:** The product is stable when stored and used at normal ambient temperature

稳定性: 正常环境温度下储存和使用, 本品稳定

**Distribution of Ban:** Strong oxidizer, strong acid.

禁配物: 强氧化剂, 强酸。

**Conditions to Avoid:** Electrostatic discharge, heat, High temperature, sun exposure, fire source etc.

避免接触的条件: 静电放电、热、高温、阳光照射、火源等。

**Hazardous Polymerization:** None.

聚合危害: 无

**Hazardous Decomposition Products:** Under normal conditions of storage and use, hazardous decomposition products should not be produced.

分解产物: 正常条件下不会产生分解物及其他刺激性物质。

## Section 11 - Toxicological Information

### 第十一项：毒理学信息

**Acute Toxicity(Tin power CAS No.7440-31-5):**

急性毒性 (锡粉 CAS号 7440-31-5) :

Oral: LD50 - rat (female) - > 2 000 mg/kg bw. Remarks:Not determinable due to absence of adverse toxic effects.

经口: LD50 - rat (female) - > 2 000 mg/kg bw. Remarks:Not determinable due to absence of adverse toxic effects.

Inhalation: LC50 - rat (male/female) - > 4.75 mg/L air (analytical).

吸入: LC50 - rat (male/female) - > 4.75 mg/L air (analytical).

Dermal: LD50 - rat (male/female) - > 2 000 mg/kg bw.

经皮: LD50 - rat (male/female) - > 2 000 mg/kg bw.

**Skin irritation or corrosion:** No data available.

皮肤刺激或腐蚀:无资料。

**Eye irritation or corrosion:** No data available.

眼睛刺激或腐蚀: 无资料。

**Respiratory or skin allergies:** No data available.

呼吸或皮肤过敏: 无资料。

**Germ cell mutation:** No data available.

生殖细胞突变性: 无资料。

**Carcinogenicity:** No data available.

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致癌性: 无资料。

**Reproductive toxicity:** No data available.

生殖毒性: 无资料。

**Specific target organ system toxicity - one exposure(Tin power CAS No.7440-31-5):** May cause mechanical irritation to the respiratory tract.

特异性靶器官系统毒性——一次接触（锡粉 CAS 号 7440-31-5）：可能对呼吸道引起机械刺激。

**Specific target organ system toxicity - repeated exposure(Tin power CAS No.7440-31-5):** This substance may have an effect on the lungs, causing benign pneumoconiosis (tin pneumoconiosis).

特异性靶器官系统毒性——反复接触（锡粉 CAS 号 7440-31-5）：该物质可能对肺有影响，导致良性的肺尘病（锡尘肺）。

**Inhalation hazard(Tin power CAS No.7440-31-5):** It can quickly reach the harmful concentration of particulate matter in the air, especially powder.

吸入危害（锡粉 CAS 号 7440-31-5）：可较快地达到空气中颗粒物有害浓度，尤其是粉末。

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## Section 12 - Ecological Information

### 第十二项：生态学信息

#### **Ecotoxicity(Tin power CAS No.7440-31-5):**

生态毒性（锡粉 CAS 号 7440-31-5）：

Acute toxicity test of fish: LC50 - Pimephales promelas - > 12.4 µg/L - 96 h.

鱼类急性毒性试验: LC50 - Pimephales promelas - > 12.4 µg/L - 96 h.

Daphnia acute activity inhibition test: No data available

溞类急性活动抑制试验: 无资料

Algal growth inhibition test: EC50 - Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum) - > 19.2 µg/L - 72 h.

藻类生长抑制试验: EC50 - Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum) - > 19.2 µg/L - 72 h.

Toxicity to microorganisms: EC50 - activated sludge of a predominantly domestic sewage - > 511 mg/L - 3 h.

Remarks:Respiration rate.

对微生物的毒性: EC50 - activated sludge of a predominantly domestic sewage - > 511 mg/L - 3 h.

Remarks:Respiration rate.

**Persistence and degradability:** No data available.

持久性和降解性: 无资料。

**Bioenrichment or bioaccumulation:** No data available.

生物富集或生物积累性: 无资料。

**Migration in soils:** No data available.

土壤中的迁移性: 无资料。

## Section 13 - Disposal Considerations

### 第十三项：废弃处置

**Nature of waste:** The sample is not regarded as hazardous waste, as defined by Regulation (EC) No. 1272/2008.

废弃物性质: 本样品不被视为危险废物, 所定义的法规(EC)No.1272/2008

**Waste disposal methods:** Refer to National or Local regulations before handling.

废弃处置方法: 处置前应参阅国家和地方有关法规。

**Attention abandoned:** Avoid polluting the environment. Prevent waste from entering sewers, surface water and groundwater.

废弃注意事项: 避免污染环境。防止废弃物进入下水道、地表水和地下水。

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## Section 14 - Transport Information

### 第十四项：运输信息

	Land transport	Sea transport	Air transport
	陆路运输 (ADR/RID)	海运 (IMDG)	空运 (ICAO/IATA)
<b>UN-Number:</b>	No Applicable	No Applicable	No Applicable
<b>UN 编号:</b>	不适用	不适用	不适用
<b>Transport hazard class:</b>	No Applicable	No Applicable	No Applicable
运输危险等级:	不适用	不适用	不适用
<b>Packaging group:</b>	No Applicable	No Applicable	No Applicable
包装类别:	不适用	不适用	不适用
<b>Marine pollutant/海洋污染物:</b>	No 否	No 否	No 否
<b>Special precautions for user:</b>	Not required	Not required	Not required
用户特别注意事项:	无要求	无要求	无要求
<b>Transport in bulk according to MARPOL 73/78 Annex II and the IBC code/按照 73/78 防污公约附则 II 和 IBC 规则散装运输:</b>	Not required	Not required	Not required
防污公约附则 II 和 IBC 规则散装运输:	无要求	无要求	无要求

**Packaging Method:** No data available

包装方法: 无资料

**Transport Fashion:** By air, sea, rail, highway.

运输方式: 空运, 海运, 铁路, 公路。

**Transport Attentions:** Examine whether the package of the containers are integrate or not before transport. No divulgence, no collapse, no precipitation or no damage during the course of transportation. Don't put the goods together with oxidizer and strong acid. The transport vehicle and ship must be cleaned and sterilized otherwise it is not allowed to assemble articles. During transport, the vehicle should prevent exposure, rain and high temperature. For stopovers, the vehicle should be away from fire and heat sources. When transported by sea, the assemble place should keep away from bedroom and kitchen, and isolated from the engine room, power and fire source.

**运输注意事项:** 运输前应先检查包装容器是否完整、密封, 运输过程中要确保容器不泄漏、不倒塌、不坠落、不损坏。严禁与氧化剂、食用化学品等混装混运。运输车船必须彻底清洗、消毒, 否则不得装运其他物品。运输时车辆应避免雨淋和高温, 中途停留时, 车辆应远离明火和高温热源。船运时, 配装位置应远离卧室、厨房, 并与机舱、电源、火源等部位隔离。

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## Section 15 - Regulatory Information

### 第十五项：法规信息

Regulatory Information: ISO 11014-2009 Safety data sheet for chemical products - Content and order of sections.  
法规信息: ISO 11014-2009 化学品安全资料表的内容和项目顺序。

Regulation (EC) No. 1272/2008 Classification, Labelling and Packaging of Substances and Mixtures.  
法规(EC)No.1272/2008, 标签和包装的物质和混合物。

## Section 16 - Additional Information

### 第十六项：其他信息

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier, nor any its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

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**Photo of the Sample:****样品照片:**

The photo is for use with SOAR original report only.

此照片仅限于随腾飞正本报告使用

\*\*\* End of Report \*\*\*

\*\*\* 报告结束 \*\*\*

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