

Safety Data Sheet

化学品安全说明书

03-25-2015

Creation Date: March 25, 2015

Section 1 – Chemical Product and Company Identification

第一项 化学品与企业标示

Product Name: Electric Match
产品名称: 电火柴
UN Proper Shipping Name: Igniter
联合国正式运输名称: 点火管
Manufacturer: **Liuyang Wenchi Electric Ignition Instruments Co., Ltd.**
制造商: 浏阳市文驰电点火具有限公司
Add: NO.18, ChangQing Village, JiLi Town, LiuYang County 410300, Hunan Province, China
地址: 中国湖南浏阳市集里办事处长青村 18 号
Post code 邮编: 410300
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Section 2 –(1-3) Composition/Information on Ingredient

第二项 - (1-3)成分/组分信息

Section 2- (1) composition of igniting powder

第二项 (1)药头药物组分信息

Chemical Name 化学名称	Chemical Formula or Abbreviation 化学式或缩写	CAS No. CAS 编 号	Content(wt%) 含量(wt%)
Potassium hyperchlorate 高氯酸钾	KClO ₄	7778-74-7	57
Antimony black 硫化锑	Sb ₂ S ₃	1345-04-6	10
Microsilica Silica 硅粉	Si	7440-21-3	25
Potassium 2,4,6trinitrophenolate 苦味酸钾	C ₆ H ₂ KN ₃ O ₇	573-83-1	4
polyvinyl alcohol 聚乙烯醇	[C ₂ H ₄ O] _n	9002-89-5	4

Igniting powder weight 药头含药量: 25mg

(2)Composition of igniting lead wire 点火导线组份信息

Chemical Name 化学名称	Chemical Formula or Abbreviation 化学式或缩写	CAS No. CAS 编号	Content(wt%) 含量(wt%)
polyvinyl chloride 聚氯乙烯	PVC	9002-86-2	64
Copper 铜	Cu	7440-50-8	36

(3) Composition of two-sided tinned copperplate 药头底基材料双面覆铜板组份信息

Chemical Name 化学名称	Chemical Formula or Abbreviation 化学式或缩写	CAS No. CAS 编号	Content(wt%) 含量 (wt%)
Copper film 铜膜	Cu	7440-50-8	5
Phenolic resin 酚醛树脂	C ₇ H ₆ O ₂	9003-36-5	95

Section 3 - Hazards Identification

第三项 危害性说明

Primary routes of entry

主要入侵路径

Skin contact	No
皮肤接触	无报道
Skin absorption	No
皮肤吸收	无报道
Eye contact	No
眼睛接触	无报道
Inhalation	No
吸入	无报道
Ingestion	No
食入	未报道

Signs and Symptoms of Exposure

接触引发的症状与体征

Skin Contact	No effect under routine handling and use
皮肤接触	常规操作和使用时无影响
Skin absorption	No effect under routine handling and use
皮肤渗入	常规操作和使用时无影响
Eye Contact	No effect under routine handling and use
眼睛接触	常规操作和使用时无影响
Inhalation	No effect under routine handling and use
吸入	常规操作和使用时无影响

Reported as carcinogen Not applicable

作为致癌物报导 无报道

<Caution> Risk of exposure occurs only if the fusehead is mechanically or electrically abused. May explode in a fire, which could release nitrogen gas and smoke. Use extinguishing media suitable for materials burning in fire.

<警告> 当遭到机械损伤或者滥用，药头药物跌落有危险，撞击可能引起药头燃烧。投入火中会导致燃烧、氮气或烟雾的释放。药头燃烧时要使用适当的灭火介质灭火。

Section 4 - First Aid Measures

第四项 急救措施

Inhalation	Not a health hazard.
吸入	不危害健康
Eye contact	Not a health hazard.
眼睛接触	不危害健康
Skin contact	Not a health hazard.
皮肤接触	不危害健康
Ingestion	If swallowed, obtain medical attention immediately
食入	如果误食，立即医疗救助

<Caution> IF EXPOSURE TO INTERNAL MATERIALS WITHIN ELECTRIC MATCH DUE TO DAMAGED

FUSEHEAD,THE FOLLOWING ACTIONS ARE RECOMMENDED ;

<警告> 如果因药头破裂导致电火柴内部物质外露，建议采取以下处理措施：

Inhalation If inhaled, remove to fresh air. If not breathing give artificial respiration, preferably mouth-to-mouth and seek medical attention.

吸入 如果吸入，立即转移到新鲜空气处。如果没有呼吸，立即实施口对口的人工呼吸并寻求医疗救助。

Eye & Skin contact In case of contact, immediately flush eyes or skin with copious amounts of water for at least 15 minutes while removing contaminated clothing and shoes; seek medical attention.

眼睛或皮肤接触 万一接触到眼睛或皮肤，立即用大量水冲洗眼睛或皮肤，并且在 15min 内除去被污染的衣物，寻求医疗救助。

Ingestion Drink milk / water and induce vomiting; seek medical attention.

食入 喝大量牛奶或水直至呕吐，并寻求医疗救助。

Section 5 - Fire Fighting Measures

第五项 消防措施

General Hazard The Electric match is flammable but internal chemical material will burn if the Electric match is incinerated. Combustion products include, but are not limited to N₂, CO, CO₂ and SO₂.

危险概述 电火柴属易燃物品，被焚烧后会引燃其内部的化学物质。燃烧产物不仅包含有 N₂，还会包含 CO、CO₂ 和 SO₂。

Extinguishing Media Use extinguishing media suitable for the materials that are burning.

灭火介质 使用与燃烧的物料相应的灭火介质灭火。

Special Firefighting

特殊灭火

Instructions If possible, remove Electric match(s) from fire fighting area.

If heated above 100°C, Electric match(s) may burn.

操作指南 如果可能，将电火柴移出燃烧区域。电火柴如果被加热到 100°C 以上，有可能会发生燃烧。

Firefighting Equipment Use NISH/MSHA approved full-face self-contained breathing apparatus(SCBA) with full protective gear.

灭火设备 使用 NISH/MSHA 认证的全面部配套呼吸装置（SCBA）以及全身防护服。

Section 6 - Accidental Release Measures

第六项 泄露应急处理

Procedures of Personal Precautions Put on adequate protective equipment. Do not breathing vapour.

个人应急处理方法 装配全套的防护设备。避免呼吸进烟雾。

Environmental precautions Keep away from drains, surface-water, ground-water and soil.

环保措施 远离雨水、地表水、地下水和土壤。

Methods for Cleaning Up Collect as much as possible in a clean container for disposal. Disposal according to local regulations.

消除方法 使用洁净的容器尽可能多地收集残留物。按照当地的法令法规进行处理。

On Land Place Electric match(s) into suitable packing box and call local fire/police department..
位于陆地上 将电火柴至于适当的包装箱内储存或运输，并且告知当地的消防部门和警方。

In Water If possible, remove from water and call local fire/police department.
在水里 如果可能，从水中移出，并且通知当地的消防部门和警方。

Section 7 - Handling and Storage

第七项 操作处置与储存

Handing Special anti-static and fireproof clothing is required for setting off Electric match. And it should be two meters away from the Electric match when ignition.

操作处置 需要穿戴防静电、防火的防护服来点燃电火柴，点火时应距离点火头 2.0M 以外。

Storage Storage area should be cool, dry, well ventilated, out of direct sunlight. Store away from sources of heat or ignition. Over high temperature will make the Electric match(s) inflate.

储存 干燥、阴凉保存，远离热源和火源。过高的温度会导致电火柴着火。

Section 8 - Exposure Controls /Personal Protection

第八项 接触控制/个体防护

Respiratory Protection Respiratory Protection is not necessary under conditions of normal use.

呼吸防护 正常使用时不需要特殊的呼吸设备。

Eye/face protection under conditions of normal use, it's necessary to have eye/face protection in order to prevent sparks from hurting the eye/face.

眼睛和面部防护 正常使用时，需要对眼睛和面部特别防护，以防点火时火星飞溅对眼睛、面部造成伤害。

Foot protection Not necessary under conditions of normal use.

食入防护 正常使用时，无需特别防护。

Gloves Cotton yarn gloves are necessary under conditions of normal use.

手套 正常使用时，需要戴棉纱手套

Section 9 - Physical and Chemical Properties

第九项 理化性质

Bridge-Wire resistance 桥丝电阻	0.5-0.7 Ω ; 1.2-2.5 Ω $\Delta R \rho = 0.25 \Omega$
No-firing current 安全电流	0.18 A / 5 min
No-firing impulse 安全电热能	0.8 mJ . Ω -1
Firing current 点火电流	0.5 A / 10 ms
firing impulse 点火电热能	2.0 mJ . Ω -1
All fire current 全点火每只所需电流	0.8 A / 4ms
All fire impulse 全点火每只所需电热能	2.5 mJ . Ω -1

Bridge resistance(电桥电阻) : 1.2-2.5 Ω

Remark: it provides heat for heating

备注：用于发热提供热量的桥式电阻的阻值

NO-fire impulse(安全电热能) : ≤ 0.8 mWs/ Ω

Remark: when it is less than or equal to 0.8 mWs/ Ω , there must be no fire.

备注: 小于等于该脉冲值时, 一定不会着火。

NO-fire current (安全电流): $\leq 0.18A$

Remark: when it's less than or equal to 0.18A, there must be no fire.

备注: 小于等于该电流时, 一定不会着火。

All fire impulse(全点火电热能): $\geq 2.5 \text{ mWs}/\Omega$

Remark: when it is more than or equal to 2.5mWs/ Ω , all the Electric matchs will be on fire.

备注: 大于等于该脉冲能量值时电火柴全部着火。

All fire current(全点火电流): $\geq 0.8A/4ms$

Remark: when it is more than or equal to 0.8A, all the Electric matchs will be on fire.

备注: 大于等于该电流时电火柴全部着火。

Appearance oxblood-red Electric match

外观与性状 深红色电火柴。

Odor a slight odor

气味 略有气味

Vapor Pressure(mmHg) N/A

蒸汽压 无意义

Vapor Density(air=1) N/A

蒸气密度 无意义

Boiling Point N/A

沸点 无意义

Solubility in water Insoluble

水溶性 不溶于水

Specific Gravity N/A

比重 无意义

Density N/A

密度 无意义

Section 10 - Stability and Reactivity

第十项 稳定性与反应活性

Reactivity None during normal operating or handling conditions.

反应活性 正常操作时, 没有反应活性。

Hazardous decomposition During normal firing conditions, carbon monoxide, carbon dioxide and sulfur dioxide are released.

有害的分解 正常点火时, 会放出氮气、一氧化碳、二氧化碳和二氧化硫。

Incompatibilities During normal operation, avoid exposure to heat, open flame and corrosives; avoid approach of a small child; avoid stray current and super-static. Don't operate Electric match at high frequencies, thunder or other occasions.

使用禁忌 操作时应避免靠近热源、明火以及强腐蚀性物质, 避免小孩靠近, 避免杂散电流, 超强静电, 禁止在高频场所、雷电等场合下使用电火柴。

Conditions to avoid

Don't short terminals.

Don't heat or throw in fire .

Don't attempt to crush or drop.

Don't put it in microwave oven, oven or pressure container.

避免的事项

不可短路。

不可加热、投入火中。

不可试图冲击或者跌落。

不可放进微波炉、烤箱或者压力容器中。

Section 11 - Toxicological Information

第十一项 毒理学资料

This product elicits traces of toxicological properties during routine handling and use. 此产品在正常操作和使用时仅有微量毒性物质。

Sensitization No

致敏性 无资料

Teratogenicity No

致畸性 无资料

Reproductive toxicity No

生殖危害性 无资料

Acute toxicity No

急性毒性 无资料

If the Electric matches are damaged through misuse, discard immediately.

如果电火柴因使用不当或遭到破坏而破损，立即停止使用。

Internal components of Electric matches are irritants and sensitizer.

电火柴内部物质可能具有刺激性和致敏性。

Section 12 - Ecological Information

第十二项 生态学资料

When promptly used or disposed the battery does not present environmental hazard. When disposed , keep away from water, rain and snow.

正确的使用不会对环境造成危害。报废时，电火柴要远离水源和雨雪。

Section 13 - Disposal Considerations

第十三项 报废相关事项

Methods of disposal Igniting powder contains less than 0.1mg of toxic metal: Plumbum. It is advisable to consult with local authorities as disposal regulations may vary dependent on location

报废方法 药头中有害金属元素铅小于 0.1mg。由于各地的关于报废的法规各有不同，所以处理前妥当的做法是与当地主管部门进行磋商，得到合理的处理方案。

Dangers Incinerating and disposing of the Electric match in fire are strictly prohibited, because it may cause fire or explosion, which will be harmful to the nearby person and animal.

危险做法 严禁焚烧电火柴，这种做法可能会导致电火柴燃烧时火星飞溅，对近距离内人或动

物造成伤害。

Section 14 – Transport Information

第十四项 运输信息

UN number: UN0454

According to Packing instruction 967 section II of LATA DGR 55rd Edition for transportation, or the special provision 188 of IMDG, or the <<Recommendations on the Transport of Dangerous Goods Model Regulations>>, the Electric match is flammable and its hazard class is 1.4S.

(1) By air: The goods are shipped according to the instruction of hazard class 1.4S

(2) By sea: The goods are shipped according to the instruction of hazard class 1.4S

UN 编号: UN0454

电火柴属易燃物品，其危险等级为 1.4S，根据包装说明 967 II of IATA DGR 55rd 版，及特别规定 188 《国际海运危险货物运输规则》

(1)空运，满足危险等级为 1.4S 运输要求

(2)海运，满足 1.4S 危险等级运输要求

Note: Electric matches weight in the package is 18Kg (weight of igniting powder is 0.15kg).

More information concerning shipping, testing, marking and packing can be obtained from Label master at <http://www.labelmaster.com>

They should be packed in strong packaging for support during transport. Take in a cargo of them without falling, dropping, and breakage. Prevent collapse of cargo piles and wet by rain

Transport Fashion: By air, by sea, by railway, by road

备注: 每个包装件内含电火柴重量为 18KGS，含药量为 0.15KGS

更多关于航运、测试、标记和包装的信息可以从 <http://www.labelmaster.com> 网站获得单独的电火柴海运，需要装在坚固的包装箱中运输，货物不能有倒下、跌落、损坏等，防止堆放的货物倒塌或雨淋！

运输方式：空运、海运、铁路、公路

Section 15-Regulatory Information

第十五项 法规信息

Law Information

《Dangerous Goods Regulation》

《Recommendations on the Transport of Dangerous Goods Model Regulations》

《International Maritime Dangerous Goods》

《Technical Instructions for the Safe Transport of Dangerous Goods》

《Classification and code of dangerous goods》

《Occupational Safety and Health Act 》 (OHSA)

《Toxic Substances Control Act》 (TSCA)

《Consumer Product Safety Act》 (CPSA)

《Federal Environmental Pollution Control Act 》 (FEPCA)

《The Oil Pollution Act 》 (OPA)

《Superfund Amendments and Reauthorization Act Title III(302/311/312/313)》 (SARA)

《Resource Conservation and Recovery Act》 (RCRA)

《Safety Drinking Water Act 》 (CWA)

《California Proposition 65》

《Code of Federal Regulations 》 (CFR)

In accordance with all Federal ,State and Local laws

法律信息

《危险品管理规章》

《危险品货物运输规章范本》

《国际海上危险货物运输规则》

《危险物品航空安全运送技术指南》

《职业安全与卫生条例的危害》

《毒性物质控制法》

《消费品安全法》

《联邦环境污染控制法》

《石油污染法》

《附加基金修正复审法》 III (302/311/312/313)》

《资源保护和回收法》

《安全饮水法》

《加州提案 65》

《美国联邦法规》

可参照联合国，国家。地方性法规

Section 16-Additional Information

第十六项 其他信息

The above information is based on the date of which we are aware and is believed to be correct as of the data hereof. Since this information may be applied under conditions beyond our control and with which may be unfamiliar and since data made available subsequent to the data hereof may suggest modifications of the information, we do not assume any responsibility for the results of its use , This information is furnished upon condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose.

以上信息均是基于我们已经了解到的且被认为是正确的数据基础上得到。因此在超过我们控制范围和我们所不熟悉的条件下，以及在此数据之后出现的数据暗示这些信息需要变动的情况下，我们不对产品使用后果负任何法律责任。这些信息是提供给使用者，以便其需要适当材料达到特定目的。