

## Material Safety Data sheet of Tetra Potassium Pyrophosphate

Revision Issued: 6/28/15

Supersedes: 12/31/14

First Issued: 7/20/13

## Material Safety Data Sheet

# Tetra Potassium Pyrophosphate

### 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION

AND OF THE COMPANY/UNDERTAKING 产品、配方以及公司、

单位的认证

PRODUCT NAME 产品名称	TETRAPOTASSIUM PYROPHOSPHATE 焦磷酸钾
Use 用途	Manufacture of detergents. Water treatment. Dispersion of slurries. Chemical applications. Food additive. Intended for the manufacture of foodstuffs and not for retail sale (For further information, refer to the product technical data sheet.) 用于制造洗涤剂, 污水净化剂, 污渍扩散剂, 化学试剂, 食品添加剂。对于食品制造商不进行零售 (更多的产品信息详见产品技术指标单)

### 2. COMPOSITION/INFORMATION ON INGREDIENTS 产品的构

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### 成或含量信息

Components: This product is hazardous.

Substance name 品名	Contents 含量	CAS No 中国编号	EC No 电子编号	Index No 索引号	Classification 等级
Tetra potassium Pyrophosphate	98%	7320-34-5	230-785-7	--	Xi;R36

Synonyms: Tetra potassium diphosphate. 别名: 焦磷酸四钾

Further data: Anhydrous product. 说明: 无水产品

### 3. HAZARDS IDENTIFICATION 危害认证

MOST IMPORTANT HAZARDS: Dust is irritating to the respiratory system.

Irritating to eyes, slightly irritating to skin

主要危害: 粉尘会刺激呼吸系统, 刺激眼睛并对皮肤有轻微危害

Adverse human health effects: If the product is not neutralized, it may have harmful effects on the aquatic environment.

对人体健康副作用: 如果对产品不加以处理, 它可能会在水生态环境中对人体产生副作用

Environmental effects:

环境危害:

Physical and chemical hazards: The moist product may cause the floor to be slippery.

物理和化学危害: 产品受潮可能会导致地板湿滑

Further hazards: NO particular fire or explosion hazard.

其他危害: 没有有火或者爆炸的危险

Fire or explosion Specific hazards: According to EC criteria, this substance is classified as: -IRRITANT.

着火或者爆炸的具体危害: 根据EC标准, 该产品被列为刺激性物品

### 4. FIRST AID MEASURES 紧急救助措施

Inhalation: Particles or aerosols: Move to the fresh air. Seek medical help.

吸入微粒或者喷雾: 迅速到空气清新处, 并寻求医疗帮助

Skin contact: Rinse with plenty of water. Remove contaminated clothing and then rinse again with water. If necessary seek medical advice.

皮肤接触: 用大量的水冲洗, 脱掉受到沾染的衣物并在此用水冲洗, 如果有必要, 请寻求医

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疗建议

Eye contact: IMMEDIATELY rinses with plenty of water for a prolonged period, (at least 15 minutes) whilst keeping the eyes wide open. Ask for urgent medical help even if there are no visible symptoms.

眼部接触: 立即用大量的水长时间冲洗 (至少持续十五分钟以上), 在冲洗的同时睁开眼睛。如果出现视力模糊症状请立即寻求医疗帮助。

Ingestion: Rinse mouth out with water. If the person is fully conscious make him/her drinks water. NEVER give an unconscious person anything to drink. Call a doctor immediately, even if there are no immediate symptoms.

食用: 用水冲洗口腔, 如果误食者依然保持清醒, 给他们服用大量的饮用水。千万不要给神志不清的误食者饮用任何东西。即使没有立刻出现任何症状, 一旦误食, 马上通知医生。

Protection of first-aiders: - gloves, boots. - Protective clothing. - Glasses with side shields.

急救的保护措施: 手套, 防毒服装以及带有侧镜的眼睛。

## 5. FIRE-FIGHTING MEASURES 救火措施

Extinguishing media 隔断媒介

- Suitable: All extinguishing agents can be used.

适用工具: 所有的灭火剂都可以用

- Not Suitable, None to our knowledge. If there is a fire close by, use suitable extinguishing agents?

不适用器材: 对我们而言, 没有什么不适用的灭火器具, 如果附近发生了火灾, 用一切可能的灭火工具去熄灭它

Specific hazards: Not combustible. Does not present any particular risk in the event of a fire

特殊危害: 本品为非易燃物, 在火灾中不会出现任何特殊的危害

Specific fire fighting methods further information: Do not dispose of fire-fighting water in the environment. : In the presence of water, form corrosive solutions.

关于防火具体办法的进一步说明: 不要在周围无水的环境中, 在水之前, 腐蚀性溶液

## 6. ACCIDENTAL RELEASE MEASURES 以外状况的应对措施

Personal precautions: 个人预防措施

Avoid contact with skin and eyes. Do not breathe dust.

避免与皮肤和眼睛接触, 不要吸入颗粒

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Do NOT attempt to take action WITHOUT suitable protective equipment. If spillage occurs on the public highway, indicate the danger and notify the authorities (police, fire brigade.)

不要在没有保护器材的时候尝试采取行动, 如果在公共场所发生溢漏状况, 向公众指明危险并向相关机构报告 (警察、消防队)

Personal protective equipment: 个人保护装备

- full impermeable protective clothing and equipment. 完全密封的防护服和装备
- eye/face protection (safety glasses + visor.) 眼睛和脸部保护 (可视的安全镜)
- appropriate gloves. 合适的手套

For further information refer to section 8 "Exposure-controls/personal protection".

Only qualified personnel equipped with suitable protective equipment may intervene. Mark out the contaminated area with signs and prevent access to unauthorized personnel. Recover the product as quickly as possible.

更多的信息请参见第八部分“泄漏的控制和个人保护”只能用质量合格的保护设备, 用标牌标记出受污染的区域并阻止未经授权的人员接近, 并尽快地从新封装好产品。

Environmental precautions: Do NOT discharge into drains or rivers.

环境预防措施: 不要将溢漏物排入水沟或者河流

Methods for cleaning up 清理办法

- Prohibited: Do NOT put the spilled material back into the original container for re-use.

禁止使用的方法: 不准把溢漏出的产品放回原来的包装中

- Recovery: Recover as much of the product as possible. Avoid creating or spreading dust. Transfer the product into a spare container: - suitably labeled.

-Corrosion-resistant.

回收: 尽可能的多回收溢漏的产品, 避免制造或者扩散粉尘。把产品放至一个贴有防腐蚀标签的容器当中

Neutralization: Neutralize non-recoverable product with

中和: 用一下试剂中和掉未回收的产品

- dilute acid solution. 希硫酸溶液

NEVER neutralize product whilst it is still inside packaging or in an emergency container.

千万不要中和在包装袋或者临时容器中的产品

- Cleaning/Decontamination: If necessary, wash with water following recovery.

清除与净化: 如果有必要, 在回收以后用水冲洗

- Disposal: Dispose of all contaminated materials in accordance with current regulations.

处理: 按照当前执行的规定处理所有收到污染的产品

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### 7. HANDLING AND STORAGE 搬运和贮存

Handling technical measures: Dust extraction (suction). Only use materials resistant to: - alkalis and caustic materials.

搬运技术标准: 去除尘土, 并只能用防腐蚀性的原料

Measures: Avoid the formation or spread of dust in the atmosphere.

方法: 避免产品或者其粉尘在空气中扩散

Safe handling advice: Handle and use in accordance with good occupational hygiene and safety practice. Avoid the build-up of dust.

安全搬运方法: 按照严格的卫生安全职业标准进行搬运, 避免产生粉尘

STORAGE Technical measures: Do not stack the pallets. Take all necessary measures to avoid accidental discharge of products into drains and waterways due to the rupture of containers or transfer systems.

贮存技术指标: 不要用送料车送。采取所有必要的措施来避免可能是产品排入水沟或者水道这样的突发事件, 因为运输过程中容器是很可能会破裂的。

Storage conditions – Recommended: Store: -in a designated area. - In a cool, dry area. - protected from humidity and bad weather conditions.

贮存条件-推荐: 存放在一个音量, 干燥, 防潮以及能有效避免恶劣天气影响的地方

Incompatible products : None, to our knowledge. 不能混放的物品: 无

Packaging: The product is packaged in suitable recyclable packaging. - Paper bag lined with a plastic film.

- Plastic bags. 塑料包装

- Big-bag 大包装

包装: 产品应包装在合适回收的包装中-内包装为纸包装, 外包装为塑料包装

Packaging materials 包装材料

- Recommended: Plastic materials (polyethylene, polypropylene.) 316L. Stainless steel.

推荐: 塑料 (聚乙烯。聚丙烯) 316升的不锈钢容器

- Not suitable: Metals which can be attacked by bases.

- 不合适的材料: 容易被地面磨破的材料

Further information: May aggravate the corrosion of metals in aqueous solution.

更多信息: 可能会加强水溶液的腐蚀性

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## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION 泄漏的控

### 制与个人保护

Engineering measures: No specific measures are required provided the product is handled in accordance with the general rules of occupational hygiene and safety.

工业标准: 除搬运的卫生安全职业标准以外, 没有特殊的工业要求

Extraction to remove dust at its source. 去除所有产生粉尘的源头

Personal protective equipment 个人保护装备

- Respiratory protection: If dust is generated: Respiratory protective device with a particle filter.

呼吸保护: 如果粉尘产生, 用一个颗粒过滤器保护呼吸道

- Hand protection: Protective gloves made of rubber.

手的保护: 用橡胶手套来保护

- Eye protection: Safety spectacles. Long face shield.

眼睛保护: 用带有长面罩的保护眼镜

-Skin and body protection: Protective clothing. Helmet. Boots.

-皮肤和身体的保护: 防护服和头盔

Collective emergency equipment: Eye fountain. Safety shower.

集体保护设备: 眼泉和干净的水

Further information: The user is responsible for monitoring the working environment in accordance with local laws and regulations.

其他信息: 使用者必须按照当地的法律法规对产品使用地进行监察

## 9. PHYSICAL AND CHEMICAL PROPERTIES 物理和化学性质

APPEARANCE 外观

Form: Powder or Granulated powder. 性状: 粉末或颗粒

Color: White. 颜色: 白色

Odor: None. 气味: 无

PH: 10-11 (Aqueous solution - 1 g/100ml). PH值: 10-11 (在1%的水溶液中)

Specific temperatures 特定温度

Melting: 850 °C 熔点: 850 °C

Flammability characteristics 可燃性

Flash point: Not applicable (non-flammable solid.) 自燃点: 不会自燃 (非易燃品)

Oxidizing properties: Not applicable. 氧化物: 不会氧化

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Explosion properties 爆炸说明

Explosive limits in air: Not applicable (non-flammable solid.)

在空气中的爆炸点: 无 (非易燃品)

Specific gravity Solubility r: Approx. 1.0 kg/dm<sup>3</sup> (Unstamped product). 特殊

溶解比重: 大约1.0 kg/dm<sup>3</sup> (非受潮品)

- in water 在水中

- in organic solvents : 1100 g/l at 25 °C. : Not determined.

在有机溶剂里: 110克/升, 温度为25° C, 非固定值

Hygroscopicity: Hygroscopic product. 受潮度: 受潮的产品

Further information: Tends to cake (solidify) under humid conditions.

更多信息: 在潮湿的环境那个下会结成块状物

## 10. STABILITY AND REACTIVITY 稳定性和变质反应

Stability: Stable at ambient temperature and under normal conditions of use.

稳定性: 在常温和正常的使用下比较稳定

Hazardous reactions 有害反应

- Materials to avoid: Weak base. Reacts with acids.

避免的物质: 避免与酸性物质混合

- Conditions to avoid: No dangerous reactions known under normal conditions of use.

避免的条件: 在正常的使用条件下无危险的反应

## 11. TOXICOLOGICAL INFORMATION 毒性

Acute toxicity: (Rat) LD 50 oral: 2980 mg/kg

急性毒性: (老鼠) 的LD 50口腔: 2980毫克/公斤

Local effects: (dusts) Irritating to the respiratory system and mucous membranes.

Slightly irritating to skin. Irritating to the eyes, May cause irritation to the digestive tract

局部危害: 粉尘进入了呼吸道系统或者隔膜, 轻微接触皮肤, 眼睛都可能对人的消化管造成刺激

## 12. ECOLOGICAL INFORMATION 生态资料

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### MOBILITY活性

Expected behavior of the product DEGRADABILITY: Ultimate destination of the product: WATER.

预期的行为, 该产品的降解性: 最终目的地的产品: 水。

### A biotic degradation非生物降解

- Hydrolysis: Slowly hydrolyses on contact with water. 水解: 缓慢的与水接触进行溶解
- Other physic-chemical reactions BIODEGRADABILITY: Converted in the aquatic environment into: (PO<sub>4</sub>) Salts.

其他的物理化学反应的生物降解性: 转换在水生环境为: (PO<sub>4</sub>) 盐

Persistence: Substance is totally biotransformed (metabolized.)

持续: 实质是完全生物转化

### BIOACCUMULATION生物富集

Octanol/water partition coefficient ECOTOXICITY: Not applicable.

辛醇/水分配系数的生态毒性: 不适用。

Effects on the aquatic environment: If the product is not neutralized, it may be toxic to aquatic organisms due to its alkalinity. Eutrophicating substance.

对水生环境: 如果该产品是不是瓦解, 它可能有毒, 以水生有机体由于其碱度。

## 13 DISPOSAL CONSIDERATIONS清理注意事项

RESIDUES FROM PRODUCT Prohibition: Do not allow the product to be released into the environment. Discharging waste into rivers and drains is forbidden.

剩余产品的禁止行为: 禁止将产品倒入自然环境中, 禁止将产品废弃物排入河流和水沟

Destruction/Disposal: Recycle the material as far as possible. Solid waste: Dispose of in accordance with relevant local regulations. If recovery is not possible: Neutralize with dilute acid.

清理: 尽可能地挥手原料。固体人废弃物: 按照当地的相关法律法规进行清理, 如果无法回收, 则用酸进行中和。

CONTAMINATED PACKAGING Prohibition: Do NOT dispose of with domestic waste. Do not burn empty packaging. : Completely empty the packaging prior to recycling.

受污染的包装禁止事项: 不准将其当成家庭废弃物一样处理, 不要焚烧空包装袋, 在回收包装之前完全倒出其中的产品

Decontamination/cleaning Destruction/Disposal: Recycle following cleaning or dispose of at an authorized site.

净化及处理: 在授权机构进行回收和处理

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Further information: In accordance with RID/ADR regulations containers or tankers, which have not been cleaned or deodorized and which previously contained a hazardous product, must either be labelled or have hazard signs. In addition, they must be supplied with instructions on safety and protection on which the chemical identity of the product appears.

更多说明: 在按照相关规定清理容器或油轮时, 其中尚未清理或脱臭以及以前载有危险或有危险的迹象的产品, 必须贴上标签。此外, 他们还必须提供与指示表明其为化学品现。

NOTE: The user's attention is drawn to the possible existence of local regulations regarding disposal.

注意: 使用者必须注意当地可能存在的相关法律法规

## 14. TRANSPORT INFORMATION 运输信息

INTERNATIONAL REGULATIONS Land 国际陆运管理

- Rail/road (RID/ADR) : NOT restricted. 铁路/公路 (美国存托凭证) : 无限制
- Sea (IMO/IMDG) : NOT restricted. 海路运输 (国际海事组织/国际海运危险货物规则) : 无限制
- Air (ICAO-IATA) : NOT restricted. 空运 (国际民航组织-国际航空运输协会) : 无限制

NOTE: The above regulatory prescriptions are those valid on the date of publication of this sheet. Given the possible evolution of transport regulations for hazardous materials, it would be advisable to check their validity with your sales office.

注意事项: 上述规则的描述是针对相关法规的有效期内。建议在运输前询问相关的机构法律法规是否发生了改变。

## 15. REGULATORY INFORMATION 调整信息

Labeling 标签

EC regulations: Mandatory labeling (self-classification) of hazardous substances:

APPLICABLE

EC规定: 所有有害物质必须贴标签 (自己分类) : 适用

- Identification of the hazardous product: EC N°: 230-785-7 TETRAPOTASSIUM PYROPHOSPHATE EC

N°: Does not appear on the EC hazardous substances list (Annex 1 of the modified EC directive 67/548/EEC)

有害产品的认证: EC N° : 230-785-7 焦磷酸钾 EC N° , 它并没有出现在EC所列出的有害物质之列 (附件1所修改的欧盟指令67/548/eeb)

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Symbol(s) : Xi : Irritant 标志: Xi : 刺激性

R Phrase(s): R36: Irritating to eyes. R系标识: R36: 刺激眼睛

S Phrase(s): S25: Avoid contact with eyes. S系标识S25 避免与眼睛接触

S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S26: 如果与眼睛发生了接触, 立即用大量的水冲洗并寻求医生帮助

Germany: WGK (Water-endangerment class):1

德国: WGK (水危等级) 1

NOTE: The regulatory information given above only indicates the principal regulations specifically applicable to the product described in the Safety Data Sheet. The user's attention is drawn to the possible existence of additional provisions which complete these regulations. Refer to all applicable national, international and local regulations or provisions.

注意事项: 上述的规定信息仅仅表明了对产品安全描述报告适用。使用者应当注意可能存在的对这些规定进行附加说明的完整条款。这指所有适用的国家, 国际和地方性法规或规定。

## 16. OTHER INFORMATION 其他信息

Chemical formula: K4 P2 O7 分子式: K4 P2 O7

Further information: Version number is replaced by version number 2 (Necessary due to automation of the SDS-mailing system).

其他说明: 版本号已经变成了第二版 (这是由自动化的的SDS -邮件系统所必须要求的)

The contents and format of this SDS are in accordance with EEC Commission Directive 2001/58EC.

本SDS报告所遵照的指标是欧洲经济共同体委员会的2001/58ec决议。

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免责条款: 在本MSDS报告中所包含的信息来源于我们认为可以信赖的渠道。然而, 这些信息

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并没有得到任何明示或者暗示保证来保证其准确新，这些关于搬运，贮存，使用或者清理的条件和方法都超出了我们的控制范围，并且也能超出了我们的知识范围。因此原因以及其他的一些原因，我们不能提供任何保证，也不能明确宣称对使用本产品在搬运，贮存，使用或者清理过程中出现的损失或者损害承担任何责任。本MSDS仅仅用于本产品，如果本产品被作为一个化合物与其他产品进行化合，本MSDS将不再适用

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完毕