

## 化学品安全数据单

### 一、标识

全球统一制度产品标识符：过硫酸氢钾复合物粉。

其它标识办法：/

化学品使用建议和使用限制：

供货商的详细情况：河北而奥生物科技有限公司。

紧急电话号码：

### 二、危险标识

物质或混合物的分类：

急毒性（口服）类别 4，皮肤腐蚀/刺激类别 1B，严重眼损伤/眼刺激类别 1，特定目标器官毒性——单次接触类别 1（胃肠道），危害水生环境（急性）类别 2，危害水生环境（慢性）类别 2。

全球统一制度标签要素，包括防范说明：

符号：



信号词：危险。

危险说明：吞咽有害。造成严重皮肤灼伤和眼损伤。对器官造成损害（胃肠道）。对水生生物有毒并具有长期持续影响。

防范说明：

预防：

不要吸入粉尘/烟/气体/气雾/蒸气/喷雾。作业后彻底清洗手部[和……]。勿触碰眼睛。使用本产品时不要进食、饮水或吸烟。避免释放到环境中。戴防护手套/穿防护服/戴防护眼罩/戴防护面具/戴听力保护装置……

应对：

如误吞咽：请就医。漱口。不得诱导呕吐。如皮肤沾染：立即脱掉所有沾染的衣服。立即用水冲洗几分钟。沾染的衣服清洗后方可重新使用。如误吸入：立即紧急就医。将人转移到空气新鲜处，保持呼吸舒适体位。专门治疗（见下文）。如进入眼睛：如戴隐形眼镜并可方便地取出，取出隐形眼镜。继续冲洗。立即用水冲洗几分钟。请就医。如已接触到或有疑虑：立即紧急就医。专门治疗（见下文）。收集溢出物。

存放：

存放处须加锁。

处置：

按照相关规定处置内装物和容器。

不导致分类的其他危险：/

### 三、组成/成分信息

化学名称	化学文摘社编号 (CAS No.)	浓度
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单过硫酸氢钾复合盐	70693-62-8	55%
硫酸钠	7757-82-6	25%
十二烷基苯磺酸钠	25155-30-0	5%
柠檬酸钠	68-04-2	5%
硫酸镁	7487-88-9	5%
氨基磺酸	5329-14-6	5%

#### 四、急救措施

##### 不同暴露途径的急救方法

**吸入：**迅速脱离并移至空气新鲜处。保持呼吸道通畅。如呼吸困难，给输氧。如呼吸停止，立即进行人工呼吸。立即就医。

**皮肤接触：**立即脱去污染的衣着，用大量流动清水冲洗。就医。

**眼睛接触：**用大量流动清水彻底冲洗至少 15 分钟。立即就医。

**摄入：**用水漱口，切勿催吐。就医。

**最重要的急性和延迟症状/效应：** /

**必要时注明立即就医及所需的特殊治疗：** /

#### 五、消防措施

**适当的灭火剂：**可用泡沫、干粉、雾状水等灭火。

**化学品产生的具体危险：**在高温明火下分解，释放出有毒气体。

**消防人员的特殊防护行动：**消防人员必须配戴空气呼吸器、消防衣及防护手套，在上风向灭火。灭火时尽可能将容器从火场移至空旷处，使用喷雾状水保持火场内容器等冷却。

#### 六、意外释放措施

**人身防范、保护设备和应急程序：**建议应急处理人员戴防护口罩，穿消防工作服。不要直接接触泄漏物。

**环境防范措施：**隔离泄漏污染区，限制出入。

**抑制和清洁的方法和材料：**小量泄漏：避免扬尘，用洁净的铲子收集于干燥、洁净、有盖的容器中，转移至安全场所。切勿使产品进入下水道等限制性区域。大量泄漏：用塑料布、帆布覆盖。使用无火花工具收集回收或运至废物处理场所处置。

#### 七、搬运和存储

**安全搬运的防范措施：**密闭操作，局部排风。操作人员必须经过专门培训，严格遵守操作规程。建议操作人员佩戴防护面具，穿防腐工作服，戴橡胶手套。搬运时轻装轻卸，防止包装破损。配备泄漏应急处理设备。倒空的容器可能残留有害物。

**安全存储的条件，包括任何不相容性：**储存于阴凉、干燥、通风良好的库房。远离火种、热源。防止阳光直射。包装必须密封，切勿受潮。应与氧化剂、易（可）燃物等分开存放，切忌混储。储区应备有合适的材料收容泄漏物。

#### 八、接触控制/人身保护

**控制参数：** /

**适当的工程控制：**严加密闭，提供充分的局部排风。

**个人防护措施**

**防护眼罩/面具：**佩戴防护面具。

**皮肤防护：**穿防腐蚀工作服。  
**呼吸系统防护：**可能接触其粉尘时，必须佩戴防尘面具（全面罩）。紧急事态抢救或撤离时，应该佩戴空气呼吸器。  
**高温危险：** /

#### 九、物理和化学特性

物理状态	固体粉剂。
颜色	粉红色。
气味	/
熔点/凝固点	/
沸点或初始沸点及沸腾范围	/
易燃性	/
上下爆炸极限/易燃极限	/
闪点	/
自燃温度	/
分解温度	/
pH 值	/
运动黏度	/
可溶性	溶于水。
辛醇-水分配系数（对数值）	/
蒸气压	/
密度和/或相对密度	/
相对蒸气密度	/
颗粒特征	/

#### 十、稳定性和反应性

**反应性：** /  
**化学稳定性：**在常温下稳定。  
**危险反应的可能性：** /  
**应避免的条件：**火星、高温、静电。  
**不相容材料：**氧化剂、易（可）燃物。  
**具有危害性的分解产物：**碳氧化物、硫氧化物、氮氧化物、金属氧化物等。

#### 十一、毒理学信息

**暴露途径：**摄取（吞咽）、皮肤/眼接触、吸入。  
**有关物理、化学和毒理学特点的症状：**  
**急性毒性效应：**  
摄入会导致灼烧感、恶心、呕吐、腹痛等症状。  
皮肤接触会导致皮肤发红、疼痛、烧伤。  
吸入会导致咳嗽、咽喉疼痛、烧伤。  
眼睛接触会导致刺激、疼痛、烧伤。  
**慢性毒性或长期毒性效应：**长期或多次接触本物质可引起皮肤发炎，接触后可引起皮肤发红、肿胀、形成水疱、脱皮和皮肤肥厚。本物质可能刺激眼睛，长期接触能引起炎症。多次或持续接触刺激物能导致结膜炎。

**毒性的度量值** (如急性毒性估计值):

过硫酸氢钾:

LD50(经口, 鼠): 500 mg/kg

LD50(经皮, 鼠): &gt;2000 mg/kg

硫酸钠:

LD50(经口, 鼠): &gt; 2000 mg/kg

LC50(吸入, 鼠): &gt; 2.4 mg/14h

## 十二、生态学信息

**毒性 (水生和陆生, 如果有):**

过硫酸氢钾:

终点	测试持续时间 (小时)	种类	值
NOEC(ECx)	24h	甲壳纲动物	1.8mg/l
LC50	96h	鱼	1.09mg/l
EC50	48h	甲壳纲动物	3.5mg/l

硫酸钠:

终点	测试持续时间 (小时)	种类	值
NOEC(ECx)	1h	藻类或其他水生植物	0.011mg/L
EC50	72h	藻类或其他水生植物	1206-1637mg/l
EC50	96h	藻类或其他水生植物	1562.44mg/L
EC50	48h	甲壳纲动物	2564mg/l
LC50	96h	鱼	ca.56-790mg/l

持久性和降解性: 高 (硫酸钠)。

生物累积潜力: 低 (LogKOW = -2.2002) (硫酸钠)。

在土壤中的流动性: 低 (Log KOC = 6.124) (硫酸钠)。

其它有害效应: /

## 十三、处置考虑

**处置方法:** 用安全掩埋法处置。破损容器禁止重新使用, 要在规定场所掩埋。

## 十四、运输信息

联合国编号: 3260。

联合国正式运输名称: 无机酸性腐蚀性固体, 未另作规定的。

运输危险分类: 8。

包装类别 (如果适用): II。

环境危险: 海洋污染物。

用户的特殊防范措施: /

按照海事组织文书运输散货: /

## 十五、管理信息

**国内化学品安全法规:** 本化学品安全技术说明书遵照了以下相关国家标准: GB/T 16483-2008、GB 13690-2009、GB 18218-2018、GB 15258-2009、GB 6944-2012、GB 190-2009、

GB/T 191-2008、GB 12268-2012、GB/T 15098-2008、GBZ 2.1-2019、GBZ 2.2-2007 以及相关法规:《铁路危险货物运输管理规则》、《危险化学品安全管理条例》。

#### 十六、其它信息

参考文献	联合国《关于危险货物运输的建议书·规章范本》 联合国《全球化学品统一分类和标签制度》
制表日期	2024-06-06

注 1: 当产品为含有两种以上危险物质的混合物时, 应依据其混合后的危险性, 制作安全数据单。

注 2: 制造商/供应商应根据实际情况确保安全数据单所含信息的正确性, 并适时更新。

注 3: 如由于产品特性而不存在或不可得某些信息时 (如固体不存在沸点), 应在表格中以“/”标识。

## Chemical Safety Data Sheet

### Section 1 IDENTIFICATION

**GHS Product identifier:** VIRSHA (potassium monopersulfate compound powder) .

**Other means of identification:** /

**Recommended use of the chemical and restrictions on use:** /

**Supplier's details:** /Hebei Erao Biotech Co.,Ltd

**Emergency phone number:** /

### Section 2 HAZARDS IDENTIFICATION

**Classification of the substance or mixture:**

Acute toxicity, oral Category 4

Skin corrosion/irritation Category 1B

Serious eye damage/eye irritation Category 1

Specific target organ toxicity – single exposure Category 1(gastrointestinal tract)

Hazardous to the aquatic environment, short-term hazard Category 2

Hazardous to the aquatic environment, long-term hazard Category 2

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

Symbol:



Signal word: Danger

Hazard statement(s): Harmful if swallowed. Causes severe skin burns and eye damage. Causes damage to organs (gastrointestinal tract). Toxic to aquatic life with long lasting effects.

Precautionary statement(s):

Prevention:

Do not breathe dust/fume/gas/mist/vapours/spray. Wash hands [and...] thoroughly after handling. Do not touch eyes. Do not eat, drink or smoke when using this product. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/...

Response:

IF SWALLOWED: Get medical help. Rinse mouth. Do NOT induce vomiting. IF ON SKIN: Take off immediately all contaminated clothing. Immediately rinse with water for several minutes. Wash contaminated clothing before reuse. IF INHALED: Get emergency medical help immediately. Remove person to fresh air and keep comfortable for breathing. Specific treatment (see below). IF IN EYES: Remove contact lenses, if present and easy to do. Continue rinsing. Immediately rinse with water for several minutes. Get medical help. IF exposed or concerned: Get emergency medical help immediately. Specific treatment (see below). Collect spillage.

Storage:

Store locked up.

Disposal:

Dispose of contents/container in accordance with local/regional/national/international regulations.

**Other hazards which do not result in classification:** /

### Section 3 COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Concentration
Potassium monopersulfate compound	70693-62-8	55%
Sodium sulfate	7757-82-6	25%
Sodium dodecylbenzene sulfonate	25155-30-0	5%
Sodium citrate	68-04-2	5%
Magnesium sulfate	7487-88-9	5%
Sulfamic acid	5329-14-6	5%

### Section 4 FIRST AID MEASURES

#### Description of necessary first aid measures

**If inhaled:** Quickly leave and move to a place with fresh air. Keep the airway unobstructed. If breathing is difficult, give oxygen. If breathing stops, give artificial respiration immediately. Consult a physician immediately.

**In case of skin contact:** Take off contaminated clothing immediately and rinse with plenty of running water. Consult a physician.

**In case of eye contact:** Rinse thoroughly with plenty of running water for at least 15 minutes and consult a physician immediately.

**If ingestion:** Rinse mouth with water. Do not induce vomit. Consult a physician.

**Most important symptoms/effects, acute and delayed:** /

**Indication of immediate medical attention and special treatment needed, if necessary:** /

### Section 5 FIREFIGHTING MEASURES

**Suitable extinguishing media:** Use foam, dry powder, water spray, etc.

**Special hazards arising from the chemical:** This material may decompose at high temperature and fire and release toxic fumes.

**Special protective actions for fire-fighters:** Firefighters must wear air breathing apparatus, fire-fighting suits and protective gloves to extinguish in the upwind direction. Whenever possible, remove the container from the fire to open space and use spray water to cool unopened containers.

### Section 6 ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment and emergency procedures:** It is recommended that emergency personnel wear protective masks and fire protective overalls. Do not touch the spill directly.

**Environmental precautions:** Isolate contaminated areas and restrict access.

**Methods and materials for containment and cleaning up:** Small amount of leakage: Avoid dusting, use a clean shovel to collect in a dry, clean, covered container and transfer to a safe place. Do not allow products to enter restricted areas such as sewers. A large amount of leakage: Cover with plastic sheeting and canvas. Use a non-sparking tool to collect the waste or transport it to a waste disposal site for disposal.

## Section 7 HANDLING AND STORAGE

**Precautions for safe handling:** There should be sufficient local exhaust in workplace. Operators should be trained and strictly follow the operating procedures. Operators are advised to wear protective masks, corrosion-resistant protective clothing and rubber gloves. Operators should load and unload lightly during handling to prevent damage to the package. There should be leakage treatment equipment in workplace. There may be harmful residues in empty containers.

**Conditions for safe storage, including any incompatibilities:** Store in a cool, dry, well-ventilated warehouse. Keep away from fire and heat. Protect from direct sunlight. The package should be sealed and not exposed to moisture. It should be stored separately from oxidants, flammable materials, etc., and should not be mixed. The storage area should be provided with suitable materials to contain spills.

## Section 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

**Control parameters:** /

**Appropriate engineering controls:** Close strictly and provide sufficient local exhaust.

**Individual protection measures**

**Eye/face protection:** Wear a protective mask.

**Skin protection:** Wear corrosion-resistant protective clothing.

**Respiratory protection:** A dust mask (full face mask) must be worn when exposed to dust. Air respirators should be worn during emergency rescue or evacuation.

**Thermal hazards:** /

## Section 9 PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical state</b>	Solid powder.
<b>Colour</b>	Pink.
<b>Odour</b>	/
<b>Melting point/freezing point</b>	/
<b>Boiling point or initial boiling point and boiling range</b>	/
<b>Flammability</b>	/
<b>Lower and upper explosion limit/flammability limit</b>	/
<b>Flash point</b>	/
<b>Auto-ignition temperature</b>	/
<b>Decomposition temperature</b>	/
<b>pH</b>	/
<b>Kinematic viscosity</b>	/
<b>Solubility</b>	Soluble in water.
<b>Partition coefficient: n-octanol/water (log value)</b>	/
<b>Vapour pressure</b>	/
<b>Density and/or relative density</b>	/
<b>Relative vapour density</b>	/
<b>Particle characteristics</b>	/

## Section 10 STABILITY AND REACTIVITY



**Reactivity:** /

**Chemical stability:** The material is stable in normal temperature.

**Possibility of hazardous reactions:** /

**Conditions to avoid:** Spark, high temperature and static electricity.

**Incompatible materials:** Oxidizers and flammable materials.

**Hazardous decomposition products:** Carbon oxides, sulfur oxides, nitrogen oxides, metal oxides, etc.

#### Section 11 TOXICOLOGICAL INFORMATION

**Information on the likely routes of exposure:** Ingestion (swallowing), skin/eye exposure and inhalation.

**Symptoms related to the physical, chemical and toxicological characteristics:**

**Acute health effects:**

Ingestion can cause symptoms such as burning, nausea, vomiting and abdominal pain.

Skin contact can cause redness, pain and burn.

Inhalation can cause cough, throat pain and burn.

Eyes contact can cause irritation, pain and burn.

**Chronic health effects:** The material may cause skin irritation after prolonged or repeated exposure and may produce a contact dermatitis (nonallergic). This form of dermatitis is often characterized by skin redness (erythema) and swelling epidermis. The material may be irritating to the eye, with prolonged contact causing inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.

**Numerical measures of toxicity (such as acute toxicity estimates):**

Potassium persulfate:

Oral (Rat) LD50: 500 mg/kg

Dermal (Rat) LD50: >2000 mg/kg

Sodium sulfate:

Oral (Rat) LD50: >2000 mg/kg

Inhalation (Rat) LC50: >2.4 mg/l4h

#### Section 12 ECOLOGICAL INFORMATION

**Ecotoxicity (aquatic and terrestrial, where available):**

Potassium persulfate:

Endpoint	Test Duration (hr)	Species	Value
NOEC(ECx)	24h	Crustacea	1.8mg/l
LC50	96h	Fish	1.09mg/l
EC50	48h	Crustacea	3.5mg/l

Sodium sulfate:

Endpoint	Test Duration (hr)	Species	Value
NOEC(ECx)	1h	Algae or other aquatic plants	0.011mg/L
EC50	72h	Algae or other aquatic plants	1206-1637mg/l
EC50	96h	Algae or other aquatic plants	1562.44mg/L

EC50	48h	Crustacea	2564mg/l
LC50	96h	Fish	ca.56-790mg/l

**Persistence and degradability:** HIGH (Sodium sulfate).

**Bioaccumulative potential:** LOW (LogKOW = -2.2002) (Sodium sulfate).

**Mobility in soil:** LOW (Log KOC = 6.124) (Sodium sulfate).

**Other adverse effects:** /

#### Section 13 DISPOSAL CONSIDERATIONS

**Disposal methods:** Dispose this product by safe burial. Damaged containers are prohibited from being reused and should be buried in the prescribed place.

#### Section 14 TRANSPORT INFORMATION

**UN number:** 3260.

**UN proper shipping name:** CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S.

**Transport hazard class(es):** 8.

**Packing group, if applicable:** II.

**Environmental hazards:** Marine pollutant.

**Special precautions for user:** /

**Transport in bulk according to IMO instruments:** /

#### Section 15 REGULATORY INFORMATION

**Regulations:** This safety data sheet is in compliance with the following national standards: GB/T 16483-2008, GB 13690-2009, GB 18218-2018, GB 15258-2009, GB 6944-2012, GB 190-2009, GB/T 191-2008, GB 12268-2012, GB/T 15098-2008, GBZ 2.1-2019, GBZ 2.2-2007 as well as the following regulations: Railway Dangerous Goods Transport Administrative Regulation, Dangerous Chemicals Safety Administrative Regulation.

#### Section 16 OTHER INFORMATION

<b>References</b>	UN Recommendations on the Transport of Dangerous Goods Model Regulations UN Globally Harmonized System of Classification and Labelling of Chemicals
<b>Form Date</b>	06-June-2024

Note 1: When products contain two or more hazardous substances, Safety Data Sheets should be prepared based on the risk of the mixture.

Note 2: Manufacturer/supplier should ensure the correctness of the information contained in the safety data sheets, and updated in a timely manner.

Note 3: As a result of product features without the existence of certain information or no data available (such as boiling point does not exist for the solid) in the table with "/" logo.