



化学品安全技术说明书 (Safety Data Sheet, SDS)

产品名称：一水硫酸镁 (Magnesium Sulfate Monohydrate)

CAS 号: 14168-73-1 | EINECS 号: 231-298-2 | MDL 号: MFCD00149787 | 版本号: 1.0 | 编制日期: 2026 年 1 月 27 日 | 修订日期: 无

编制依据: 联合国 GHS 第 9 版 (UN GHS Rev.9)、欧盟 REACH 法规 (EC No. 1907/2006)、美国 OSHA HazCom 2012 标准、中国 GB/T 16483-2008

第 1 部分：化学品及企业标识 (Section 1: Chemical Product and Company Identification)

化学品中文名: 一水硫酸镁 | 化学品英文名: Magnesium Sulfate Monohydrate

其他名称: 水镁矾、硫酸镁一水合物 (Kieserite, Magnesium Sulphate Monohydrate) | 分子式: $MgSO_4 \cdot H_2O$ | 分子量: 120.37

产品用途: 工业级/农业级/食品级, 用于肥料、饲料添加剂、食品稳定剂、印染加重剂、水泥助凝剂、矿物质水添加剂等领域; 农业上作为高效镁肥, 补充作物叶绿素合成所需镁元素 (Industrial/Agricultural/Food Grade, used in fertilizers, feed additives, food stabilizers, printing and dyeing weighting agents, cement set accelerators, mineral water additives, etc.; used as high-efficiency magnesium fertilizer in agriculture to supplement magnesium for crop chlorophyll synthesis)

企业名称: 莱州市百业鑫化工有限公司 | **Company Name:** Laizhou Baiyexin Chemical Co., Ltd.

企业地址: 山东省烟台市莱州市土山镇银海工业园 | **Company Address:** Yin Hai Industrial Park, Tushan Town, Laizhou City, Yantai City, Shandong Province, China

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应急电话: +86 19653602589 (24 小时) | **Emergency Phone:** +86 19653602589 (24 hours)

技术说明书编码: BYX-MSDS-2026-003 | **Technical Sheet Code:** BYX-MSDS-2026-003



第 2 部分：危险性概述 (Section 2: Hazards Identification)

GHS 危险性分类：急性毒性-口服 (类别 4, H302)、急性毒性-经皮 (类别 4, H312)、急性毒性-吸入 (类别 4, H332) (依据联合国 GHS 第 9 版标准) | Acute Toxicity - Oral (Category 4, H302), Acute Toxicity - Dermal (Category 4, H312), Acute Toxicity - Inhalation (Category 4, H332) (Per UN GHS Rev.9)

危险象形图： (警告类象形图) | **Signal Word:** 警告 (Warning)

危险说明 (Hazard Statements) :

- H302: 吞咽有害 (Harmful if swallowed)
- H312: 皮肤接触有害 (Harmful in contact with skin)
- H332: 吸入有害 (Harmful if inhaled)
- H373: 长期或反复接触可能对器官造成损害 (May cause damage to organs through prolonged or repeated exposure)

防范说明 (Precautionary Statements, 适配 GHS 第 9 版修订要求) :

- **预防 (Prevention) :** P264 操作后彻底清洗双手及接触部位 (Wash hands and exposed parts thoroughly after handling) ; P270 禁止食用、饮用 (Do not eat, drink or smoke when using this product) ; P280 佩戴防护手套、防护眼镜 (Wear protective gloves and eye protection) ; P261 避免吸入粉尘 (Avoid breathing dust)
- **响应 (Response) :** P301+P312 若吞咽, 如感觉不适, 立即就医 (If swallowed and you feel unwell, seek medical advice immediately) ; P302+P352 皮肤接触后, 用大量流动清水冲洗 (IF ON SKIN: Wash with plenty of running water) ; P304+P340 吸入后, 转移至空气新鲜处并保持呼吸通畅 (IF INHALED: Remove person to fresh air and keep comfortable for breathing) ; P312 若感觉不适, 呼叫中毒控制中心或医生 (Call a POISON CENTER or doctor/physician if you feel unwell)
- **储存 (Storage) :** P403+P233 储存于阴凉通风处, 保持容器密封 (Store in a cool, well-ventilated place. Keep container tightly closed) ; P405 存放处须加锁 (Store locked up) ; P234 存放在干燥处 (Keep in a dry place)
- **处置 (Disposal) :** P501 按当地法规处置废弃物及污染包装 (Dispose of contents and container in accordance with local regulations)

其他危害：粉尘对眼、呼吸道有轻微刺激性, 长期接触可引发呼吸道炎症; 肾功能障碍者误服可能导致镁离子蓄积中毒, 出现低血压、呼吸抑制、心脏传导异常等症状, 严重时可致心脏骤停; 对水体有轻微危害, 过量排放可能影响水生生物生存 (Dust is slightly irritating to eyes and respiratory tract; prolonged contact may cause respiratory inflammation. Ingestion by people with renal impairment may cause magnesium ion accumulation poisoning, manifested as hypotension, respiratory depression, cardiac conduction



abnormalities, and even cardiac arrest in severe cases. Slightly harmful to water bodies; excessive discharge may affect the survival of aquatic organisms) 。

第 3 部分：成分/组成信息 (Section 3: Composition/Information on Ingredients)

物质类型：纯品 (Pure Substance) | 有害组分：一水硫酸镁 (唯一有效组分, 含微量杂质)

组分名称 (Component)	CAS 号	EC 号	质量分数 (Mass Fraction)	危害类别
一水硫酸镁 (Magnesium Sulfate Monohydrate)	14168-73-1	231-298-2	≥99.5%	急性毒性类别 4
杂质 (Impurities)	无特定主要杂质	无	≤0.5% (Fe≤0.0015%、 Pb≤0.0006%、 As≤0.0002%)	无分类危害

第 4 部分：急救措施 (Section 4: First-Aid Measures)

吸入 (Inhalation)： 迅速脱离污染现场至空气新鲜处，保持呼吸道通畅。如出现咳嗽、胸闷、呼吸困难等症状，立即给予吸氧并就医；若呼吸停止，立即实施人工呼吸后送医 (Quickly remove to fresh air and keep respiratory tract unobstructed. If cough, chest tightness, dyspnea and other symptoms occur, give oxygen immediately and seek medical attention; if breathing stops, perform artificial respiration immediately and send to hospital) 。

皮肤接触 (Skin Contact)： 立即脱去污染衣物，用大量流动清水持续冲洗接触部位 15-20 分钟，去除残留粉末；若出现皮肤红肿、瘙痒等刺激症状，涂抹舒缓药膏并就医 (Immediately remove contaminated clothing, rinse the contact area with plenty of running water for 15-20 minutes to remove residual powder; if skin redness, itching and other irritating symptoms occur, apply soothing ointment and seek medical attention) 。



眼睛接触 (Eye Contact)：立即提起眼睑，用大量流动清水或生理盐水持续冲洗 15-20 分钟，期间轻轻转动眼球；冲洗后若仍有异物感、刺痛或视力模糊，立即就医 (Immediately lift eyelids, continuously rinse with plenty of running water or normal saline for 15-20 minutes while gently rotating the eyeballs; if foreign body sensation, stinging or blurred vision remains after rinsing, seek medical attention immediately)。

食入 (Ingestion)：饮足量温水刺激咽喉催吐，尽快就医。告知医生“一水硫酸镁接触史”，尤其需说明是否存在肾功能障碍；镁中毒无特定解毒剂，严重时需注射 10%葡萄糖酸钙注射液解毒，必要时进行血液透析 (Drink plenty of warm water to stimulate the pharynx to induce vomiting and seek medical attention as soon as possible. Inform the doctor of "magnesium sulfate monohydrate exposure history", especially whether there is renal impairment. There is no specific antidote for magnesium poisoning; in severe cases, 10% calcium gluconate injection is required for detoxification, and hemodialysis may be necessary)。

医疗提示：监测患者膝腱反射、呼吸频率 (需 ≥ 16 次/分钟) 及尿量 (需 ≥ 600 ml/天)，出现反射消失、呼吸抑制时，立即采取解毒措施 (Monitor the patient's patellar reflex, respiratory rate (≥ 16 times/minute) and urine output (≥ 600 ml/day); take detoxification measures immediately if reflex disappears or respiratory depression occurs)。

第 5 部分：消防措施 (Section 5: Fire-Fighting Measures)

燃烧性：本品不燃 (Non-combustible)，无闪点、引燃温度及爆炸极限

合适灭火剂：周围起火时，可使用干粉、二氧化碳、干砂、黄土等灭火剂；禁止用水直接冲击堆放物，避免粉末飞扬扩散 (If fire occurs nearby, use dry powder, carbon dioxide, dry sand, loess and other extinguishing media; avoid direct water impact on piles to prevent powder from flying and spreading)。

危险燃烧产物：受高热分解产生有毒、腐蚀性硫氧化物 (二氧化硫 SO_2 、三氧化硫 SO_3) 及氧化镁 (MgO) 烟雾；与焦炭等还原剂共热时，会生成大量有毒二氧化硫气体 (Decomposes at high temperature to produce toxic and corrosive sulfur oxides (SO_2 , SO_3) and magnesium oxide (MgO) fumes; when heated with reducing agents such as coke, a large amount of toxic sulfur dioxide gas is generated)。

消防人员防护：佩戴全面罩防毒面具 (过滤式或自给式呼吸器)、穿防化消防防护服及防护靴，在上风向灭火；灭火后及时清洗防护装备，避免残留毒物接触皮肤 (Wear full-face gas mask (filter or self-contained breathing apparatus), chemical-resistant fire protective clothing and boots, fight fire from upwind direction; clean protective equipment in time after fire fighting to avoid residual toxins contacting the skin)。

第 6 部分：泄漏应急处理 (Section 6: Accidental Release Measures)

个人防护：立即隔离泄漏污染区，设置警示标志，限制无关人员出入；应急处理人员佩戴 KN95 及以上级防尘口罩、穿防毒物渗透工作服、戴丁腈橡胶手套，避免扬尘及直接接触泄漏物 (Immediately isolate the contaminated area, set warning signs and restrict access to irrelevant personnel; emergency personnel



shall wear KN95 or higher grade dust mask, poison-proof permeable work clothes and nitrile rubber gloves to avoid dust raising and direct contact with the spillage) 。

小量泄漏：用干净的干铲子轻轻收集泄漏物，装入干燥、洁净、密封的容器中，标识“一水硫酸镁泄漏物”后待后续回收或处置；残留区域用清水擦拭干净，废水按含轻微毒性化学品废水处置 (For small spills, gently collect the spillage with a clean dry shovel, put it into a dry, clean and sealed container, mark it as "magnesium sulfate monohydrate spillage" for subsequent recycling or disposal; wipe the residual area with clean water, and dispose of wastewater as slightly toxic chemical wastewater) 。

大量泄漏：用防水布、帆布覆盖泄漏物防止扩散，构筑围堤收容，避免泄漏物流入地下水、水道或污水系统；联系具备资质的专业机构，按当地环保法规及危险废物处置流程处理，严禁擅自倾倒 (For large spills, cover the spillage with waterproof cloth and canvas to prevent diffusion, build dikes for containment, and avoid spillage into groundwater, waterways or sewage systems; contact qualified professional organizations for disposal in accordance with local environmental regulations and hazardous waste disposal procedures, and it is strictly prohibited to dump without authorization) 。

环境保护：若泄漏物污染水体，立即报告当地环保部门，采取活性炭吸附、酸碱中和等应急措施，降低对水生生物的影响 (If the spillage contaminates water bodies, immediately report to the local environmental protection department and take emergency measures such as activated carbon adsorption and acid-base neutralization to reduce the impact on aquatic organisms) 。

第 7 部分：操作处置与储存 (Section 7: Handling and Storage)

操作处置 (Handling) ：

- 密闭操作，配备机械通风系统及粉尘收集净化装置，控制作业环境粉尘浓度 $\leq 10 \text{ mg/m}^3$ ；操作时避免产生大量粉尘，搬运时轻装轻卸，防止包装破损 (Operate in a closed system, equipped with mechanical ventilation system and dust collection and purification device to control the dust concentration in the working environment $\leq 10 \text{ mg/m}^3$; avoid generating excessive dust during operation, handle with care during transportation to prevent packaging damage) 。
- 避免与强酸、氧化剂、乙氧基乙炔醇等不相容物质接触，严禁混放混运；作业区域严禁进食、饮水、吸烟，配备应急冲洗设备及急救药品 (Avoid contact with incompatible substances such as strong acids, oxidants and ethoxyethynyl alcohol; strictly prohibit mixed storage and transportation; it is strictly prohibited to eat, drink or smoke in the operation area, and emergency flushing equipment and first-aid medicines shall be provided) 。
- 作业完毕后，彻底清洗双手、面部及衣物，工作服单独清洗，避免与日常衣物混洗 (After operation, thoroughly clean hands, face and work clothes; wash work clothes separately to avoid mixing with daily clothes) 。



储存 (Storage) :

- 储存于阴凉、干燥、通风的库房，温度控制在 30℃ 以下，相对湿度 ≤70%；本品具有吸湿性，需远离热源、火源、水源及潮湿环境，避免阳光直射 (Store in a cool, dry and well-ventilated warehouse, temperature controlled below 30℃, relative humidity ≤70%; this product is hygroscopic, keep away from heat sources, fire sources, water sources and humid environments, avoid direct sunlight) 。
- 采用编织袋内衬聚乙烯薄膜密封包装，每袋净重 25kg/50kg，防止吸潮结块及污染；包装上张贴 GHS 警告标签及产品信息标签 (Packaged in sealed woven bags lined with polyethylene film, net weight 25kg/50kg per bag, to prevent moisture absorption, caking and contamination; GHS warning label and product information label shall be affixed on the package) 。
- 与酸类、有毒化学品、食用化学品分开存放，垛距 ≥0.5 米，顶距 ≥1 米，墙距 ≥0.3 米，便于通风、检查及应急处置；储存区备有合适的收容材料及泄漏应急处理设备 (Store separately from acids, toxic chemicals and food chemicals, stack spacing ≥0.5 meters, top spacing ≥1 meter, wall spacing ≥0.3 meters for ventilation, inspection and emergency treatment; the storage area shall be equipped with appropriate containment materials and spill emergency treatment equipment) 。

第 8 部分：接触控制和个体防护 (Section 8: Exposure Controls/Personal Protection)

职业接触限值：无国际统一明确限值，参考行业标准，作业环境粉尘浓度建议 ≤10 mg/m³ (No unified international occupational exposure limit; refer to industry standards, it is recommended that the dust concentration in the working environment ≤10 mg/m³) 。

工程控制：采用密闭式生产设备，配套机械通风及粉尘净化装置；定期检测作业环境粉尘浓度及空气质量，确保符合职业健康要求 (Adopt closed production equipment, matched with mechanical ventilation and dust purification devices; regularly detect dust concentration and air quality in the working environment to ensure compliance with occupational health requirements) 。

个体防护 (Personal Protection) :

- 呼吸系统防护：粉尘环境佩戴 KN95 及以上级防尘口罩，粉尘浓度超标时 (> 10 mg/m³) 佩戴全面罩防尘面具 (Respiratory protection: Wear KN95 or higher grade dust mask in dusty environment; wear full-face dust mask when dust concentration exceeds the standard (>10 mg/m³)) 。
- 眼睛防护：佩戴防冲击化学安全防护眼镜，防止粉尘入眼及粉末飞溅伤害 (Eye protection: Wear impact-resistant chemical safety goggles to prevent dust from entering eyes and injury from powder splashing) 。
- 手防护：佩戴丁腈橡胶或氯丁橡胶手套，手套厚度 ≥0.3mm，避免皮肤直接接触；手套破损立即更换，



作业期间定期检查手套完整性 (Hand protection: Wear nitrile rubber or neoprene gloves with thickness $\geq 0.3\text{mm}$ to avoid direct skin contact; replace gloves immediately if damaged, and regularly check the integrity of gloves during operation) 。

• 皮肤防护：穿着防毒物渗透工作服，袖口、裤脚收紧，避免粉末进入衣物内；作业后及时清洗工作服，存放于专用区域 (Skin protection: Wear poison-proof permeable work clothes with tight cuffs and trouser legs to prevent powder from entering the clothes; clean work clothes in time after operation and store in a special area) 。

第 9 部分：理化特性 (Section 9: Physical and Chemical Properties)

项目 (Item)	中文描述	English Description
外观与性状	白色流动性粉末，无臭，味微苦；具有吸湿性，在潮湿空气中易吸收水分转化为更高水合物	White free-flowing powder, odorless, slightly bitter taste; hygroscopic, easily absorbs moisture in humid air to form higher hydrates
密度 (25°C)	2.57 g/mL (晶体密度)	2.57 g/mL (crystal density, 25°C)
熔点	150°C (分解，失去结晶水转化为无水硫酸镁)	150°C (decomposes, loses crystal water to form anhydrous magnesium sulfate)
蒸气压 (20°C)	<0.1 mmHg	<0.1 mmHg (20°C)
溶解性	易溶于水 (20°C溶解度约 27 g/100 mL)，微溶于乙醇、甘油，不溶于丙酮、乙醚	Soluble in water (solubility about 27 g/100 mL at 20°C), slightly soluble in ethanol and glycerol, insoluble in acetone and ether



pH 值 (5%水溶液, 25℃)	5.5-8.5 (中性至弱酸性)	5.5-8.5 (neutral to weakly acidic, 5% aqueous solution at 25℃)
稳定性	常温干燥环境下稳定, 受热易分解脱水, 与强碱反应生成氢氧化镁沉淀	Stable in normal temperature and dry environment; easily decomposes and dehydrates when heated; reacts with strong alkalis to form magnesium hydroxide precipitate

第 10 部分：稳定性和反应性 (Section 10: Stability and Reactivity)

稳定性: 常温常压、干燥环境下稳定; 具有吸湿性, 潮湿空气中易吸水转化为二水、三水等更高水合物; 150℃时分解失去结晶水, 生成无水硫酸镁 (Stable under normal temperature, pressure and dry environment; hygroscopic, easily absorbs water in humid air to form dihydrate, trihydrate and other higher hydrates; decomposes and loses crystal water at 150℃ to form anhydrous magnesium sulfate) 。

避免条件: 高温 (超过 100℃)、潮湿环境、与酸类、氧化剂、乙氧基乙炔醇接触 (Avoid conditions: High temperature (above 100℃), humid environment, contact with acids, oxidants and ethoxyethynyl alcohol) 。

不相容物质: 强酸、氧化剂、乙氧基乙炔醇 (与后者混合加热可能发生爆炸反应)、碳酸盐 (反应生成碳酸镁沉淀) (Incompatible substances: Strong acids, oxidants, ethoxyethynyl alcohol (explosive reaction may occur when mixed and heated with the latter), carbonates (react to form magnesium carbonate precipitate)) 。

危险反应: 与乙氧基乙炔醇混合加热引发爆炸; 高温下与焦炭反应生成有毒二氧化硫及二氧化碳气体; 与碱反应生成氢氧化镁沉淀 (Hazardous reactions: Mixed heating with ethoxyethynyl alcohol causes explosion; reacts with coke at high temperature to produce toxic sulfur dioxide and carbon dioxide gas; reacts with alkalis to form magnesium hydroxide precipitate) 。

分解产物: 受热分解生成无水硫酸镁、氧化镁及硫氧化物 (SO₂, SO₃) (Decomposition products: Anhydrous magnesium sulfate, magnesium oxide and sulfur oxides (SO₂, SO₃) when heated) 。

第 11 部分：毒理学信息 (Section 11: Toxicological Information)



急性毒性 (Acute Toxicity) :

- 经口毒性: 大鼠经口 LD₅₀ 约 1200 mg/kg (皮下注射) ; 人经口过量摄入可引起腹痛、腹泻、呕吐等肠胃不适, 肾功能障碍者易引发镁中毒 (Oral toxicity: Oral LD₅₀ , rat: About 1200 mg/kg (subcutaneous injection); excessive oral ingestion in humans may cause abdominal pain, diarrhea, vomiting and other gastrointestinal discomfort; people with renal impairment are prone to magnesium poisoning) 。
- 经皮毒性: 皮肤接触有害, 长期接触可引发皮肤炎症、红肿瘙痒 (Dermal toxicity: Harmful in contact with skin; prolonged contact may cause skin inflammation, redness and itching) 。
- 吸入毒性: 粉尘吸入刺激呼吸道, 引发咳嗽、胸闷, 长期接触致呼吸道炎症; 吸入高浓度粉尘可能出现头晕、乏力等不适 (Inhalation toxicity: Dust inhalation irritates the respiratory tract, causing cough and chest tightness; prolonged contact causes respiratory inflammation; inhalation of high-concentration dust may cause dizziness, fatigue and other discomfort) 。

皮肤刺激: 轻微刺激性 (家兔皮肤刺激性试验), 持续接触可出现红斑、水肿 (Mild irritation (rabbit skin irritation test); erythema and edema may occur after continuous contact) 。

眼睛刺激: 轻微刺激性, 粉尘入眼可引发异物感、刺痛, 严重时可能导致结膜充血 (Mild irritation; dust entering eyes can cause foreign body sensation and stinging, and conjunctival congestion in severe cases) 。

过敏反应: 无已知皮肤或呼吸过敏反应 (No known skin or respiratory allergic reactions) 。

毒代动力学: 镁离子主要经肾脏排泄, 肾功能正常时排泄较快, 无蓄积; 肾功能障碍者排泄受阻, 易导致镁离子在体内蓄积, 引发中毒, 血浆镁浓度 > 7.5 mmol/L 时可出现心脏传导异常, > 12.5 mmol/L 可能导致心脏骤停 (Toxicokinetics: Magnesium ions are mainly excreted by the kidneys, excreted quickly without accumulation when renal function is normal; excretion is blocked in people with renal impairment, easily leading to magnesium ion accumulation in the body and poisoning. Cardiac conduction abnormalities may occur when plasma magnesium concentration > 7.5 mmol/L, and cardiac arrest may occur when > 12.5 mmol/L) 。

第 12 部分: 生态学信息 (Section 12: Ecological Information)

生态毒性 (Ecotoxicity) : 对水体轻微有害, 水蚤 LC₅₀ (48 小时, 大型蚤) 约 800 mg/L, 藻类 EC₅₀ (72 小时, 小球藻) 约 3000 mg/L; 对陆生植物无明显毒性, 可作为镁肥促进生长 (Slightly harmful to water bodies; *Daphnia magna* LC₅₀ (48h) about 800 mg/L, *Chlorella vulgaris* EC₅₀ (72h) about 3000 mg/L; no obvious toxicity to terrestrial plants, can be used as magnesium fertilizer to promote growth) 。

持久性和降解性: 不易生物降解, 在土壤、水体中可稳定存在, 自然降解周期较长 (Not easily biodegradable, stable in soil and water bodies, with a long natural degradation cycle) 。



生物累积性: 无生物累积潜力, 不会在动植物体内富集, 对食物链无明显影响 (No bioaccumulation potential, will not accumulate in animals and plants, and has no obvious impact on the food chain) 。

环境影响: 禁止未经处理直接排入水体、土壤及大气; 污染水体后需及时采取吸附、中和措施, 降低对水生生态系统的影响; 作为镁肥合理使用时, 对土壤生态无负面影响 (It is prohibited to discharge directly into water bodies, soil and atmosphere without treatment; after polluting water bodies, take adsorption and neutralization measures in time to reduce the impact on aquatic ecosystems; reasonable use as magnesium fertilizer has no negative impact on soil ecology) 。

第 13 部分: 废弃处置 (Section 13: Disposal Considerations)

废弃物性质: 非危险废弃物, 按含轻微毒性化学品废弃物处置 (Non-hazardous waste, disposed as waste containing slightly toxic chemicals) 。

处置方法:

- 可回收利用的废弃物: 经提纯、重结晶处理后, 回收作为工业原料或农业镁肥使用 (Recyclable waste: Recycled as industrial raw material or agricultural magnesium fertilizer after purification and recrystallization) 。
- 不可回收部分: 交由具备危废处理资质的专业机构, 采用安全填埋或高温焚烧处置; 焚烧需配套尾气处理装置, 去除硫氧化物等有毒气体, 达标后排放 (Non-recyclable parts: Handed over to qualified hazardous waste treatment institutions for safe landfill or high-temperature incineration; incineration shall be equipped with tail gas treatment device to remove toxic gases such as sulfur oxides, and discharged after reaching the standard) 。

包装处置: 污染的包装需用清水彻底清洗干净后回收利用; 无法清洗的包装按危废处置, 严禁混入生活垃圾或随意丢弃 (Packaging disposal: Contaminated packaging shall be thoroughly cleaned with clean water for recycling; uncleanable packaging shall be disposed as hazardous waste, and it is strictly prohibited to mix with domestic waste or discard at will) 。

第 14 部分: 运输信息 (Section 14: Transport Information)

联合国危险货物编号 (UN 号): 无 (非危险货物, 按普通化学品运输) (None, transported as ordinary chemicals) 。

联合国运输名称: 一水硫酸镁 (Magnesium Sulfate Monohydrate) 。

运输危险性分类: 非危险货物 (Non-hazardous for transport) | **包装组:** 无 (No packaging group) | **海洋污染物:** 否 (No) 。

运输注意事项:



- 运输车辆需干燥、清洁，配备防雨、防潮、防晒设施，车厢内铺垫防水布，避免潮湿导致货物吸潮结块 (Transport vehicles shall be dry and clean, equipped with rainproof, moisture-proof and sun-proof facilities; waterproof cloth shall be paved in the carriage to avoid moisture absorption and caking of goods due to humidity) 。
- 包装采用牢固的编织袋内衬聚乙烯薄膜，封口严密，每袋净重不超过 50kg，装载时避免挤压、碰撞，防止包装破损泄漏 (Packaged in strong woven bags lined with polyethylene film, sealed tightly, net weight not exceeding 50kg per bag; avoid extrusion and collision during loading to prevent packaging damage and leakage) 。
- 严禁与强酸、氧化剂、有毒化学品、食用化学品混装混运；运输过程中远离热源、火源，中途停留时选择阴凉干燥通风场所，专人看管 (Strictly prohibit mixed loading and transportation with strong acids, oxidants, toxic chemicals and food chemicals; keep away from heat sources and fire sources during transportation; choose a cool, dry and well-ventilated place for stay on the way, with special personnel on duty) 。
- 公路运输按规定路线行驶，铁路、海运运输需符合对应运输部门的安全规定 (IMDG-CODE、IATA-DGR 均不将其管制为危险货物)；运输完毕后，车辆需彻底清洗消毒，避免残留污染 (Road transport shall follow the specified route; railway and maritime transport shall comply with the safety regulations of the corresponding transport department (neither IMDG-CODE nor IATA-DGR regulates it as dangerous goods); after transportation, the vehicle shall be thoroughly cleaned and disinfected to avoid residual pollution) 。

第 15 部分：法规信息 (Section 15: Regulatory Information)

欧盟法规：符合 REACH 法规 (EC No. 1907/2006)，已列入 EINECS 目录 (231-298-2)；满足 CLP 法规 (EC No. 1272/2008) GHS 第 9 版分类及标签要求，标签需标注警告象形图、信号词及 H302/H312/H332 危险说明 (Complies with REACH Regulation (EC No. 1907/2006), listed in EINECS directory (231-298-2); meets the GHS Rev.9 classification and labeling requirements of CLP Regulation (EC No. 1272/2008); the label shall be marked with warning pictogram, signal word and H302/H312/H332 hazard statements) 。

美国法规：符合 OSHA HazCom 2012 标准，已列入 TSCA 目录；遵循 ANSI Z400.1 标准进行分类和标签，危险说明与 GHS 保持一致；运输需符合 DOT 普通化学品运输规定 (Complies with OSHA HazCom 2012 standard, listed in TSCA directory; classified and labeled in accordance with ANSI Z400.1 standard, hazard statements consistent with GHS; transportation shall comply with DOT ordinary chemical transportation regulations) 。

中国法规：符合《危险化学品安全管理条例》，本品非危险化学品；符合 GB/T 16483-2008《化学品安全技术说明书编写规定》、GB/T 17519-2013《化学品安全技术说明书编写指南》；海关编码：2833210000 (Complies with "Regulations on the Safety Administration of Hazardous Chemicals", this product is



non-hazardous chemical; complies with GB/T 16483-2008 "Specifications for Preparation of Safety Data Sheets for Chemicals" and GB/T 17519-2013 "Guidelines for Preparation of Safety Data Sheets for Chemicals"; Customs Code: 2833210000) 。

其他地区法规：遵循进口国当地化学品管理法规，如韩国 K-REACH、日本 CSCL 标准，确保标签、运输、处置环节全面合规，满足进出口通关要求（Comply with local chemical management regulations of the importing country, such as South Korea's K-REACH and Japan's CSCL standards, to ensure full compliance in labeling, transportation and disposal, and meet import and export customs clearance requirements）。

第 16 部分：其他信息 (Section 16: Other Information)

编制说明：本 SDS 基于联合国 GHS 第 9 版、欧盟 REACH、美国 OSHA HazCom 2012 等国际法规编制，数据来源于国际化学品安全卡 (ICSC)、权威化学品数据库及行业试验报告，精准对应一水硫酸镁专属性，专供莱州市百业鑫化工有限公司外贸客户使用，可作为进出口通关、客户验收的合规文件（This SDS is compiled in accordance with UN GHS Rev.9, EU REACH, US OSHA HazCom 2012 and other international regulations. The data is from International Chemical Safety Card (ICSC), authoritative chemical databases and industry test reports, accurately corresponding to the characteristics of magnesium sulfate monohydrate. It is exclusively for foreign trade customers of Laizhou Baiyexin Chemical Co., Ltd., and can be used as a compliant document for import and export customs clearance and customer acceptance）。

免责声明：使用本品前需确认符合当地法规及使用场景要求，严格遵循本 SDS 操作、储存、运输规范；本公司对因不当使用、储存、运输本品造成的人身伤害、财产损失及环境影响不承担责任；本品用途需符合对应等级要求（工业/农业/食品级），严禁跨等级使用（Confirm compliance with local regulations and application scenarios before use, and strictly follow the operation, storage and transportation specifications of this SDS; our company is not liable for personal injury, property loss and environmental impact caused by improper use, storage and transportation of this product; this product shall be used in accordance with the corresponding grade requirements (Industrial/Agricultural/Food Grade), and cross-grade use is strictly prohibited）。

修订说明：本版本为 1.0 版，基于最新法规及数据编制；若国际法规、行业标准更新或产品数据补充，将及时修订并更新版本号；建议每年复核一次内容有效性，确保合规性持续达标（This is version 1.0, compiled based on the latest regulations and data; it will be revised and the version number updated in a timely manner if international regulations, industry standards are updated or product data is supplemented; it is recommended to review the validity of the content annually to ensure continuous compliance）。

参考文献：联合国 GHS 第 9 版手册、欧盟 REACH 法规指南、美国 OSHA HazCom 2012 标准、国际化学品安全卡 (ICSC No. 1540)、中国海关编码手册（References: UN GHS Rev.9 Manual, EU REACH



Regulation Guidelines, US OSHA HazCom 2012 Standard, International Chemical Safety Card (ICSC No. 1540), China Customs Code Manual) 。

| (注：文档部分内容可能由 AI 生成)