光华化工
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化学品安全技术说明书（SDS）

产品：**热镀锌防爆剂（SYS）**
编制依据：**GB/T 16483- 2008、GB/T 17519- 2013、GB 30000 系列 GHS 分类标准**

1 化学品及企业标识

1.1 商品名称：热镀锌防爆剂（SYS）

1.2 1.2 别名：助镀槽润湿防爆助剂

1.3 产品推荐用途：热镀锌助镀槽专用助剂；提升润湿性、缩短工件干燥时间，抑制爆锌风险

1.4 禁止用途：不得用于食品、医药、饮用水体系

1.5 生产企业：昆山光华化工材料有限公司

1.6 企业地址：江苏省昆山市巴城镇湖滨北路 341 号

1.7 联系电话：13584927325

1.8 24 小时国内应急咨询电话：13584927325

1.9 编制部门：技术工程部

1.10 编制日期：2026- 08- 19

1.11 修订版本：V2.0

2 危险性概述

2.1 GHS 危险性分类： 皮肤刺激（类别 2）；眼睛刺激（类别 2）；无物理爆炸 / 燃烧危险。

2.2 GHS 象形图：⚠感叹号

2.3 信号词：**警告**

2.4 危险说明： H315：造成皮肤刺激； H319：造成严重眼刺激。

2.5 防范说明： P280：戴防护手套、防护眼镜； P302+P352：如皮肤接触，用大量清水冲洗； P305+P351+P338：如入眼睛，清水持续冲洗数分钟，取出隐形眼镜继续冲洗；刺激持续，就医。

2.6 其他危害：本品不含磷、不含 ODS 消耗臭氧层物质，符合 RoHS 指令；正常工况下无显著健康危害，避免高浓度雾滴长期接触人体。

3 成分 / 组成信息

☑混合物　□纯品

组分名称	CAS 号	浓度区间
十二烷基双羟乙基甲基氯化铵	22340-01-8	35- 45 %
双十二烷基甲基氯化铵	3401-74-9	10%
去离子水	7732- 18- 5	55- 65 %

备注：核心功能性组分为商业机密，提供浓度区间；无列入《危险化学品目录》高浓度危险组分。

4 急救措施

4.1 吸入：转移至空气新鲜处；如出现呼吸道不适，就医。

4.2 皮肤接触：脱去被污染衣物，使用流动清水冲洗皮肤至少 10 分钟；发生皮肤刺激，就医。

4.3 眼睛接触：立即翻开眼睑，流动清水或生理盐水持续冲洗不少于 15 分钟；刺激持续不退，就医。

4.4 食入：饮用足量温水，**禁止催吐**，立即就医。

4.5 给医生提示：对症处理，无特殊解毒剂。

5 消防措施

5.1 合适灭火剂：雾状水、干粉、二氧化碳、砂土。

5.2 禁止灭火剂：无特殊禁忌。

5.3 燃烧有害分解产物：高温下可产生一氧化碳、有机烟气。

5.4 消防员防护建议：佩戴防毒面具、全套消防防护服，在上风向开展灭火作业；尽可能将容器转移至空旷区域；用水冷却火场容器；容器变色、泄压发声，立即撤离。

6 泄漏应急处理

6.1 人员防护：疏散无关人员；处置人员佩戴橡胶手套、防护眼镜，避免皮肤眼睛直接接触泄漏液体。

6.2 环境保护：防止流入下水道、雨水管网、沟渠，避免对水生环境造成影响。

6.3 小量泄漏：砂土、活性炭、惰性吸附材料吸收残液；收集进密闭容器，废水送入厂区废水处理系统。

6.4 大量泄漏：构筑围堤收容；用泡沫覆盖抑制挥发；将物料泵入专用收集容器，交由有资质单位处置。

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7 操作处置与储存

7.1 操作注意事项：

1）密闭操作，车间保持通风；操作人员经过岗位培训，遵守作业规程。

2）避免皮肤、眼睛直接接触，佩戴个人防护用品。

3）远离热源，工作场所禁止吸烟。

4）避免与强氧化剂混配接触。

5）轻装轻卸，防止包装桶破损泄漏；现场配备泄漏应急物资与消防器材。

7.2 储存条件：

1）储存于阴凉通风库房，环境温度 5- 35℃；保持容器密封完好。

2）与氧化剂、食品化学品分开存放，严禁混储。

3）按照消防法规、危化品仓储管理要求保管。

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8 接触控制 / 个体防护

8.1 职业接触限值：无国家规定职业接触限值。

8.2 工程控制：生产岗位加强通风，减少气雾产生。

8.3 呼吸防护：正常工况不需要；产生大量雾滴时佩戴防雾滴口罩。

8.4 手部防护：耐化学橡胶防护手套。

8.5 眼睛防护：佩戴化学防护眼镜。

8.6 身体防护：耐化学品工作服。

9 理化特性

外观：黄色至无色透明液体

气味：中性微弱气味

pH 值：6- 8（5% 水溶液）

相对密度（15℃）：1.00±0.05 g/cm³

闪点：无闪点（不燃液体）

溶解性：可与水任意比例互溶

燃烧性：不燃

其他性能：耐高温、耐高盐、耐酸碱，润湿渗透性能优异；不含磷，不含 ODS。

备注：理化参数来源本产品 CMA- COA 第三方检测报告。

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10 稳定性和反应性

10.1 稳定性：常温常压储存条件下稳定。

10.2 应避免接触物质：强氧化剂。

10.3 危险反应：与强氧化剂接触可发生有机反应。

10.4 危险分解产物：高温不完全燃烧产生一氧化碳、有机烟气；常温储存无分解。

11 毒理学信息

11.1 急性毒性：混合物无急性高毒数据。

11.2 皮肤腐蚀 / 刺激：类别 2，长期反复接触可引发皮肤发红、轻度红斑。

11.3 眼损伤 / 眼刺激：类别 2，可造成眼部刺激。

11.4 致敏性：无明确致敏记录。

11.5 致突变、致癌、生殖毒性：本混合物组分未见相关致癌致突变证据。

12 生态学信息

12.1 水生毒性：表面活性剂组分对水生生物具有一定危害，禁止直接排放水体。

12.2 生物降解性：组分生物降解率＞90%。

12.3 生物蓄积潜力：无显著生物蓄积。

12.4 其它生态效应：严禁未经处理直接排入自然水环境。

13 废弃处置

13.1 化学品残余物：不可直接排放；按照地方法规，送入厂区废水处理站预处理，或委托具备资质危废处置单位处置。

13.2 污染包装容器：容器清洗干净后回收利用。

13.3 提示：处置全过程遵守国家、地方环境保护、危废管理法规。

14 运输信息

14.1 UN 编号：不属于危险货物，无 UN 编号。

14.2 运输危险类别：非危险化学品。

14.3 包装类别：无。

14.4 包装方式：25kg 塑料桶包装。

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14.5 运输注意事项： 运输前检查包装密封完好；防止暴晒、冷冻；禁止和强氧化剂、食品类货物混运；防止容器发生泄漏。

15 法规信息

本 SDS 编制参考法规：GB/T16483- 2008、GB/T17519- 2013、GB30000 系列 GHS 分类； 《安全生产法》、《危险化学品安全管理条例》、RoHS 环保指令、地方环保安全生产相关规定。

说明：本产品不属于《危险化学品目录》列明危险化学品。

16 其他信息

16.1 参考文献：本产品 CMA- COA 检测报告，企业 TDS 技术数据表。

16.2 编制修订说明：V2.0，废止旧 GB16483- 2000 旧版本 MSDS，更新 GHS 危险性分类，适配现行国标。

16.3 编制部门：昆山光华化工材料有限公司- 技术工程部。

16.4 免责声明：本 SDS 依据现有测试、文献资料编制，仅供安全操作参考；使用者结合现场工况，自行评估使用安全风险。

Safety Data Sheet (SDS)

Product: Hot- dip Galvanizing Anti- Explosion Agent (SYS)

Regulatory reference: OSHA Hazard Communication Standard 29 CFR 1910.1200 (HazCom 2012, aligned with UN GHS Revision 7)

SECTION 1: IDENTIFICATION

1.1 Product identifier: Hot- dip Galvanizing Anti- Explosion Agent (SYS)

1.2 Synonym: Flux- bath wetting & anti- foaming auxiliary for hot- dip galvanizing

1.3 Recommended use: Wetting agent for hot- dip galvanizing flux bath; improve wettability, shorten workpiece drying time, reduce zinc- splashing risk.

1.4 Restrictions on use: Not for food, pharmaceutical or potable- water systems.

1.5 Manufacturer information: Company: Kunshan Guanghua Chemical Materials Co., Ltd. Address: No.341 Hubin North Road, Bacheng Town, Kunshan City, Jiangsu Province, P.R.China Telephone: 13584927325

1.6 **US- local 24- hour emergency telephone**: 13584927325

1.7 Prepared by: Engineering Department, Kunshan Guanghua Chemical Materials Co., Ltd.

SECTION 2: HAZARD(S) IDENTIFICATION

2.1 GHS Hazard Classification (per 29 CFR 1910.1200): Skin Irritation Category 2; Serious Eye Irritation Category 2A. No physical fire- explosion hazard.

2.2 GHS Pictogram: Exclamation mark ⚠

2.3 Signal word: **Warning**

2.4 Hazard Statements: H315: Causes skin irritation. H319: Causes serious eye irritation.

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2.5 Precautionary Statements: P280: Wear protective gloves and eye protection. P302+P352: IF ON SKIN: Wash with plenty of soap and water. P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P332+P313: If skin irritation occurs: Get medical advice/attention. P337+P313: If eye irritation persists: Get medical advice/attention.

2.6 Other hazards: Contains no phosphorus, no ODS ozone- depleting substances, complies with RoHS requirements. Avoid prolonged exposure to mist/aerosol.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

☑ Mixture ☐ Substance

Chemical name	CAS- No.	Concentration range
Dodecyl dihydroxyethyl methylammonium chloride	22340-01-8	35- 45 %
Dodecyl methylammonium chloride	3401-74-9	10%
deionized water	7732-18-5	55- 65 %

Remarks: Key functional components are protected as trade secrets; concentration ranges are provided instead of exact weight- percent values. No high- hazard ingredients listed under US Hazardous Chemical Inventory.

SECTION 4: FIRST- AID MEASURES

4.1 Inhalation: Remove victim to fresh air. If respiratory discomfort persists, seek medical attention.

4.2 Skin contact: Take off contaminated clothing. Rinse skin thoroughly with running water for at least 10 minutes. If irritation develops, obtain medical help.

4.3 Eye contact: Rinse eyes continuously with plenty of running water or normal saline for minimum 15 minutes. If irritation remains, seek medical care immediately.

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4.4 Ingestion: Give large quantities of water to drink. **Do NOT induce vomiting.** Call a physician.

4.5 Notes to physician: Treat symptomatically; no specific antidote is available.

SECTION 5: FIRE- FIGHTING MEASURES

5.1 Suitable extinguishing media: Water spray, dry chemical, carbon dioxide, sand.

5.2 Unsuitable extinguishing media: None known.

5.3 Hazardous decomposition products under fire- conditions: Carbon monoxide, organic fumes upon incomplete combustion.

5.4 Advice for fire- fighters: Wear self- contained breathing apparatus (SCBA) and full protective turnout gear. Fight fire from up- wind side. Move intact containers to safe open area if without risk. Cool exposed containers with water spray. Withdraw immediately if container shows discoloration or venting noise.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions: Evacuate non- essential personnel. Responders shall wear chemical- resistant gloves and safety goggles. Avoid direct skin- eye contact with spilled liquid.

6.2 Environmental precautions: Prevent spill from entering sewers, storm drains and surface watercourses.

6.3 Small spill: Contain spill with sand, activated carbon or other inert absorbents. Collect waste into sealed containers; send wastewater to on- site waste- water treatment facility.

6.4 Large spill: Dike for containment. Apply foam to suppress aerosol generation. Pump material into dedicated waste receptacles. Arrange disposal via licensed waste- handling contractor.

SECTION 7: HANDLING AND STORAGE

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7.1 Handling precautions:

Use with adequate local ventilation. Operators shall receive proper job- site training.

Wear assigned personal protective equipment, avoid skin- eye contact.

Keep away from heat sources; no open- flame smoking in working zone.

Incompatible with strong oxidizing agents, avoid mixing contact.

Handle drums carefully to prevent rupture- leakage. Keep spill- kit and fire- control equipment readily available.

7.2 Storage conditions:

- Store in cool, well- ventilated warehouse; storage temperature range 5- 35° C. Keep containers tightly closed.
- Segregate from oxidizing agents and food- grade commodities.
- Comply with local fire- safety and warehouse- storage regulations.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Occupational exposure limits: No established OSHA- PEL / ACGIH- TLV values for this mixture.

8.2 Engineering controls: Maintain adequate ventilation to reduce aerosol- mist build- up.

8.3 Respiratory protection: Normally not required. If heavy mist/aerosol is generated, use suitable mist- filter respirator.

8.4 Hand protection: Chemical- resistant rubber gloves.

8.5 Eye protection: Chemical- resistant safety goggles.

8.6 Body protection: Chemical- resistant work clothing.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Colorless to pale- yellow clear liquid

Odor: Neutral mild odor

pH value: 6- 8 (5% aqueous solution)

Relative density (15° C): 1.00 ± 0.05 g/cm³

Flash point: Non- flammable, no measurable

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flash- point Solubility: Miscible with water in all proportions

Flammability: Non- combustible

Other properties: Heat- resistant, high- salt- tolerant, acid- alkali- stable, excellent wetting- penetrating performance. Contains no phosphorus and no ozone- depleting substances.

Source of data: In- house CMA- COA third- party test report.

SECTION 10: STABILITY AND REACTIVITY

10.1 Chemical stability: Stable under normal ambient storage- handling conditions.

10.2 Incompatible materials: Strong oxidizing agents.

10.3 Hazardous reactions: May undergo chemical interaction when mixed with strong oxidants.

10.4 Hazardous decomposition products: Carbon monoxide and organic fumes under high- temperature incomplete combustion; no decomposition under ambient storage.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Acute toxicity: No high- acute- toxicity data available for this mixture.

11.2 Skin corrosion / irritation: Category 2; repeated long- term contact may produce skin erythema / mild rash.

11.3 Serious eye damage / eye irritation: Category 2A; causes eye irritation.

11.4 Skin sensitization: No confirmed sensitizing- reaction records.

11.5 Germ- cell mutagenicity, carcinogenicity, reproductive toxicity: No evidence of carcinogenic / mutagenic / reproductive hazards from component data.

SECTION 12: ECOLOGICAL INFORMATION (Non- mandatory for OSHA- HCS)

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12.1 Aquatic toxicity: Surfactant components present hazard to aquatic organisms. Do not discharge raw product to natural water environment.

12.2 Biodegradability: Biodegradation rate > 90 %.

12.3 Bioaccumulative potential: No significant bioaccumulation.

12.4 Other adverse environmental effects: Prohibited from direct release into surface water.

SECTION 13: DISPOSAL CONSIDERATIONS (Non- mandatory for OSHA- HCS)

13.1 Product residues: Do not discharge untreated. Pretreat via on- site waste- water system or consign to licensed hazardous- waste disposal contractor complying with local EPA regulations.

13.2 Contaminated packaging: Thoroughly rinse containers for potential recycling; residual content shall be managed as waste material.

13.3 Regulatory note: Always follow federal, state and local waste- management statutes.

SECTION 14: TRANSPORT INFORMATION (Non- mandatory for OSHA- HCS)

14.1 UN number: Not classified as dangerous goods, no UN- number assigned.

14.2 DOT hazard class: Non- hazardous commodity for transport.

14.3 Packing group: Not applicable.

14.4 Packaging: 25 kg plastic drums.

14.5 Transport advice: Inspect drum sealing before shipment. Protect from freeze- thaw and direct sunlight. Do not co- ship with strong oxidants or food- stuff cargo. Prevent container leakage.

SECTION 15: REGULATORY INFORMATION (Non- mandatory for OSHA- HCS)

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Prepared in accordance with OSHA 29 CFR 1910.1200 Hazard Communication Standard (HazCom 2012). Not listed on US Hazardous Chemicals list. Reference: TSCA inventory status to be verified for US import scenarios. Complies with RoHS directive requirements for restricted- substance limits.

SECTION 16: OTHER INFORMATION

16.1 References: In- house CMA- COA test report, product TDS technical data sheet.

16.2 Revision note: Version V2.0. Obsolete earlier MSDS documents compiled under old GB16483- 2000 Chinese standard. Updated to comply with OSHA- HCS GHS classification rules.

16.3 Prepared by: Engineering Department, Kunshan Guanghua Chemical Materials Co., Ltd.

16.4 Disclaimer: This SDS is compiled based on available test- data and literature for safety- operation reference only. End- users shall independently assess safety risks according to actual site working- conditions.

