化学品安全技术说明书（SDS）

产品：**离心镀无铬钝化液（SYWL-388）**

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：离心镀无铬钝化液（SYWL-388）

1.2 别名：热镀锌锌合金环保无铬钝化处理剂

1.3 产品推荐用途：用于锌铝镁零配件、电力金具、紧固件类、锌合金表面钝化处理；形成无色透明转化钝化膜，提升抗盐雾、抗白锈防腐性能；

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- 20 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）；严重眼损伤类别 1；对水生生物有害并具有长期持续影响；不燃液体，无爆炸危险。

2.2 GHS 象形图：感叹号 ⚠ GHS07

2.3 信号词：警告

2.4 危险说明： H315：造成皮肤刺激； H318：造成严重眼损伤； H412：对水生生物有害并具有长期持续影响。

2.5 防范说明： P280：戴防护手套、防护眼镜、防护面罩； P301+P330+P331：如食入：漱口，禁止催吐； P303+P361+P353：如皮肤（头发）沾染，立即脱去全部污染衣物，大量清水冲洗皮肤； 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，立刻就医； P273：避免释放到环境中。

2.6 其他危害：弱酸性液体，避免和碱性物料接触；不含铬及重金属，不含 ODS 消耗臭氧层物质，符合 RoHS、Weee 指令。

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3 成分 / 组成信息

☑混合物 □纯品

组分名称	CAS 号	质量份数
有机硅树脂	商业保密	5-10%
有机成膜络合组分	商业保密	10-20%
pH 缓冲调节剂	商业保密	5-10%
去离子水	7732- 18- 5	60-75%

备注：功能性组分为商业机密，仅提供浓度区间；无《危险化学品目录》列明高浓度危险组分；最终腐蚀性以第三方危险特性鉴别报告为准。

4 急救措施

4.1 吸入：转移至空气新鲜处；吸入酸雾引发呼吸道不适，立刻就医。

4.2 皮肤接触：立刻脱去全部受污染衣物，流动清水冲洗皮肤至少 15 分钟，出现刺激症状立即就医。

4.3 眼睛接触：立即翻开眼睑，流动清水或者生理盐水持续冲洗不少于 15 分钟，必须立刻就医。

4.4 食入：饮用足量温水，**严禁催吐，禁止自行中和**，立即就医。

4.5 给医生提示：本品弱酸性，可造成皮肤黏膜刺激及眼部损伤，对症处理，无特异性解毒剂。

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：高温分解产生一氧化碳、酸性烟气、有机分解产物。

5.4 消防员防护建议：佩戴自给式呼吸器 SCBA、全套耐酸碱消防防护服，在上风向灭火；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，人员立即撤离。

6 泄漏应急处理

6.1 人员防护：疏散无关人员；处置人员穿戴耐酸碱防护服、耐酸碱手套、防护面屏，严禁皮肤眼睛直接接触泄漏液体。

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6.2 环境保护：严禁泄漏物流入下水道、雨水管网、河道；泄漏物必须用弱碱（碳酸氢钠）中和处理至 pH 6- 9 之后，方可进入废水系统。

6.3 小量泄漏：砂土、石灰石、惰性吸附材料吸附残液；碳酸氢钠中和至 pH 6- 9，收集进密闭容器，送入厂区废水处理系统。

6.4 大量泄漏：构筑围堤收容；碳酸氢钠中和；物料泵入专用耐酸收集容器，交由具备资质危废处置单位处置。

7 操作处置与储存

7.1 操作注意事项

1）密闭操作，车间加强通风；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，佩戴全套个人防护用品。操作现场禁止佩戴隐形眼镜。

3）远离热源，工作场所禁止吸烟。

4）避免与强氧化剂、强碱混配接触。

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、碱类、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。

8 接触控制 / 个体防护

8.1 职业接触限值：混合物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；产生大量酸雾、气雾时佩戴合适的防雾滴口罩。

8.4 手部防护：耐化学橡胶防护手套。

8.5 眼睛防护：佩戴护目镜（防冲击化学品防护眼镜），操作禁止佩戴隐形眼镜。

8.6 身体防护：耐化学品工作服。

9 理化特性

外观：无色透明液体

气味：微弱气味

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pH 值：2.3- 2.6（原液）

相对密度（15℃）：1.00±0.05 g/cm³

冰点：- 35 ℃

沸点：100 ℃

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

使用工艺：常温使用；原液 15- 20 倍稀释；适用浸泡法、喷淋法；

备注：理化参数来源本产品 CMA- COA 第三方检测报告。

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：强碱、强氧化剂。

10.3 危险反应：和强碱接触发生中和放热反应；可与强氧化剂发生化学反应。

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

11 毒理学信息

11.1 急性毒性：该混合物无高急性毒性数据。

11.2 皮肤腐蚀 / 刺激：类别 2，反复长期接触可引发皮肤发红、红斑。

11.3 眼损伤 / 眼刺激：类别 1，可造成严重眼部损伤。

11.4 致敏性：无明确致敏记录。

11.5 致突变、致癌、生殖毒性：混合物组分未见明确致癌致突变证据。

12 生态学信息

12.1 水生毒性：对水生生物有害，具有长期持续毒性；原液严禁直接排放水体。

12.2 生物降解性：有机组分综合生物降解率＞90%。

12.3 生物蓄积潜力：无显著生物蓄积。

12.4 其它生态效应：废水必须中和预处理达标之后排放。

13 废弃处置

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13.1 化学品残余物：原液不可直接排放；使用碳酸氢钠中和 pH 至 6- 9 后，厂区废水站预处理，或者委托具备资质危废处置单位处置。

13.2 污染包装容器：容器充分中和清洗后回收利用；残留废液按照危险废物管理。

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、50kg 塑料大口吨桶包装。

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；禁止和强碱、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、Weee 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》列明的危险化学品。

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，ASTM B117 防腐性能标准。

16.2 修订说明：V2.0，按照 GB/T16483- 2008 现行国标编制；依据 pH 值做 GHS 危险性分类；完整录入产品工艺使用参数。

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: Chrome-Free Passivation Solution for Centrifugal Galvanizing (SYWL-388)

Prepared in accordance with: GB/T 16483-2008, GB/T 17519-2013, GB 30000 series GHS classification standards

SECTION 1: IDENTIFICATION

1.1 Product identifier: Chrome-Free Passivation Solution for Centrifugal Galvanizing (SYWL-388)

1.2 Synonym: Environment-friendly non-chromate passivating agent for hot-dip galvanizing and zinc-alloy

1.3 Recommended use: Used for passivation treatment of galvanized workpieces, galvanized steel towers and zinc-alloy surfaces; forms colorless transparent conversion passivation film to enhance salt-spray resistance and anti-white-rust anti-corrosion performance.

1.4 Restrictions on use: Shall not be used for food, pharmaceutical or potable-water systems.

1.5 Manufacturer: Kunshan Guanghua Chemical Materials Co., Ltd.

1.6 Address: No.341 Hubin North Road, Bacheng Town, Kunshan City, Jiangsu Province, P.R.China

1.7 Telephone: +86-13584927325

1.8 24-hour domestic emergency telephone (China): +86-13584927325

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1.9 Prepared by: Engineering Department

1.10 Date of preparation: 2026-08-20

1.11 Revision: V2.0

SECTION 2: HAZARD(S) IDENTIFICATION

2.1 GHS Hazard Classification: Skin Irritation Category 2; Serious Eye Damage Category 1; Hazardous to aquatic life with long-lasting effects; Non-flammable liquid, no explosion hazard.

2.2 GHS Pictogram: Exclamation mark ⚠ GHS07

2.3 Signal word: Warning

2.4 Hazard Statements:

H315: Causes skin irritation.

H318: Causes serious eye damage.

H412: Harmful to aquatic life with long lasting effects.

2.5 Precautionary Statements:

P280: Wear protective gloves, eye-protection and face-shield.

P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with plenty of 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. Call a physician immediately.

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P273: Avoid release to the environment.

2.6 Other hazards: Weak-acid liquid. Avoid contact with alkaline materials. Chromium-free and heavy-metal-free; contains no ozone-depleting substances (ODS). Complies with RoHS and Weee directives.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

☑ Mixture ☐ Substance

Chemical name	CAS-No.	Mass fraction
Organosilicone resin	Trade secret	5-10 %
Organic film-forming complexing components	Trade secret	10-20 %
pH-buffering adjusting agent	Trade secret	5-10 %
De-ionized water	7732-18-5	60-75 %

Remarks: Key functional components are treated as trade secrets; only concentration ranges are provided. No high-concentration hazardous ingredients listed in China Catalogue of Hazardous Chemicals. Final corrosive property shall be subject to third-party hazard identification test report.

SECTION 4: FIRST-AID MEASURES

4.1 Inhalation: Remove victim to fresh air. Seek immediate medical attention for respiratory discomfort caused by acid-mist inhalation.

4.2 Skin contact: Immediately remove all contaminated clothing. Rinse skin thoroughly with running water for at least 15 minutes. Seek medical help if

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irritation occurs.

4.3 Eye contact: Immediately hold eyelids apart, continuously flush eyes with plenty of running water or normal saline for not less than 15 minutes. Seek medical care without delay.

4.4 Ingestion: Give sufficient warm water to drink. **Do NOT induce vomiting. Do NOT neutralize by yourself**. Call a physician immediately.

4.5 Notes to physician: This product is weak-acid, may cause skin-mucous membrane irritation and eye injury. Treat symptomatically; no specific antidote is available.

SECTION 5: FIRE-FIGHTING MEASURES

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

5.2 Unsuitable extinguishing media: None known.

5.3 Hazardous decomposition products under fire conditions: Carbon monoxide, acid fumes and organic decomposition substances generated upon high-temperature decomposition.

5.4 Advice for fire-fighters: Wear self-contained breathing apparatus (SCBA) and full acid-resistant fire-fighting protective suit. Fight fire from up-wind direction. If safe to do so, move intact containers to open area. Cool exposed containers with water spray. Immediately evacuate personnel if containers discolor or venting noise occurs.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions: Evacuate irrelevant personnel. Responders shall wear acid-resistant protective clothing, acid-proof gloves and full-face shield. Avoid direct skin-eye contact with spilled liquid.

6.2 Environmental precautions: Prevent spillage from entering sewers, storm drains and watercourses. Spilled material must be neutralized with weak base (sodium bicarbonate) to pH 6-9 before discharging into wastewater system.

6.3 Small spill: Absorb residual liquid with sand, limestone or other inert absorbents. Neutralize with sodium bicarbonate to pH 6-9. Collect waste in sealed containers and deliver to on-site wastewater treatment facility.

6.4 Large spill: Dike for containment; neutralize with sodium bicarbonate. Pump liquid into dedicated acid-proof collecting receptacles and hand over to licensed hazardous-waste disposal contractor.

SECTION 7: HANDLING AND STORAGE

7.1 Handling precautions

1) Operate in closed-system with adequate workshop ventilation. Operators shall receive position-specific training and follow operating procedures.

2) Avoid direct skin-eye contact. Wear complete set of personal protective equipment. Contact lenses shall NOT be worn during operation.

3) Keep away from heat sources. No smoking in working zone.

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4) Avoid mixing-contact with strong alkalis and strong oxidizing agents.

5) Handle drums carefully to prevent rupture-leakage. Keep spill-response kits and fire-fighting equipment readily available.

7.2 Storage conditions

1) Store in cool and well-ventilated warehouse; ambient storage temperature: 5-35 °C. Keep containers tightly sealed.

2) Segregate strictly from alkalis, oxidizing agents and food-grade commodities; no mixed-storage.

3) Store in compliance with fire-protection regulations and hazardous-chemical warehousing requirements.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Occupational exposure limits: No national occupational exposure limits established for this mixture.

8.2 Engineering controls: Provide sufficient ventilation at work stations to reduce mist generation.

8.3 Respiratory protection: Normally not required. Wear suitable mist-filter respirator when large amount of acid mist or aerosol is generated.

8.4 Hand protection: Chemical-resistant rubber protective gloves.

8.5 Eye protection: Impact-resistant chemical-safety goggles; contact-lenses are prohibited during operation.

8.6 Body protection: Chemical-resistant work clothing.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Colorless transparent liquid

Odor: Faint odor

pH value: 2.3-2.6 (as-received liquid)

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

Freezing point: -35 °C

Boiling point: 100 °C

Flash point: Non-flammable, no measurable flash-point

Solubility: Fully miscible with water

Flammability: Non-combustible

Application notes: Operate at ambient temperature; dilute stock solution at 15-20 times ratio; applicable for immersion and spray process.

> Source of physical-chemical data: Third-party CMA-COA test report of this product.

SECTION 10: STABILITY AND REACTIVITY

10.1 Chemical stability: Stable under normal ambient temperature and pressure.

10.2 Incompatible materials: Strong alkalis, strong oxidizing agents.

10.3 Hazardous reactions: Exothermic neutralization reaction upon contact with strong alkalis; chemical reaction may occur with strong oxidizing agents.

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10.4 Hazardous decomposition products: Acid fumes, carbon monoxide and organic decomposition products generated under incomplete high-temperature 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 or prolonged contact may cause skin redness and erythema.

11.3 Serious eye damage / eye irritation: Category 1; may cause severe eye injury.

11.4 Skin sensitization: No confirmed sensitization records.

11.5 Germ-cell mutagenicity, carcinogenicity, reproductive toxicity: No clear evidence of carcinogenic or mutagenic hazards for mixture components.

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

12.1 Aquatic toxicity: Harmful to aquatic life with long-lasting toxic effects. Raw product must not discharge directly to water bodies.

12.2 Biodegradability: Overall biodegradation rate of organic components ＞ 90 %.

12.3 Bioaccumulative potential: No significant bioaccumulation.

12.4 Other ecological effects: Wastewater must be neutralized and pre-treated

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before discharge.

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

13.1 Product residues: Do not discharge untreated. Neutralize waste liquid with sodium bicarbonate to pH 6-9, then pre-treat via on-site waste-water system or consign to licensed hazardous-waste disposal contractor.

13.2 Contaminated packaging containers: Thoroughly neutralize and rinse containers for potential recycling. Residual waste liquid shall be managed as hazardous waste material.

13.3 Note: All disposal activities shall comply with national and local environmental-protection and hazardous-waste regulations.

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

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

14.2 Transport hazard class: Non-hazardous chemical.

14.3 Packing group: Not applicable.

14.4 Packaging: 25 kg, 50 kg plastic open-top IBC drums.

14.5 Transport advice: Inspect container tightness before shipment. Protect from direct sunlight and freezing. Do not co-transport with strong alkalis, oxidants or food-stuff cargo. Prevent container leakage.

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

References for SDS compilation:

GB/T16483-2008, GB/T17519-2013, GB 30000 series GHS standards;

Work Safety Production Law, Regulations on Safety Management of Hazardous Chemicals, RoHS, Weee directives, local environmental-protection & work-safety provisions.

Note: This product is not listed in China Catalogue of Hazardous Chemicals.

SECTION 16: OTHER INFORMATION

16.1 References: CMA-COA test report of this product, enterprise TDS technical data sheet, ASTM B117 anti-corrosion performance standard.

16.2 Revision note: Version V2.0. Compiled under current GB/T16483-2008 national standard; GHS classification is based on pH property; complete product application-process parameters are documented.

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

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