光华化工
GUANGHUA CHEMICAL

化学品安全技术说明书（SDS）

产品：**热镀锌酸碱两用除油剂**（Dual-purpose degreaser）

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

商品名称：**热镀锌酸碱两用除油剂**

别名：（酸性/碱性）两用除油剂、水基复合型除油助剂

产品推荐用途：本品由多种高效乳化剂、渗透剂、油污剥离剂、金属络合剂复配而成，为水基复合型除油助剂。可单独配槽使用，也可分别添加于盐酸酸洗体系、碱洗体系，兼具快速脱脂、分散油污、抑制酸雾、缓蚀络合重金属离子的效果；适用于钢铁等工件前处理除油，适配酸洗除锈、碱洗除油两条工艺路线，油污包容能力强，槽液稳定性好。

禁止用途：不得用于食品、医药、饮用水体系；禁止与强氧化剂（次氯酸钠、双氧水等）直接混配。

生产企业：昆山光华化工材料有限公司

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编制部门：技术工程部

编制日期：2026-10-30

修订版本：V1.0

2 危险性概述

2.1 GHS 危险性分类：皮肤刺激（类别 2）；严重眼刺激（类别 2）；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。

备注：原液近中性（pH 6.0～8.0）；以上分类依据产品组成与理化特性推断，正式分类以第三方危险特性鉴别报告为准；与盐酸、烧碱等复配后的工作槽液腐蚀性显著上升，需单独做危险特性鉴别。

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；H319：造成严重眼刺激；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：近中性水基液体；严禁与强氧化剂混配，避免组分失效；低浓度单独水相除油时刺激性低，配入酸性/碱性工作液后，工作液的酸雾、碱雾及腐蚀性风险需按实际体系管控。

3 成分 / 组成信息

☑混合物　□纯品

组分名称	CAS 号	质量分数
乳化剂（功能性组分）	商业保密	10-20 %
渗透剂（功能性组分）	商业保密	5-15 %
油污剥离剂（功能性组分）	商业保密	5-15 %
金属络合剂（功能性组分）	商业保密	1-5 %
去离子水	7732-18-5	50-70 %

备注：功能性组分为商业机密，仅提供浓度区间；质量分数为依据产品复配逻辑推断的参考区间，正式发布前请以企业技术数据表（TDS）/配方台账核准后补录；无《危险化学品目录》列明高浓度危险组分；本品仅为助剂，配入盐酸、烧碱后的工作槽液危险性会升高，整套槽液危险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、碱雾引发呼吸道不适，立刻就医。

4.2 皮肤接触：立即脱去受污染衣物，用大量清水持续冲洗皮肤，出现刺激症状立即就医。

4.3 眼睛接触：立即翻开眼睑，用大量流动清水持续冲洗至少 15 分钟，及时就医。

4.4 食入：饮用足量温水，严禁催吐，立即就医。

4.5 给医生提示：本品为近中性水基助剂，刺激性较低；与无机酸、烧碱复配后体系腐蚀性增强，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、有机分解产物。

5.4 消防员防护建议：佩戴自给式呼吸器（SCBA）、全套耐化学品消防防护服，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；处置人员穿戴防护手套、护目镜/防护面屏，避免皮肤眼睛直接接触泄漏液体。

6.2 环境保护：严禁泄漏物流入下水道、雨水管网、河道；泄漏的含酸/碱工作液须先中和处理至 pH 6-9 后方可进入废水系统。

6.3 小量泄漏：用砂土、惰性吸附材料吸附收集，装入密闭容器，送厂区废水处理系统；不得直接用水冲洗入下水道。

6.4 大量泄漏：构筑围堤收容，泵入密闭收集容器，交由具备资质的危废处置单位处置。

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；配制的酸洗/碱洗槽体建议配套废气收集，降低酸雾、碱雾逸散；操作人员经岗位培训，熟知酸碱体系风险，遵守作业规程。

2）配液时严格遵守酸碱操作规范：酸加水、碱加水，严禁将水直接冲入浓酸、浓碱；先配制好酸/碱基础液，在搅拌状态下缓慢加入本品。

3）全程避免皮肤眼睛直接接触，佩戴耐酸碱手套、护目镜、耐酸碱围裙等防护用品；工位配置洗眼器、安全喷淋。

4）工作场所禁止吸烟；远离热源。

5）严禁与强氧化剂（次氯酸钠、双氧水等）混配，避免组分失效。

6）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）槽液效率下降时，按工艺比例补加本品或部分更换槽液；槽液表面浮油定期撇除。

7.2 储存条件

1）储存于阴凉通风库房，避光，远离氧化剂、食品；储存温度 5～40℃。

2）密封存放，防止雨淋；包装容器完好。

3）按照消防法规、化学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；配套盐酸、烧碱工作液需管控无机酸雾、碱雾的职业接触限值。

8.2 工程控制：生产岗位加强通风；酸洗/碱洗槽体配套废气收集装置；作业区域配置洗眼器与安全淋浴装置。

8.3 呼吸防护：正常工况不需要；配液、处理工件产生大量酸雾/碱雾时佩戴相应的防毒面具（酸性气体/碱性气体）。

8.4 手部防护：耐酸碱橡胶防护手套。

8.5 眼睛防护：耐化学品护目镜 + 防护面屏。

8.6 身体防护：耐化学品工作服、耐酸碱围裙。

9 理化特性

外观：淡黄色至无色透明液体

气味：轻微特征有机气味，无强刺激性

pH 值：6.0～8.0（原液，25℃）

相对密度（25℃）：1.02～1.08 g/cm³

闪点：＞93℃（非易燃品）

溶解性：与水、稀酸、稀碱任意比例互溶，不分层、无沉淀

稳定性：-5℃～50℃储存不分层；低温如有轻微浑浊，回暖摇匀即可恢复，不影响使用

使用工艺：本品为助剂，添加到酸/碱工作液中配套使用，也可低浓度单独水相除油；通用配槽添加量 0.5%～2%（按工作液总质量计）；酸洗体系：盐酸浓度≤30%（质量分数），按 0.5%～2% 添加，常温～55℃，处理 3～30 min；碱洗体系：氢氧化钠/氢氧化钾≤5%（质量分数），按 0.5%～2% 添加，40～65℃，处理 2～10 min；单独水相除油：清水添加 0.5%～2%，加温浸泡或喷淋。

备注：理化参数为本产品技术资料推荐值（工业常用区间），配以浓酸、浓碱之后，工作液理化特性与危险性会发生改变。

10 稳定性和反应性

10.1 稳定性：-5℃～50℃储存条件下稳定，不分层；常温常压稳定。

10.2 应避免接触的物质：强氧化剂（次氯酸钠、双氧水等）、食品。

10.3 危险反应：与强氧化剂混配会导致组分失效；与酸碱复配为正常配套使用，但配液操作不当（水入浓酸/浓碱）可引发剧烈放热飞溅。

10.4 危险分解产物：高温不完全燃烧产生一氧化碳、有机分解产物；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（推断，待检测确认）。

11.2 皮肤腐蚀/刺激：类别 2（推断），长时间或反复接触可能引起皮肤刺激。

11.3 眼损伤/眼刺激：类别 2（推断），可造成严重眼刺激。

11.4 致敏性：无明确致敏记录。

11.5 致突变、致癌、生殖毒性：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：对水生生物有害并具有长期持续影响（推断，待检测确认）；原液严禁直接排放水体。

12.2 生物降解性：水基表面活性剂体系，生物降解性数据以检测报告为准。

12.3 生物蓄积潜力：无显著生物蓄积（推断）。

12.4 其它生态效应：含酸/碱清洗废水属于危废管控范畴，不得直接外排，按当地环保要求中和预处理后交由有资质单位处置。

13 废弃处置

13.1 化学品残余物：原液不得直接外排；按当地环保要求中和预处理后，经厂区废水站处理或委托具备资质的危废处置单位处置；含酸/碱废槽液需充分中和后处置。

13.2 污染包装容器：容器充分清洗后回收利用；残留废液按危险废物管理。

13.3 提示：处置全过程遵守国家、地方环境保护及危废管理法规。

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（普通化工助剂，不属于易燃易爆品）。

14.3 包装类别：无。

14.4 包装方式：塑料桶包装（25kg/200kg）。

14.5 运输注意事项：运输前检查包装密封完好；防止暴晒、雨淋、冰冻；禁止与强氧化剂、食品类货物混运；防止容器泄漏。

15 法规信息

本 SDS 编制参考法规：GB/T 16483-2008、GB/T 17519-2013、GB 30000 系列 GHS 分类标准；《中华人民共和国安全生产法》、《危险化学品安全管理条例》、地方环保安全生产相关规定。

说明：本产品（除油剂两性原液）不属于《危险化学品目录》列明的危险化学品（以实际危险特性鉴别为准）；与盐酸、烧碱复配后的工作槽液需单独评估危险性。

16 其他信息

16.1 参考文献：本产品技术说明书（TDS）、企业检验报告。

16.2 修订说明：V1.0，依据 GB/T 16483-2008 现行国标编制；完整录入酸洗/碱洗配槽添加量、配液顺序、处理工艺参数；重点提示：本品为助剂，复配无机酸、烧碱后工作液危险性上升，需单独评估。

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 依据现有技术资料与检测信息编制，仅供安全操作参考；本 SDS 仅针对除油剂两性原液，不覆盖客户自行复配盐酸、烧碱后的工作槽液；使用者应结合现场工况，自行评估使用安全风险。

Safety Data Sheet (SDS)

Product: Dual-purpose degreaser (Acid-Alkali Dual-Use Degreaser)

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: Amphoteric Degreaser (Acid-Alkali Dual-Use Degreaser)

1.2 Synonym: Water-based multi-functional degreasing auxiliary agent for acid and alkaline systems

1.3 Recommended use: Formulated from multiple high-efficiency emulsifiers, penetrating agents, oil-stripping agents and metal-chelating agents; a water-based compound degreasing auxiliary. Can be used as a stand-alone bath or added respectively to hydrochloric-acid pickling systems and alkaline cleaning systems. Provides rapid degreasing, oil dispersion, acid-mist suppression, corrosion inhibition and chelation of heavy-metal ions. Suitable for

surface pretreatment degreasing of steel and other workpieces; compatible with both pickling-de-rusting and alkaline-degreasing routes. High oil-loading capacity and good bath stability.

1.4 Restrictions on use: Shall not be used for food, pharmaceutical or potable-water systems. Do not mix directly with strong oxidizing agents (e.g. sodium hypochlorite, hydrogen peroxide).

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

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1.9 Prepared by: Engineering Department

1.10 Date of preparation: 2026-10-30

1.11 Revision: V1.0

SECTION 2: HAZARD(S) IDENTIFICATION

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

Note: Stock solution is near-neutral (pH 6.0-8.0). Classification above is inferred from product composition and physical-chemical properties; formal classification shall be subject to third-party hazard identification report. Working bath compounded with hydrochloric acid or caustic soda exhibits significantly higher corrosivity and requires separate hazard identification.

2.2 GHS Pictogram: Exclamation mark ⚠ GHS07

2.3 Signal word: Warning

2.4 Hazard Statements:

H315: Causes skin irritation.

H319: Causes serious eye irritation.

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.

P273: Avoid release to the environment.

2.6 Other hazards: Near-neutral water-based liquid. Strictly avoid mixing with strong oxidizing agents to prevent component failure. Low irritancy in low-concentration water-

phase degreasing; for acid/alkaline working baths, control acid-mist, alkali-mist and corrosivity risks according to the actual system.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

☑ Mixture □ Substance

Chemical name	CAS-No.	Mass fraction
Emulsifiers (functional components)	Trade secret	10-20 %
Penetrating agents (functional components)	Trade secret	5-15 %
Oil-stripping agents (functional components)	Trade secret	5-15 %
Metal-chelating agents (functional components)	Trade secret	1-5 %
De-ionized water	7732-18-5	50-70 %

Remarks: Key functional components are treated as trade secrets; only concentration ranges are provided. Mass fractions are inferred reference ranges based on formulation logic and shall be verified against the enterprise TDS/formulation ledger before official release. No high-concentration hazardous ingredients listed in China Catalogue of Hazardous Chemicals. This product is only an auxiliary agent; hazards of working bath rise after compounding with hydrochloric acid or caustic soda. Corrosive property of the mixed bath shall be subject to third-party hazard identification report.

SECTION 4: FIRST-AID MEASURES

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

4.2 Skin contact: Immediately remove contaminated clothing. Rinse skin thoroughly with plenty of running water. Seek medical help if irritation occurs.

4.3 Eye contact: Immediately hold eyelids apart, continuously flush eyes with plenty of running water for at least 15 minutes. Seek medical care without delay.

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

4.5 Notes to physician: This product is a near-neutral water-based auxiliary with low irritancy. Acidity/alkalinity and corrosivity increase after compounding with mineral acids or caustic soda, which 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 and organic decomposition substances generated upon high-temperature decomposition.

5.4 Advice for fire-fighters: Wear self-contained breathing apparatus (SCBA) and full chemical-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 protective gloves, goggles/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 acid/alkaline working liquid must be neutralized to pH 6-9 before discharging into wastewater system.

6.3 Small spill: Absorb residual liquid with sand or other inert absorbents. Collect in sealed containers and deliver to on-site wastewater treatment facility. Do not flush directly into drains with water.

6.4 Large spill: Dike for containment; pump liquid into sealed 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. Exhaust-gas collection is recommended for acid/alkaline bath tanks to reduce mist emission. Operators shall receive position-specific training, be aware of risks of acid/alkaline systems and follow operating procedures.

2) Follow acid/alkali handling rules during bath preparation: always add acid to water and alkali to water; NEVER pour water directly into concentrated acid or concentrated alkali. Prepare the acid/alkaline base solution first, then slowly add this product under stirring.

3) Avoid direct skin-eye contact at all times. Wear acid/alkali-resistant gloves, goggles and apron. Eyewash station and safety shower shall be available at workplace.

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

5) Strictly avoid mixing with strong oxidizing agents (sodium hypochlorite, hydrogen peroxide, etc.) to prevent component failure.

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

7) Top up proportionally or partially replace bath liquid when efficiency declines; skim floating oil regularly.

7.2 Storage conditions

1) Store in cool, ventilated, light-protected warehouse; keep away from oxidizing agents and food commodities. Storage temperature: 5-40 ℃.

2) Keep containers tightly sealed and protected from rain.

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

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Occupational exposure limits: No national occupational exposure limits established for this mixture. Occupational exposure limits for inorganic acid mist / alkali mist shall be considered for baths mixed with hydrochloric acid or caustic soda.

8.2 Engineering controls: Provide sufficient ventilation at work stations; install exhaust-gas collection for acid/alkaline bath tanks. Eyewash and safety shower facilities shall be equipped in working area.

8.3 Respiratory protection: Normally not required. Wear suitable gas respirator (acid-gas or alkali-gas) when large amount of acid/alkali mist is generated during mixing or workpiece-processing.

8.4 Hand protection: Acid/alkali-resistant rubber protective gloves.

8.5 Eye protection: Chemical-resistant safety goggles plus face shield.

8.6 Body protection: Chemical-resistant work clothing and acid/alkali-resistant apron.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Pale-yellow to colorless transparent liquid

Odor: Slight characteristic organic odor, no strong irritancy

pH value: 6.0-8.0 (as-received liquid, 25 ℃)

Relative density (25 ℃): 1.02-1.08 g/cm³

Flash point: ＞93 ℃ (non-flammable)

Solubility: Fully miscible with water, dilute acids and dilute alkalis; no layering or precipitation

Stability: No layering within -5 ℃ to 50 ℃ storage; slight turbidity at low temperature recovers after warming and shaking, without affecting use

Application notes: Auxiliary agent added into acid/alkaline working baths, or used at low concentration in water-phase degreasing. General addition rate: 0.5%-2% (based on total working-liquid mass). Acid pickling system: hydrochloric acid ≤30% (mass fraction), add 0.5%-2%, ambient to 55 ℃, 3-30 min. Alkaline cleaning system: NaOH/KOH ≤5% (mass fraction), add 0.5%-2%, 40-65 ℃, 2-10 min. Stand-alone water-phase degreasing: add 0.5%-2% into clean water, warm soaking or spraying.

Note: Physical-chemical data are recommended values from the product technical data sheet (industrial common ranges). Physical-chemical properties and hazards will change after blending with concentrated acids/alkalis.

SECTION 10: STABILITY AND REACTIVITY

10.1 Chemical stability: Stable within -5 ℃ to 50 ℃ storage; no layering. Stable under normal ambient temperature and pressure.

10.2 Incompatible materials: Strong oxidizing agents (sodium hypochlorite, hydrogen peroxide, etc.), food commodities.

10.3 Hazardous reactions: Component failure occurs when mixed with strong oxidizing agents. Compounding with acids/alkalis is normal intended use; improper bath preparation (adding water into concentrated acid/alkali) may cause violent exothermic splashing.

10.4 Hazardous decomposition products: 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 (inferred, subject to test confirmation).

11.2 Skin corrosion / irritation: Category 2 (inferred); prolonged or repeated contact may cause skin irritation.

11.3 Serious eye damage / eye irritation: Category 2 (inferred); may cause serious eye irritation.

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

12.1 Aquatic toxicity: Harmful to aquatic life with long-lasting toxic effects (inferred, subject to test confirmation). Raw product must not discharge directly to water bodies.

12.2 Biodegradability: Water-based surfactant system; biodegradability data shall be subject to test report.

12.3 Bioaccumulative potential: No significant bioaccumulation (inferred).

12.4 Other adverse environmental effects: Acid/alkaline cleaning wastewater falls under hazardous-waste control; shall not be discharged directly. Neutralize and pre-treat according to local environmental requirements before handing over to licensed units.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Product residues: Do not discharge untreated. Neutralize and pre-treat waste liquid according to local environmental requirements, then treat via on-site wastewater system or

consign to licensed hazardous-waste disposal contractor. Waste bath containing acid/alkali shall be fully neutralized prior to disposal.

13.2 Contaminated packaging containers: Thoroughly 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

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

14.2 DOT hazard class: Non-hazardous chemical commodity (ordinary chemical auxiliary; not flammable/explosive).

14.3 Packing group: Not applicable.

14.4 Packaging: Plastic drums (25 kg / 200 kg).

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

SECTION 15: REGULATORY INFORMATION

References for SDS compilation: GB/T 16483-2008, GB/T 17519-2013, GB 30000 series GHS standards; Work Safety Law of the People's Republic of China, Regulations on Safety Management of Hazardous Chemicals, local environmental-protection & work-safety provisions.

Note: The stock solution is not listed in China Catalogue of Hazardous Chemicals (subject to actual hazard identification). Working bath mixed with hydrochloric acid or caustic soda requires separate hazard assessment.

SECTION 16: OTHER INFORMATION

16.1 References: Technical data sheet (TDS) of this product, enterprise inspection report.

16.2 Revision note: Version V1.0. Compiled under current GB/T 16483-2008 national standard; complete pickling/alkaline bath addition rates, mixing sequence and process parameters are documented. Important reminder: this product is only an auxiliary agent; hazards of working bath rise after compounding with mineral acids or caustic soda and require separate assessment.

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

16.4 Disclaimer: This SDS is compiled on the basis of available technical data and test information for safety-operation reference only. This SDS applies only to Amphoteric Degreaser stock solution and does not cover customer-mixed working bath containing hydrochloric acid or caustic soda. End-users shall independently assess safety risks according to actual on-site working conditions.