



TECHNICAL DATA SHEET

Product Name: GLY-PRO™ Descaler

Application: Mild acid-based descaler and cleaner. Ideal for HVAC, Internal Pipework or associated plant equipment. No disassembly required.

Recommended Use Temperature Range: 5°C to 80°C

Description: GLY-PRO™ Descaler is a high-performance, concentrated liquid cleaner formulated with a proprietary blend of acids and advanced corrosion inhibitors. It is specifically designed for the rapid and effective removal of inorganic scale deposits, including calcium carbonate, magnesium carbonate (limescale), rust (iron oxides), and other mineral incrustations from industrial process equipment. The integrated inhibitor package protects system metallurgy, minimising acid attack on most common metals during the cleaning process.

GLY-PRO™ Descaler chemically reacts with the mineral deposits and metallic corrosion immediately dissolving and allowing them to be flushed out.

GLY-PRO™ Descaler is a specially formulated cleaning chelant that restores system heat transfer efficiency whilst reducing energy consumption extending the lifespan of the system.

Drain, flush and refill system. Introduce GLY-PRO™ Descaler (3-5% by volume) and recirculate for 1 to 8 hours, depending on the level of contamination. Drain, flush and prepare the system ready for recommissioning.

For maximum cleaning benefit heat to 50° if system permits.

Applications:

GLY-PRO™ Descaler is engineered for use in a wide range of water-circulating systems and equipment, including but not limited to:

- Heat Exchangers (plate & frame, shell & tube)
- Chillers and Condenser Coils
- Boilers (during offline cleaning)
- Piping, Valves, and Process Lines
- Water-Jacketed Industrial Equipment

Typical Physical Properties

Appearance (25°C)	Colorless or pale yellow liquid
pH (10% wt. aq. soln.)	2.7
pH (undiluted)	2.5
Specific gravity	1.110

¹ Typical properties, not to be construed as product specification.

Safety & Handling:

DANGER! Causes severe skin burns and serious eye damage. May be corrosive to metals.

- **Personal Protective Equipment (PPE):**
 - **Eye Protection:** Chemical splash goggles and a full-face shield are required.
 - **Hand Protection:** Acid-resistant gloves (e.g., neoprene, butyl rubber, or heavy-duty nitrile).
 - **Body Protection:** Chemical-resistant apron, boots, and full-body suit (coveralls).
- **Handling:** Use only in a well-ventilated area. Avoid breathing vapours or mist. Have an emergency eyewash station and safety shower immediately accessible. **Always add acid to water, never add water to acid.**
- **First Aid:**
 - **Eye Contact:** Immediately flush with plenty of water for at least 15-20 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. **Seek immediate medical attention.**
 - **Skin Contact:** Immediately take off all contaminated clothing. Rinse skin with water/shower for at least 15 minutes. **Seek immediate medical attention.**
 - **Ingestion:** Rinse mouth. Do NOT induce vomiting. **Seek immediate medical attention.**

Directions for Use:

This procedure is a general guideline. Adjustments may be necessary based on scale thickness, system volume, and metallurgy. Ensure product is handled according to the above and SDS instructions.

Step 1: System Preparation

1. Isolate the equipment or system to be cleaned from the main process.
2. Lockout/Tagout (LOTO) all relevant energy sources.
3. Drain the system completely and flush with water to remove loose sludge and debris.

Step 2: Dilution & Solution Preparation

1. Determine the total volume of the system to be cleaned (in litres).
2. Calculate the required amount of GLY-PRO™ Descaler. The recommended concentration is **5% to 10% by volume**, depending on the severity of the scale.
 - **Light Scale:** 3% - 5% (30-50mL per litre of water)
 - **Heavy Scale:** 5% - 10% (50-100mL per litre of water)
3. If possible, premix cleaning agent and add to the system. Otherwise
4. Fill the system to approximately 50% of its volume with clean water.
5. Slowly and carefully add the calculated amount of GLY-PRO™ Descaler

to the water in the system.

6. Top up the system with water to the operational level.

Step 3: Circulation & Cleaning

1. Begin circulating the solution using a chemical-resistant pump.
2. For optimal performance, heat the solution to 40°C–60°C
3. Monitor the cleaning progress. Foaming and bubbling indicate the acid is actively dissolving the scale. The cleaning process is complete when foaming subsides.
4. **Technical Monitoring:** Periodically test the pH of the circulating solution. As the acid is consumed by the scale, the pH will rise. If the pH rises above 3.5 and scale is still present, a further addition of GLY-PRO™ Descaler may be required.

Step 4: Draining, Neutralization & Disposal

1. Once cleaning is complete, drain the spent cleaning solution into a suitable container or holding tank.
2. The spent acid solution must be neutralized prior to disposal. Slowly add a neutralizing agent (e.g., soda ash or a 50% caustic soda solution) until the pH is between **6.0 and 8.0**.
3. Dispose of the neutralized solution in accordance with all local, state, and federal regulations.

Step 5: Rinsing & Passivation

1. Flush the system thoroughly with clean water at least two times, or until the pH of the discharge water matches the pH of the inlet water.
2. For ferrous metal systems, a passivation step using an appropriate agent is recommended to prevent flash rusting. Contact GSA for technical advice if uncertain.

Materials Compatibility

- **Compatible:** Stainless Steel (304, 316), Carbon Steel (limited exposure), PVC, CPVC, Polypropylene, Polyethylene, Teflon®.
- **Incompatible:** Zinc, Galvanized Steel, Aluminum, Magnesium, Concrete. Always conduct a spot test on an inconspicuous area if material compatibility is uncertain. **BEWARE.** Staining of stainless steel may occur during the cleaning process. Any spilt product on external stainless steel surfaces may tarnish as a result. It is the user's responsibility to test compatibility and protect external surfaces from drips and spills.

Storage & Disposal

- **Storage:** Store in original, tightly sealed containers in a cool, dry, and well-ventilated area away from incompatible substances such as alkalis (bases), chlorine-based products, and reactive metals.
- **Disposal:** Dispose of unused product and container in accordance with local regulations for corrosive waste.

CONDITIONS OF SALE & USAGE (STANDARD DISCLAIMER)

This product should not be used for any purpose or in any manner contrary to the labeling, SDS, or Technical Data Sheet, unless authorized to do so under appropriate legislation. By purchasing and using this product the purchaser assumes responsibility for any and all results that may occur and shall not hold the manufacturer liable for any loss or injury however occurring.

Due to the nature of industrial cleaning applications, the information provided by Glycol Sales Australia (GSA), whether in technical data sheets, by telephone, or in writing, is offered in good faith but without warranty. The performance of the product, its suitability for a specific application, and the results obtained are the sole responsibility of the user.

1. User Responsibility & Assumption of Risk:

The user must conduct their own tests and evaluations to determine the suitability and safety of any GSA product for their particular purpose and system metallurgy. The user assumes all risk and liability whatsoever in connection with these tests and the use of the product. Conditions of use, system design, and the manner of application are beyond GSA's control and are therefore the exclusive responsibility of the end-user.

2. No Warranty:

All information and technical assistance are given without warranty or guarantee. GSA makes no warranties, express or implied, including but not limited to the implied warranties of merchantability or fitness for a particular purpose.

3. Limitation of Liability:

In no event shall GSA be liable for any special, incidental, indirect, or consequential damages whatsoever (including, without limitation, damages for loss of profits, business interruption, loss of data, or any other pecuniary loss) arising out of the use of or inability to use this product, even if GSA has been advised of the possibility of such damages. The user, by accepting and using this product, agrees to indemnify and hold GSA, its employees, agents, and affiliates harmless from and against any and all claims, liabilities, damages, losses, or expenses, including attorneys' fees and costs, arising out of or in any way connected with the user's handling, use, or disposal of the product.

The user's sole remedy for any claim arising out of the use of this product shall be the replacement of the product or a refund of the purchase price, at GSA's discretion.