Chemical Tanks

Installation, Operation & Maintenance Manual

Document Version: June 2026

Polymaster

Contents

ABOUT THIS PRODUCT

Polymaster Chemical Tanks provide certified, one-piece storage solutions for chemicals, diesel, oil, solvents and other hazardous liquids, suited to industrial and water treatment applications. Manufactured from linear high-density polyethylene compounded specifically for chemical service, tanks offer broad chemical compatibility, UV resistance and the impact strength required for harsh Australian conditions.

Available in over 24 sizes from 200L to 50,000L, rated from 1SG to 2SG depending on capacity, tanks can be interconnected for effectively unlimited storage capacity. Tanks are Australian made and manufactured to AS/NZS 4766:2006.

By following the installation requirements in this manual, this product will give you many years of trouble-free service.

CORRECT TANK INSTALLATION IS THE SOLE RESPONSIBILITY OF THE PURCHASER.

KEY FEATURES:

- One-piece rotationally moulded construction — no internal support pole
- Self-supporting roof design
- Available in over 24 sizes, from 200L to 50,000L, interconnectable for effectively unlimited storage capacity
- Rated from 1SG to 2SG depending on capacity
- Operating temperature range of -18°C to 50°C
- Compatible with over 1,900 chemicals, including high-SG products such as 98% sulphuric acid
- Optional Hexathene resin grades available for extra resistance to diesel fuel and other plasticiser chemicals
- Manufactured to AS/NZS 4766:2006

MATERIALS USED IN CONSTRUCTION:

- PE – Linear high-density polyethylene, compounded specifically for chemical service, with double-strength UV+ resin
- Made from premium polyethylene resin that meets the material requirements of AS/NZS 4766
- Tanks are designed using engineering methods including finite element analysis (FEA) to ensure structural integrity

AUSTRALIAN STANDARDS

Polymaster is certified to ISO 9001:2015 International Standards and undertakes regular audits from third-party auditors.

Polymaster Chemical Tanks are manufactured to AS/NZS 4766:2006 — BSI Benchmark certified (Licence BMP 657671).

Every tank is labelled with full manufacturing details, including a serial number, for complete traceability.

CERTIFIED ISO 9001

PRODUCT CERTIFICATION

BSI Certified Product

AS/NZS 4766:2006 Lic:BMP No 657671
Australian/New Zealand Standards

GENERAL HEALTH & SAFETY

Read this manual carefully before installation and use. Pay attention to all safety warnings. This manual should be kept with the equipment at all times.

- Installation and use of this product should only be carried out by properly trained and approved personnel.
- Users of this product are responsible for the safe and correct use of this product.
- Any changes to this product made without consulting the manufacturer will invalidate all warranties and guarantees.
- The components must not be altered or tampered with, due to potential risks to personnel.
- The manufacturer will not be responsible for any accidents or damages caused by incorrect installation or use of this product.
- This product is only suitable for storage and dispensing of Polymaster approved chemicals.
- Chemicals and diesel fuel, other than water, being stored must be kept away from skin, eyes and never taken internally. Refer to the product-specific MSDS (provided by others) and Poisons Information for assistance.
- Polymaster polyethylene tanks are heavy and require adequate equipment and properly trained personnel to unload and position them. Do not stand or work on top of the tank — surfaces are slippery and flexible, which could result in serious injury or death.
- If the tank needs to be entered, ensure proper confined space procedures are adhered to and adequate ventilation equipment is provided.
- It is the responsibility of the end user to ensure appropriate PPE, health and safety measures, and safe work practices are employed.

CHEMICAL RESISTANCE

A chemical resistance chart is included in Section 11 of this guide and is also available on our website www.polymaster.com.au. It is recommended that you discuss your specific chemical storage requirements with a Polymaster consultant or study the comprehensive chemical chart to ensure compatibility. A more comprehensive list is also available on request.

TEMPERATURE & SG RATINGS

The temperature of the chemical/liquid stored has different effects on the polyethylene and can produce different effects within the same chemical range. The chemical resistance chart shows this effect. Contact a Polymaster consultant if you are unsure about your application. A continuous liquid temperature above 40 degrees Celsius is not recommended for these tanks. Standard tanks are designed for a Specific Gravity (SG) of 1.0, but upon request this can be increased to 1.5 or even 2.0 in some situations.

VENTING

These tanks cannot be pressurised and are designed to operate at atmospheric pressure. Proper venting stops pressure or vacuum developing as the tank is filled or emptied. The vent should always exceed the size of the largest fill or discharge. Check that the chemical you are using is able to be vented to atmosphere without prior treatment.

TANK TESTING AND CHEMICAL COMPATIBILITY

It is strongly recommended that tanks are hydro-tested for 24–48 hours before introduction of chemical. If applicable, remove all water used for testing in case of possible reaction with chemicals stored. Confirm compatibility of the tank and all associated fittings and gaskets with the chemical being stored. Label tank with appropriate chemical warning label and do not remove any Polymaster warning labels. Ensure tanks are adequately vented to prevent pressure or vacuum.

SELECTING A SAFE LOCATION

GENERAL LOCATION

There are many aspects to consider when selecting the best location for your tank. Some points to consider:

- Excessive wind or seismic forces
- Area subject to flooding
- Bund containment required
- Safe distance from any source / equipment generating heat or flames
- Generally accessible location to ensure safe operation and maintenance

REGULATIONS

There may be local, state or national regulations that apply to your proposed tank installation. Check with the relevant authorities concerned to ensure all requirements are complied with. A thorough evaluation of the proposed site is recommended prior to any placement or installation works being carried out.

ACCESS

Position your tank for ease of regular maintenance and inspection. Do not lock the tank in by other equipment or buildings in the case of having to cost-effectively remove and/or replace the tank in the future. Use guards and physical restraints to prevent tank fittings and piping from impact damage and protect personnel from chemical leakage.

ABOVE GROUND

These tanks are specially designed for above ground use and cannot be buried in any circumstances, due to excessive pressure causing the side wall to collapse. Below ground tanks are available — please contact your Polymaster consultant if you have this requirement.

WARNING: Failure to comply with these precautions and instructions can result in serious property damage, injury or death, and reduce the tank's performance and longevity.

TRANSPORT, HANDLING & STORAGE

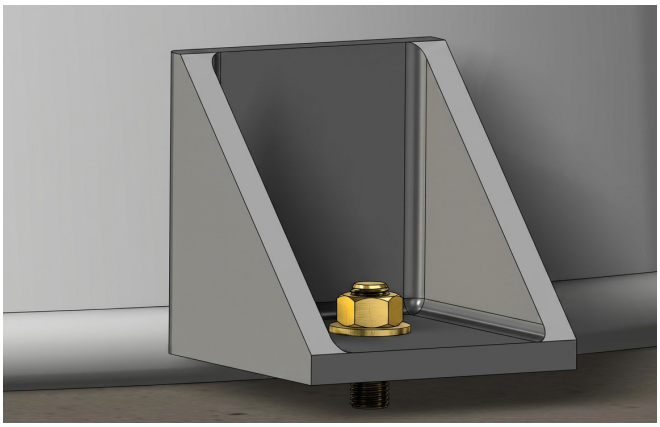
- DO NOT TRANSPORT WITH LIQUID INSIDE.
- The tank must be protected against mechanical damage during transport and storage.
- Loading and off-loading must be carried out using only professional equipment, e.g. a forklift with extended forks. Covers, sockets or other protruding elements which are not designed for lifting or moving the tank must not be used to lift or move the tank.
- The tank must never be pushed, pulled, dragged, or rolled.
- During transport and storage, if fitted, the door must be tightly closed and secured. If fitted, the dispensing nozzle must be placed in its holster and the control box shut.
- Loading and transport areas must be smooth and free of sharp edges. During transportation, the tank must be secured to prevent movement.
- The contents of the storage tank must be used within 12 months.
- Site delivery of the tank is to be conducted under the guidance of a Polymaster or nominated representative to ensure proper and safe handling and to prevent dropping and/or damage to the tank.

NOTE: THE TANK MUST NOT BE FILLED AT A RATE GREATER THAN 250 LITRES PER MINUTE (LPM). For further advice, contact Polymaster on 1800 062 064.

INSTALLATION & USAGE

These instructions should be read in their entirety before commencing installation of the tank.

- For all tank installation and maintenance, please take into consideration Health & Safety and Local Building Regulations.
- A solid minimum 45mm thick base or plinth extending 300mm on all sides, made from concrete/bitumen, is required. This plinth is to be engineered by the user. If this is not possible, the station must be installed directly on a level, secure and non-combustible base. Base material is to be maximum 5mm particle size, e.g. “Crusher Dust”. Where a non-concrete/bitumen base is used, engineering of the restraint or tethering for local conditions is by the customer.
- Prior to installing, inspect for damage. If damaged, do not install.
- Determine if the station needs to be secured in place. Do not drill holes in the tank.



- The tanks must be adequately restrained to ensure stability whether full or empty. If hold down lugs have been specified, these are only for tank positioning — they are not designed to withstand massive forces. Stainless steel M12 nuts, flat washers and chemical anchor studs (installer to provide) should be positioned in the centre of the 20mm diameter hole in each lug to allow expansion and contraction of tank. Do not over-tighten the nut.
- Ensure the entire base of the tank is supported with a non-combustible base (minimum 45mm thickness) extending 300mm on all sides.
- Custom design kits are available upon request.
- After installation, ensure this manual is left with the end user for future reference.

PIPING AND VALVES

All hoses, piping and valves must be adequately supported independently of the tank sidewall and roof. Flexible connections must be used when connecting to fittings installed on the tank, to ensure successful installation and tank warranty. All fittings, valves, and piping should be shielded to prevent possible physical impact and protect personnel from chemical spray or leakage.

WARNING: Failure to support and protect valves and piping and to provide engineered foundations for tank will void your warranty and could cause chemical release resulting in serious injury and/or property damage.

GENERAL SAFETY PRECAUTIONS

Polymaster polyethylene tanks are heavy and require adequate equipment and properly trained personnel to unload and position them. Do not stand or work on top of the tank as the surfaces are slippery and flexible, which could result in serious injury or death. If the tank needs to be entered, ensure proper confined space procedures are adhered to and adequate ventilation equipment is provided.

FILLING & DISPENSING

WARNING: Failure to follow below will result in tank damage and void the warranty.

- In case of liquid in the outer tank, always empty the outer tank first.
- If testing during commissioning, ensure that the outer tank level does not exceed the inner tank level.

FILLING CHEMICAL TANK

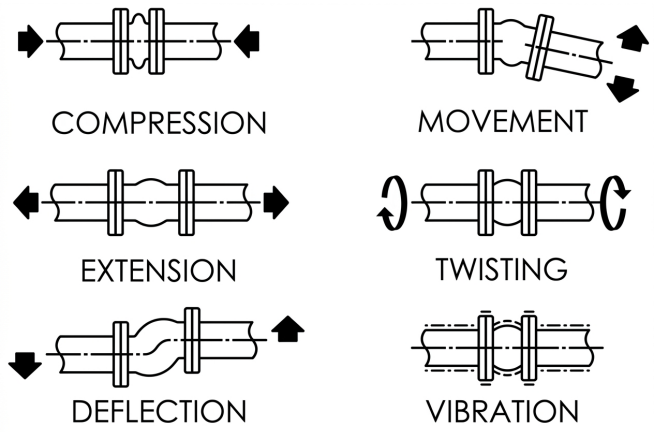
During the first fill of the tank, the level indicator may show less volume than that filled. The level indicator minimum read point is placed at the base of the tank. The maximum level must NOT be exceeded.

- Filling should be performed only under constant supervision of an authorised person.
- This tank can only be filled by a tanker equipped with a camlock coupling.
- Fill tank in normal manner. Do not overfill. Check level gauge during filling.
- The tank must not be filled at a rate exceeding 250 litres per minute (LPM).
- Disconnect delivery hose from coupling.
- Promptly clean up any drips or spills.

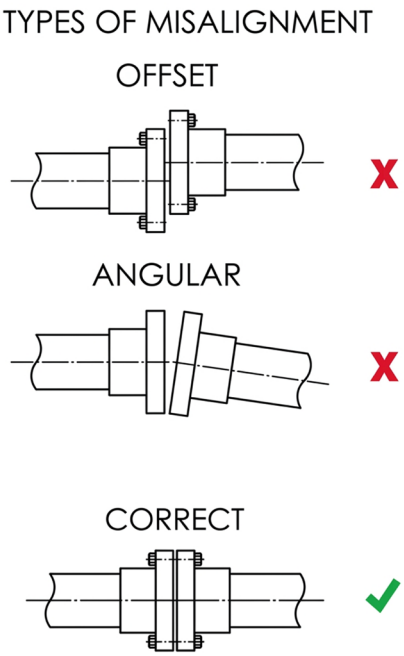
FLEXIBLE CONNECTIONS

INSTALL FLEXIBLE CONNECTION IN ACCORDANCE WITH THE SPECIFIC MANUFACTURER'S INSTALLATION GUIDELINES.

Flexible connections are required to protect the tank and fitting structure from the normal movements during its service use and life, and to isolate them from external loads and vibrations coming from the attached piping systems.



- Flexible connections are not to be used for correcting piping misalignment. The flexible connection and mating flanges must be installed in a centred, aligned and mated position.



- Attach only FULL-FACE flanges to the flexible connection. They are not designed to attach directly to the tank wall.
- Ensure adequate clearance between bolt ends for full use of flexible connections.
- Provide pipe support adjacent to the flexible connection.

FLEXIBLE CONNECTION MINIMUM SPECIFICATIONS

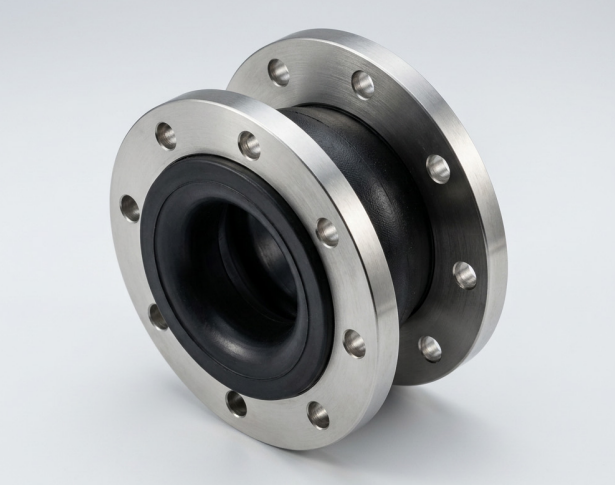
- Axial Compression ≥ 38mm
- Axial Extension ≥ 15mm
- Lateral Deflection ≥ 19mm
- Angular Deflection ≥ 14° 2

INSTALLATION OF FLEXIBLE HOSE CONNECTIONS

- Check flexible hose is compatible with the chemical being stored and is of sufficient size.
- Support the flexible hose in such a manner that horizontal and vertical movement is not impeded. It is the responsibility of the tank installer/purchaser to install the appropriate flexible connections between the tank and pipework. Failure to comply with this will void Polymaster's warranty.

FLEXIBLE CONNECTIONS (cont.)

TANK WARRANTY — FLEXIBLE CONNECTIONS



All fittings, including outlets and inlets on the tank, must have a flexible joint connection between the tank and the plumbing or rigid pipework. This is vital to absorb movement and stress, isolate pump vibration, accommodate pipe misalignment and minimise surge pressures. It is the responsibility of the tank purchaser to install the appropriate flexible connections between the tank and the plumbing. The Polymaster warranty is only valid if the installation has appropriate flexible connections.

One option for applications with mild chemicals is the rubber flexible joints which are available from Polymaster.

SERVICE & MAINTENANCE

Regular routine visual inspections of your polyethylene tanks are important to ensure safety of personnel and preservation of stored chemical. Any sign of stress cracking, UV degradation and/or other signs of tank failure should be immediately reported and a full inspection carried out, which would ultimately result in tank replacement. Internal checks are also recommended at least annually or as often as is practical — cracks will often show up on the inside surface before becoming obvious on the exterior.

- Plan and initiate a maintenance regime for the tank system. Aim to keep all system equipment in good working condition.
- Spare parts must comply with the requirements of the manufacturer.
- Carry out a daily visual check of the tank station and ancillaries. Any leaks to be promptly recorded, reported and repaired by a qualified and authorised person.
- Any faults or alarms should be reported to the station manager immediately.
- Protect against unauthorised access.
- In the event of tank relocation, lift according to the Lifting Instructions shown on the tank label. Tank must be empty. Do not damage the tank walls, base, roof, pipework and fittings.
- Inspect for tank leaks regularly.

- If liquid is detected by alarm or observed around the outer tank or in the interstitial space (space between inner and outer tanks), promptly record, report and arrange for corrective action. Corrective action will include emptying the leaking tank and interstitial space, locating the leak and if accessible, polyethylene welding the leak. Test for leaks by filling with potable water to the highest tank storage level and hold for 24 hours. Dispose of unwanted liquid according to local EPA guidelines.
- Ensure that contamination not intended to be in the tank is prevented from entering at any time either by design or a managed maintenance regime. If the stored liquid or fumes are allowed to escape outside the tank, ensure you check local EPA guidelines for compliance. Metal items and control panels that could be affected by the fumes must be protected from corrosion by using good engineering practice.

INTERNAL INSPECTION

Empty the tank and neutralise any remaining chemical. Where a confined space entry is possible, thoroughly clean the inside of the tank — a dirty tank will make inspection unsuccessful. Examine the tank surface for any cracking or surface degradation. Pay particular attention around fittings and the base in the radius where the floor meets the wall.

If a confined space entry is not possible, clean inside as well as possible from the inspection cover and use a light to inspect the internals.

WARNING: Do not enter a tank without confined space entry training and relevant personnel and permits. Use adequate approved ventilation equipment when inspecting the internals of a tank as fumes and vapours may be present. Use necessary fall protection equipment to prevent against accidental falls relating to entry method or slippery conditions. Failure to comply with these warnings could result in injury or death.

EXTERNAL INSPECTION

Thoroughly clean the outside of the tank and examine for any cracking or excessive surface degradation. Pay particular attention around all fittings, level indication tubing, flexible couplings, connection hoses and gaskets for any leakage or signs of corrosion. Inspect the vents for "free flow" to ensure adequate entry for pressure and vacuum. Check all pipe support brackets to make sure fittings, valves, piping etc. are adequately supported and protected.

SAFETY CONSIDERATIONS

Do not stand or work on top of tank. The tank surfaces are slippery and flexible and if any premature degradation has occurred the section could give way resulting in serious injury or death. Before any entry to tank ensure confined space protocol is met, which requires extra personnel, proper ventilation equipment and an adequate plan for rapid withdrawal. Any chemical residues that remain in the tank could be fatal unless properly neutralised or completely removed.

CHEMICAL CHART

This Chemical Resistance Chart is to be used as a guide to assist you in determining the suitability of LLDPE Hexathene® for storing the chemical indicated. Chemical storage is a critical application which requires the optimum processing of the part. Many chemicals can attack, degrade and cause swelling in LLDPE. Other agents (e.g. detergents, alcohols, oils etc.) may cause cracking of the LLDPE especially when the part is under stress.

Symbol	Meaning
✓	Indicates satisfactory, negligible attack
–	Indicates some attack or absorption (may be considered where alternative materials are unsatisfactory)
×	Indicates unsatisfactory, extensive attack (polyethylene should not be used for any applications where these chemicals are present)
?	Indicates possibility of tank 'stress cracking'

Notes:

- Information provided by Polymaster Industrial with respect to chemical resistance is to be used as a guide for application and is not to be taken as a guarantee of ultimate field performance.
- Satisfactory chemical resistance does not necessarily imply freedom from environmental stress cracking or chemical oxidation.
- The ultimate serviceability of a chemical tank is subject to factors outside the control of Polymaster Industrial. These factors include processing conditions, design, installation, operating conditions and environment which may all compromise the supplied product.
- This data is supplied in good faith and is not the result of evaluations conducted by Polymaster.

CHEMICAL CHART

Chemical	Concentration (% by weight in aqueous solution)	Temperature 20°C	Temperature 60°C	Environmental cracking hazard
Acetaldehyde	100	—	×	
Acetic acid	10	✓	✓	
Acetic acid	60	✓	✓	✓
Acetic acid	Glacial	—	×	✓
Acetone	100	×	×	?
Alcohol, amyl		✓		?
Alcohol, butyl		✓		?
Alcohol, cetyl		✓		?
Alcohol, ethyl	40	✓		
Alcohol, ethyl	100	×		?
Alcohol, furfuryl		×		?
Alcohol, methyl	6	✓		
Alcohol, methyl	100	—		
Alum		✓	✓	
Aluminium chloride		✓	✓	
Aluminium fluoride		✓	✓	
Aluminium hydroxide		✓	✓	
Aluminium sulphate		✓	✓	
Ammonia	0.88 SG	✓	✓	
Ammonia	Dry gas	✓		
Ammonium bicarbonate		✓	✓	
Ammonium carbonate		✓	✓	
Ammonium chloride		✓	✓	
Ammonium hydro sulphide		✓	✓	
Ammonium hydroxide		✓	✓	
Ammonium metaphosphate		✓	✓	
Ammonium nitrate		✓	✓	
Ammonium persulphate		✓	✓	
Ammonium phosphate		✓	✓	
Ammonium sulphate		✓	✓	
Ammonium sulphide		✓	✓	
Ammonium thiocyanate		✓	✓	
Amyl acetate		×		?
Aniline		×		
Aniline hydrochloride		×		
Aniline sulphate		×		
Animal oils		—	×	?
Antimony pentachloride		✓	✓	
Antimony trichloride		✓	✓	
"Arcton" 6		—		?
Barium carbonate		✓	✓	
Barium chloride		✓	✓	
Barium hydroxide		✓	✓	
Barium sulphate		✓	✓	
Barium sulphide		✓	✓	

Chemical	Concentration (% by weight in aqueous solution)	Temperature 20°C	Temperature 60°C	Environmental cracking hazard
Benzaldehyde	100	×		?
Benzene		×		?
Benzene sulphonic acid		×		
Benzyl alcohol		×		
Bismuth carbonate		✓	✓	
Borax		✓	✓	
Boric acid		✓	✓	
Boron trifluoride		✓		
Brine		✓	✓	
Bromine	Dry gas	×		
Calcium bisulphite		✓	✓	
Calcium carbonate		✓	✓	
Calcium chlorate		✓	✓	
Calcium chloride		✓	✓	
Calcium hydroxide		✓	✓	
Calcium hypochlorite		✓		
Calcium nitrate		✓		
Calcium phosphate		✓		
Calcium sulphate		✓		
Camphor oil		×		?
Carbon dioxide		✓		
Carbon disulphide		×		
Carbon monoxide		✓		
Carbon tetrachloride		×		
Castor oil		×		?
Chloral hydrate		×		
Chlorine	Dry gas	—	×	
Chlorine	Liquid	×		
Chlorine water	2	✓	✓	
Chlorine water	Sat. solution	✓	—	
Chloroform		×		?
Chlorosulphonic acid		×	×	
Chrome alum		✓	✓	
Chromic acid	Plating solution	✓	✓	
Cider		✓		
Citric acid		✓	✓	
Copper cyanide		✓	✓	
Copper fluoride		✓	✓	
Copper nitrate		✓	✓	
Copper sulphate		✓	✓	
Creosote		×		?
Cresols		×		?
Cresylic acid (crude)		×		
Cupric chloride		✓	✓	
Cupric nitrate		✓		
Cupric sulphate		✓	✓	
Cyclohexanol		×		

CHEMICAL CHART 1

Chemical	Concentration (% by weight in aqueous solution)	Temperature 20°C	Temperature 60°C	Environmental cracking hazard
Cyclohexanone		×		
Detergents, synthetic (Normal user conditions)		✓	✓	?
Developers, phosphate		✓	✓	
Dextrose		✓	✓	
Dibutyl phthalate		—		?
Diethyl ether		×	×	?
Dioctyl phthalate		—	×	?
Disodium photographic		✓		
Emulsifiers	All conc.	✓	✓	
Emulsions, photographic		✓		
Ether		×		?
Ethyl acetate		—	×	
Ethylene dichloride		×		?
Ethylene glycol		✓		
Ferric chloride		✓		
Ferric sulphate		✓		
Ferrous ammonium citrate		✓	✓	
Ferrous sulphate		✓		
Fixing solution, Photographic		✓	✓	
Fluorine		—	×	
Fluosilicic acid		✓		
Formaldehyde	40	✓	✓	
Formic acid	3	✓	✓	
Formic acid	10	✓	✓	
Formic acid	25	✓	✓	
Formic acid	50	✓	✓	
Formic acid	100	✓	✓	
Fruit pulp		✓		
Furfuryl alcohol		×		?
Glucose		✓		
Glycerine		✓	✓	
Grape sugar		✓		
Hydrobromic acid	50	✓	✓	
Hydrobromic acid	100	✓	✓	
Hydrochloric acid	10	✓	✓	
Hydrochloric acid	22	✓	✓	
Hydrochloric acid	Conc.	✓	✓	
Hydrofluoric acid	4	✓		
Hydrofluoric acid	40	✓	✓	
Hydrofluoric acid	50	✓	✓	
Hydrofluoric acid	Conc.	✓	—	
Hydrogen		✓	✓	
Hydrogen peroxide	3 (10 vol.)	✓		
Hydrogen peroxide	12 (40 vol.)	✓		
Hydrogen peroxide	30 (100 vol.)	✓		
Hydrogen peroxide	90 and above	✓		

Chemical	Concentration (% by weight in aqueous solution)	Temperature 20°C	Temperature 60°C	Environmental cracking hazard
Hydrogen sulphide		✓		
Hydroquinone		✓		
Hypochlorous acid		—	×	
Lactic acid	10	✓	✓	
Lactic acid	100	✓	✓	
Lead acetate		✓		
Lead arsenate		✓		
Lead tetra-ethyl		✓		
Linseed oil		—	×	?
Magnesium carbonate		✓	✓	
Magnesium chloride		✓	✓	
Magnesium hydroxide		✓	✓	
Magnesium nitrate		✓	✓	
Maleic acid	25	✓	✓	
Maleic acid	50	✓	✓	
Maleic acid	Conc.	✓	✓	
Magnesium sulphate		✓	✓	
Mercuric chloride		✓		
Mercuric cyanide		✓	✓	
Mercury		✓		
Metallic soaps		✓		?
Methyl acetate		×	×	
Methyl bromide		—	×	
Methyl chloride		×	×	
Methyl ethyl ketone		—	×	?
Milk		✓		
Mineral oils		—	×	?
Monochlor benzene		×	×	
Nickel chloride		✓	✓	
Nickel nitrate		✓	✓	
Nickel sulphate		✓		
Nitric acid	5	✓	✓	Oxidising Agent
Nitric acid	10	✓	✓	Oxidising Agent
Nitric acid	25	✓	✓	Oxidising Agent
Nitric Acid	50	—	×	Oxidising Agent
Nitric Acid	70	—	×	Oxidising Agent
Nitric Acid	95	×	×	Oxidising Agent
Nitrobenzene		—	×	?
Oxalic acid		✓	✓	
Oxygen		✓		
Paraffin		—	×	
Petrol		×	×	
Petroleum Ether		×	×	
Phenol		×		?
Phosphoric acid	25	✓	✓	
Phosphoric acid	30	✓	✓	
Phosphoric acid	50	✓	✓	

CHEMICAL CHART

Chemical	Concentration (% by weight in aqueous solution)	Temperature 20°C	Temperature 60°C	Environmental cracking hazard
Phosphorus oxychloride		×	×	
Phosphorus pentoxide		✓		
Phosphorus trichloride		✓		
Photographic developers		✓	✓	
Photographic emulsions		✓		
Photographic Fixing solutions		✓	✓	
Picric acid	1	✓		
Picric acid	10% w./ alcohol	✓		
Potassium bicarbonate		✓	✓	
Potassium bichromate		✓	✓	
Potassium bisulphate		✓	✓	
Potassium bisulphite		✓	✓	
Potassium borate		✓	✓	
Potassium bromate		✓	✓	
Potassium bromide		✓	✓	
Potassium carbonate		✓	✓	
Potassium chlorate		✓	✓	
Potassium chloride		✓	✓	
Potassium chromate		✓	✓	
Potassium cuprocyanide		✓	✓	
Potassium cyanide		✓	✓	
Potassium dichromate		✓	✓	
Potassium ferricyanide		✓	✓	
Potassium ferrocyanide		✓	✓	
Potassium fluoride		✓	✓	
Potassium hydroxide	1	✓	✓	
Potassium hydroxide	10	✓	✓	
Potassium hydroxide	Conc.	✓	✓	?
Potassium nitrate		✓	✓	
Potassium perborate		✓	✓	
Potassium permanganate		✓		
Potassium persulphate		✓	✓	
Potassium phosphate		✓	✓	
Potassium sulphate		✓	✓	
Potassium sulphide		✓	✓	
Potassium thiosulphate		✓	✓	
Salicylic acid		✓	✓	
Sea water		✓	✓	
Silicone fluids		—		?
Silver cyanide		✓		
Silver nitrate		✓	✓	
Soap solution		✓	✓	?
Sodium acetate		✓	✓	

Chemical	Concentration (% by weight in aqueous solution)	Temperature 20°C	Temperature 60°C	Environmental cracking hazard
Sodium aluminate		✓	✓	
Sodium benzoate		✓	✓	
Sodium bicarbonate		✓	✓	
Sodium bisulphate		✓	✓	
Sodium bisulphite		✓	✓	
Sodium borate		✓	✓	
Sodium bromide		✓	✓	
Sodium carbonate		✓	✓	
Sodium chlorate		✓	✓	
Sodium chloride		✓	✓	
Sodium cyanide		✓	✓	
Sodium ferricyanide		✓	✓	
Sodium ferrocyanide		✓	✓	
Sodium fluoride		✓	✓	
Sodium hydroxide	1	✓	✓	
Sodium hydroxide	10	✓	✓	
Sodium hydroxide	40	✓	✓	?
Sodium hyposulphates	Conc.	✓	✓	
Sodium hypochlorite	15% chlorine	✓	✓	Oxidising Agent
Sodium metaphosphate		✓	✓	
Sodium nitrate		✓	✓	
Sodium nitrite		✓	✓	
Sodium peroxide		✓	✓	
Sodium phosphate		✓	✓	
Sodium silicate		✓	✓	
Sodium sulphate		✓	✓	
Sodium sulphide		✓	✓	
Sodium sulphite		✓	✓	
Sodium thiosulphate		✓	✓	
Soft soap		✓	✓	?
Stannic chloride		✓	✓	
Stannous chloride		✓	✓	
Starch		✓	✓	
Stearic acid		✓	✓	
Sucrose		✓	✓	
Sulphur	Colloidal	✓		
Sulphur dioxide	Dry gas	✓		
Sulphur dioxide	Moist	✓		
Sulphuric acid	10	✓	✓	
Sulphuric acid	20	✓	✓	
Sulphuric acid	30	✓	✓	
Sulphuric acid	40	✓	✓	
Sulphuric acid	50	✓	✓	
Sulphuric acid	60	✓	✓	
Sulphuric acid	70	✓	—	
Sulphuric acid	95	—	×	
Sulphuric acid	98	—	×	

CHEMICAL CHART

Chemical	Concentration (% by weight in aqueous solution)	Temperature 20°C	Temperature 60°C	Environmental cracking hazard
Sulphuric acid	Fuming	×	×	
Surface-active agents (Emulsifiers, synthetic detergents and wetting agents)	Normal dilutions	✓	✓	?
Tallow		✓		
Tannic acid		✓	✓	
Tanning extracts	10	✓	✓	
Tartaric acid		✓		
Toluene		×	×	
Transformer oil		—	×	?
Trichloroethylene		×	×	?
Tricresyl phosphate		×	×	?
Triethanolamine		—	×	?

Chemical	Concentration (% by weight in aqueous solution)	Temperature 20°C	Temperature 60°C	Environmental cracking hazard
Trisodium phosphate		✓	✓	
Turpentine		—	×	?
Vegetable Oils		—	×	?
Vinegar		✓		
Water		✓	✓	
Wetting agents	Normal dilutions	✓	✓	?
Whey		✓		
Wines and spirits		✓		?
Xylene		×	×	
Yeast		✓		
Zinc chloride		✓	✓	
Zinc Oxide		✓	✓	
Zinc sulphate		✓	✓	

RECOMMENDED CARE INSTRUCTIONS

ITEM/AREA OF INTEREST	ACTION RECOMMENDED	FREQUENCY
Visual Inspection	Visually inspect the entire unit for any changes in condition.	3 Months
Cleaning	Clean the unit regularly with soapy water and a cloth to remove any buildup of dust/dirt/chemical spillage.	3 Months
Location	Confirm that the installation environment matches that of the original installation. Review changes for any influence to the safe use of the tank such as wind or distance to people and traffic.	As Used / 12 Months
Tank Condition	Temperature & SG Ratings of the fluids. Review the fluids being stored in the tank and confirm that they match those intended for original tank use. Inspect abrasions or cuts on the tank. Assess tank for excessive weathering. Assess tank for any swelling, bulging or deformation of tank walls.	As Used / 3 Months
Chemical Degradation and Compatibility	Confirm the chemicals currently used are compliant with the original installation. Review any change with Polymaster and the Polymaster Chemical Compatibility Chart.	As Used / 12 Months
Valves	During normal operation, check the action of the PVC-U ball valve handle.	As Used / 3 Months
Vent	Check and clean around the vent regularly to remove any buildup of dust/dirt. Check that there is nothing impeding the operation of the vent.	3 Months
Seals	When the unit is completely empty, undo and remove the PVC-U ball valves. Check the condition of the seals within the ball valve. Replace if the seals have deteriorated.	12 months
Bund Alarms	Check that the alarms activate when tested. Replace batteries in alarm boxes as necessary.	As Used / 3 Months
Gaskets	Visually inspect the condition of the flanges and connected fitting regularly for any changes or leaks. If any change is noted, completely drain the tank until empty then inspect and service the unit and replace gaskets as needed.	As Used / 3 Months
Screw Lids	Check that the screw lids (internal and external) are still tightly secured.	As Used/12 months
Weld on Fittings	Investigate any degradation of weld and/or excessive stress marks. Check for any leakage or surface cracks developing. Check fitting distortion including vertical/horizontal alignment.	As Used/12 months
Flexible Connections	Check positioning and alignment of flexible connections. Assess compatibility of connector to user's systems. Review for excessive axial or lateral compression.	As Used / 3 Months
Electrical / Sensors	Visually inspect the condition of the power box and associated components. Clean the power box with a damp cloth to remove any buildup of dust/dirt/chemical spillage. Part Code: PB240V-CHEM	3 Months

RECOMMENDED CARE INSTRUCTIONS

ITEM/AREA OF INTEREST	ACTION RECOMMENDED	FREQUENCY
Foundation/Base	Check the condition of the tank foundation for any erosion, cracking or subsidence. Repair as required. Ensure any repair materials meet the Installation Guide requirements.	3 Months
Moving	ONLY MOVE UNIT WHEN COMPLETELY EMPTY.	
Tank Restraints	Review all restraints, tie down lugs and associated fasteners to ensure they are secure, meet "As Installed" condition and performance and are in good condition.	As Used / 3 Months

TROUBLESHOOTING

TOPIC	POSSIBLE CAUSE	ACTION	CONTACT
Bund alarm activated	Over filling	Check high level alarm. Shut off filling pump before high level reached.	Contact Polymaster
Bund alarm activated	Leaking internal tank	Review tank location for any impact or damage. Review fittings.	Contact Polymaster
Bund alarm activated	Faulty bund alarm or alarm sensor	Check sensor/alarm operation. Check and replace batteries.	Contact Polymaster
Bund alarm activated	Water ingress	Check for damage to any vents or connected pipework.	Contact Polymaster
Bund alarm activated	Hoses or fill line issue	Check all hoses (fill lines) are connected and haven't come off.	Contact Polymaster
High level alarm	Overfill	Dispense product until below alarm level. Review fill procedures. Review level sensor operation.	Contact Polymaster
High level alarm	Faulty alarm or parameters	Check parameters on controller; if correct contact supplier.	Contact Polymaster
High level alarm	Faulting bund alarm or Parameters	Check cable connections. Check bund sensor is located at low level in bund.	Contact Polymaster
Low level alarm	Faulty alarm parameters / low product level	Check tank levels; if enough product in tank, check alarm parameters on controller. If levels are low order more product.	Not required
Cabinet door not shutting	Tank not level on base	Re-level base so cabinet door will shut.	Not required
Water present in product when dispensed	Water ingress to internal tank	Check the manhole cover is fitted correctly and sealed.	Contact Polymaster

WARRANTY

Polymaster products are guaranteed against material or manufacturing defect. Warranty periods commence from the date of invoice:

Item	Warranty
Polyethylene tanks	5 years
Accessories / components	12 months
Hoses, nozzles, and sensors	3 months

WARRANTY CONDITIONS:

- Equipment is installed and commissioned in accordance with this manual.
- Equipment is installed and commissioned by a suitably qualified engineer.
- Equipment has not been subject to misuse, careless handling, faulty installation, or repairs by unauthorised personnel.
- Equipment has been purchased by the end user and is not for hire purposes.
- The tank is installed above ground.
- The tank has not been filled at a rate exceeding 250 litres per minute.
- The tank is inspected every 6 months or every 50,000 litres dispensed (whichever occurs first), by a suitably qualified service engineer.
- All fittings have appropriate flexible connections between the tank and plumbing or rigid pipework.
- Immediately upon discovery of any defect in the tank, the tank is safely drained and taken out of service. Contact Polymaster and allow a representative to inspect before any attempts are made to repair or move the tank.

WARRANTY EXCLUSIONS:

- Mechanical damage caused by the user, dealer, or improper maintenance.
- Faults, damage, or premature wear caused by improper use.
- Damage caused by third parties.
- Repairs carried out by unauthorised service personnel.
- Ancillary fittings such as contents measuring gauges or mechanical pumps (refer to respective manuals).

To make a warranty claim, you will need your serial number, proof of purchase, and a photo of the product clearly showing the issue.

Submit a claim at **polymaster.com.au/warrant.**

Questions? Contact Polymaster

1800 062 064
polymaster.com.au
sales@polymaster.com.au