



Taylex
WASTEWATER

Wastewater Specification Guide



Taylex

WASTEWATER

**Wastewater Recycling Systems
for Australian & New Zealand
homes that protect your family
and our environment.**

**Taylex Systems produce the highest quality
effluent for the safest and best environmental
outcomes.**

Why our Poly?	1
Trust Taylex	2
How does my Wastewater Treatment System work?	3
Emergency Storage	5
Advanced Secondary PABS1500	6
Advanced Secondary PABS NR	8
Importance of Nutrient Reduction	10
Summary of Results	11
Servicing	12
Warranty	13

Why our Poly?

Taylex polymer wastewater treatment system is a six-stage aerated wastewater treatment systems that exceed national standards and are certified in New Zealand and all Australian states and territories.

Taylex Polymer Tanks are designed to accommodate site conditions where it is not possible to crane in a concrete treatment system e.g. steep terrain. Our unique polymer mould cleverly uses 'Sandwich closed-cell foam polymer' to mould the compartment walls in one piece. There are no joins or glued-in compartments and all partitions extend to the lid of the tank, so you can enjoy the same peace of mind as if you had a Taylex concrete system.





Trust Taylex

Welcome to Taylex, an Australian family-owned company founded in 1969. We have 80 plus employees and over 90 trained wastewater specialists who market, install and service our range nationally in Australia and New Zealand. Post installation, we have a network of over 300 trained Service Technicians to provide the ongoing care and maintenance for your system.

We manufacture a range of products for Wastewater, Rainwater and Stormwater applications, we also offer Servicing for our wastewater systems. Taylex was the first company to manufacture Home Sewage Treatment Systems in Australia and we continue to be leaders in our field.

Expertise

With over 50 years of experience, building our reputation, Taylex is the trusted voice for the wastewater industry. We work closely with the national manufacturers association and governing bodies to lobby for more stringent wastewater regulations to ensure the highest level of treatment is met and to provide you with the best results possible.

Integrity

We honour warranties. We stand behind our products, for their lifetime, no questions, no fine print. We are an Australian owned and made family business. We are passionate about producing quality products that work. We take care of our staff. We value the environment and human health.

Flexibility

Taylex has a system that will work for you. In difficult terrain or soil, for the size of your house or the slope of your block, Taylex systems are adaptable, we are eager to work with you and become part of the solution.

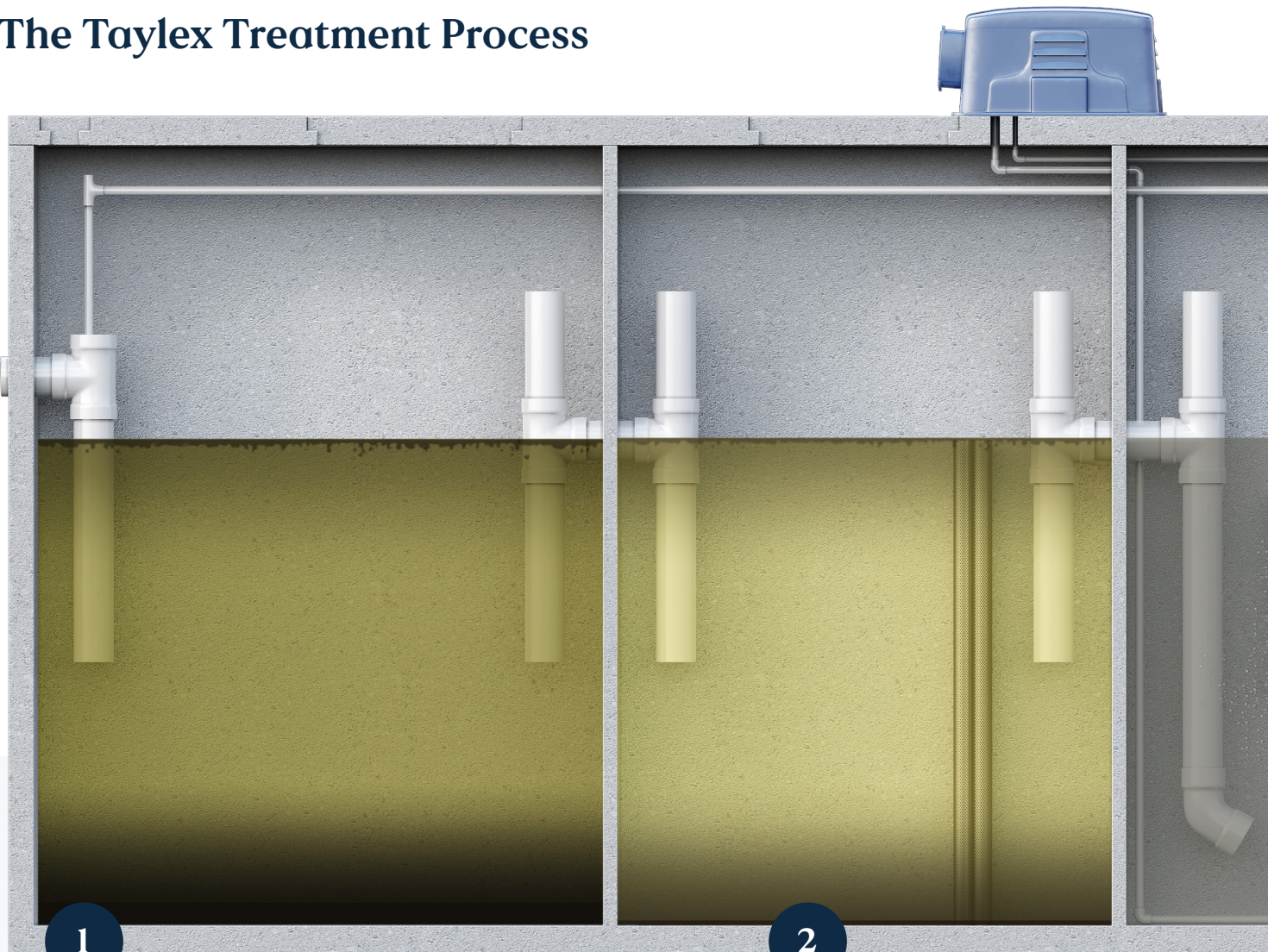
Innovation

Taylex is at the cutting edge of environmentally sound wastewater treatment that is healthy for your family and the environment. We are constantly testing and improving our systems to not only provide unparalleled quality and unmatched results, but to ensure the most stringent safety standards are met. We are constantly striving to improve and perfect.

Functionality

Our Systems work! Taylex use Monolithic, single piece moulds meaning no deteriorating seals or weak post-joined walls, which could expose your family to catastrophic failure of your system. There's no skimping on parts from the biggest pump down to the smallest seal. Our systems are designed and engineered to last as long as your home.

The Taylex Treatment Process



1



Primary Chamber

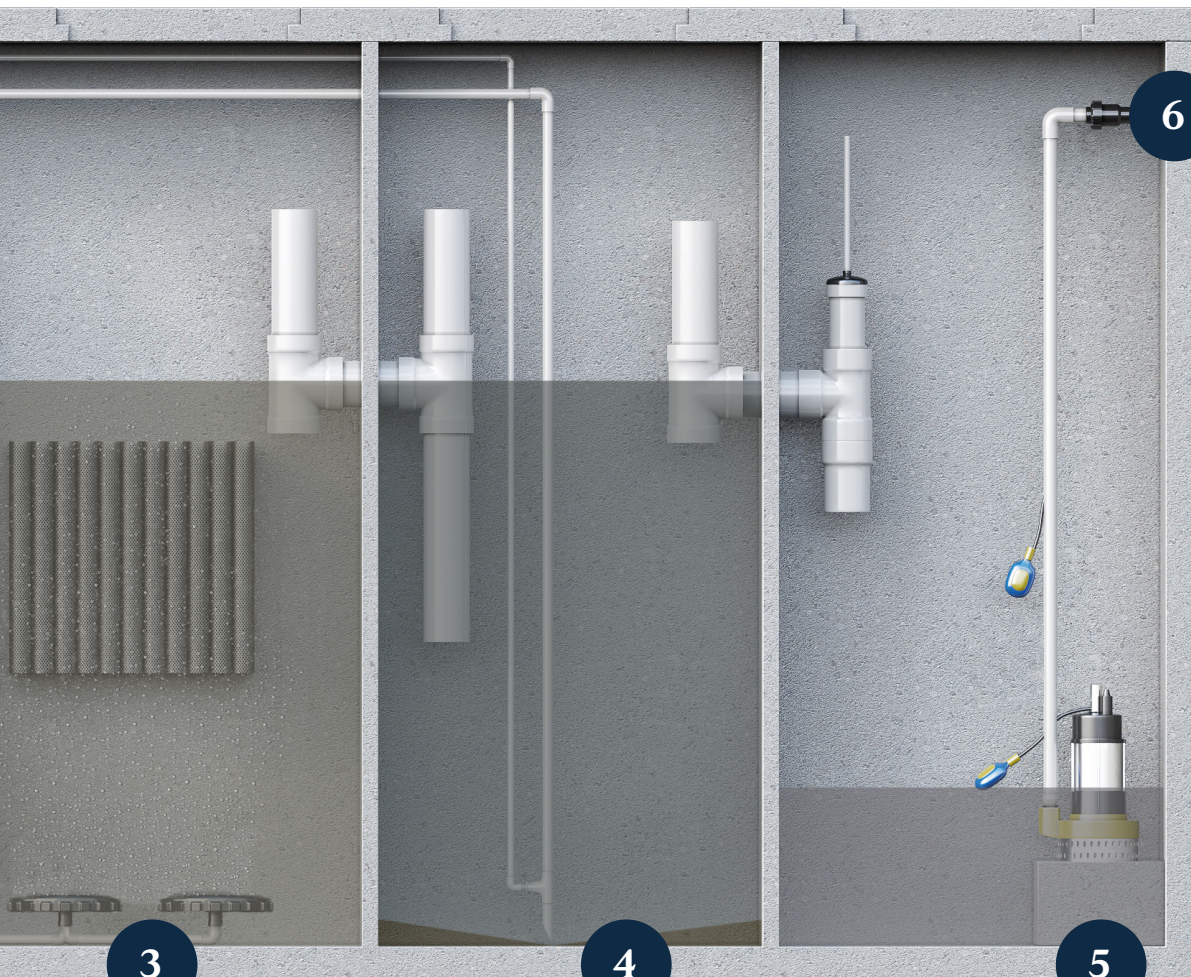
The first stop for your household wastewater is in the 'Primary Chamber'. Here solids will naturally sink to the bottom and fats and oils will naturally float to the top, leaving a clearer "Supernatant Zone" in the middle. This zone will transfer to the next stage of treatment.

2



Secondary Chamber

Next is the 'Secondary Chamber'. Further settling happens here. Again, water from the middle flows onto the next stage. In a traditional Septic System, this is where the journey would end and effluent would now be pumped onto your property and into our environment, relying on sand or soil to do the rest. With a Taylex Wastewater Treatment System, there are still four more steps to produce clean, clear, safe water for your yard. If you have an ABS NR there is additional Bio Media in this chamber, that encourages further separation of solids.



6 Irrigation Pump

Lastly, when the Disinfection Chamber fills up, your dependable irrigation pump automatically switches on to send your water out to do its job in your yard. Crystal clear water irrigates your designated area and returns safely to nature, contributing to a healthy water cycle.

3



Aeration Chamber

The 'Aeration Chamber' is next up. This is where the magic happens. Your quiet, reliable, energy-efficient Nitto Blower sends oxygen into the chamber in the form of tiny bubbles. These bubbles pass through a specially designed structure called "Bio-Media". Bio Media, in combination with oxygen provides perfect living conditions for naturally occurring 'Aerobic bacteria'. These microscopic Eco-Warriors are now hard at work, chomping through the remaining organic matter, polishing the water, and eliminating odour.

4



Clarification Chamber

Step four is in the 'Clarification Chamber'. More settling occurs here. Once settled to the bottom, this potent mix of Aerobic bacteria and fine particle solids are recirculated to the Primary Chamber to keep it healthy and working hard (not smelly).

5



Disinfection Chamber

The final step in the treatment process is the 'Disinfection Chamber'. The water gets a 'kiss' goodbye from our Chlorinator which removes any harmful bacteria, viruses and pathogens. Using less chlorine per litre than your average swimming pool, the system removes any harmful bacteria, viruses and pathogens.

Emergency Storage

Taylex systems have the largest emergency storage buffers currently available on the market. In cases where surge loading events can't be avoided (like parties or in the unlikely event there is a critical fault with your system) your family has up to 1 day of storage (assuming a 1500L daily flow). That's 347 toilet flushes or 2.3 hours of shower time!

Taylex Poly ABS systems are designed to process and treat up to 2,000L of wastewater per day.
Average wastewater generated per day:

 200L / ONE PERSON

 800L / FAMILY OF FOUR



Emergency Buffer Zone

1,541L



Days of Storage
Based on 1500L/day

1.0



Toilet Flushes

347



Shower Time

2.3hr



Washing Loads

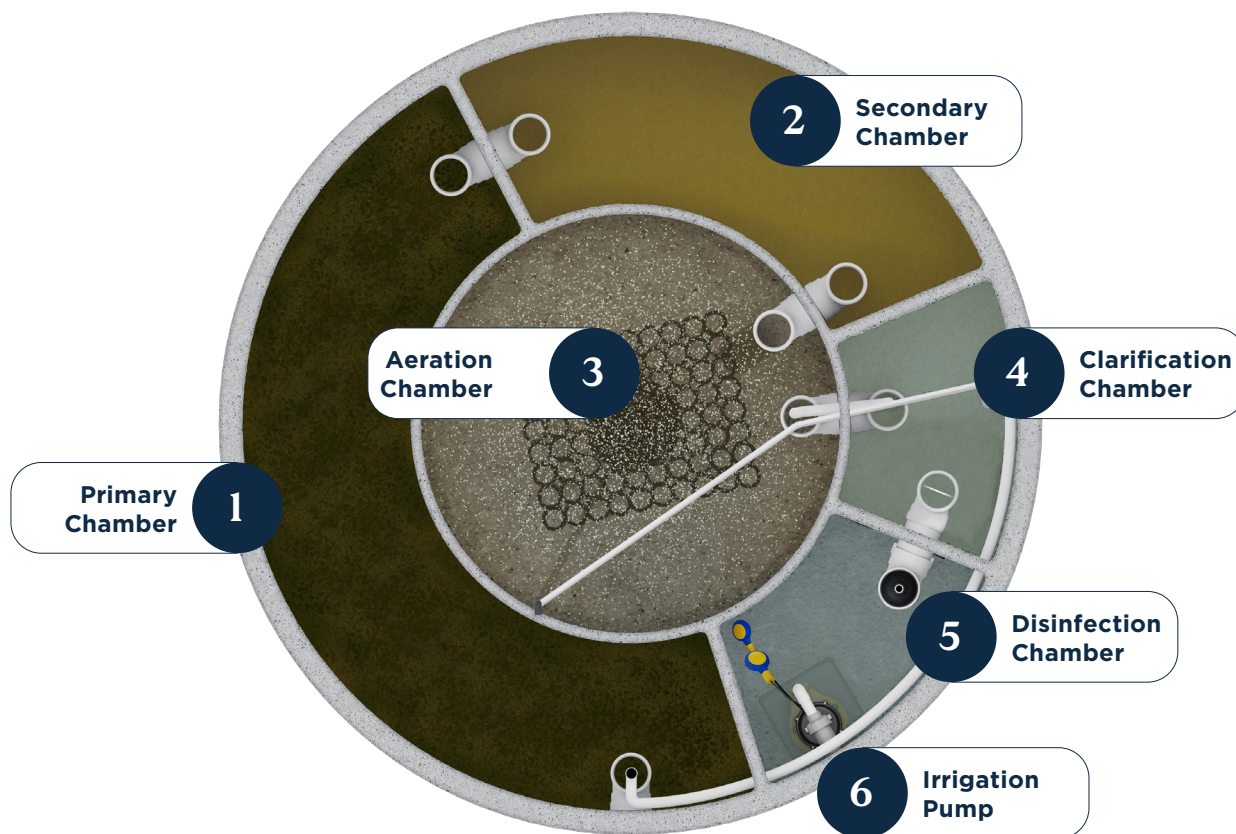
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It is important to note that where possible, Surge loading your system should be avoided as it may impact the operational efficiency of your system.

PABS Advanced Secondary Treatment Systems up to 10EP

	PABS2000 (13EP)			PABS1500 (10EP)		
TANK COMPLIANCE						
Tank Design & Testing (In Ground)	AS1546.1:2008			AS1546.1:2008		
Tank Design & Testing (Above Ground)	AS/NZS 4766:2006			AS/NZS 4766:2006		
EFFLUENT COMPLIANCE						
	AS1546.3:2008			AS1546.3:2017		
	Required	Av. Results	% Reduction	Required	Av. Results	% Reduction
Biochemical Oxygen Demand (BOD ⁵)	<10mg/l	3.4mg/l	98.50%	<10mg/l	1.5mg/l	99.59%
Total Suspended Solids (TSS)	<10mg/l	2.6mg/l	99.25%	<10mg/l	7.6mg/l	97.66%
E. Coli	<10cfu/100ml	ND	99.99%	<10cfu/100ml	1.4cfu/ml	99.99%
Total Nitrogen	N/A	24.9mg/l	53.77%	N/A	N/A	N/A
Total Phosphorus	N/A	2.5mg/l	84.67%	N/A	N/A	N/A
Free Available Chlorine (FAC)	N/A			N/A	1.05 mg/l	
Operating Temperature	Min. -2°C Max. -45°C			Min. -2°C Max. -45°C		
TANK CAPACITY						
Total Capacity	7,449L			7,449L		
Operating Capacity	5,908L			5,908L		
EMERGENCY STORAGE						
Poly	1,541L			1,541L		
SYSTEM CHAMBER CAPACITIES						
Primary Chamber	1,646L			1,646L		
Secondary Chamber	881L			881L		
Aeration Chamber	2,053L			2,053L		
Clarifier Chamber	663L			663L		
Irrigation Chamber	665L			665L		
Maximum Hydraulic Loading Capacity	2,000L per day			1,500L per day		
DESIGN PARAMETERS						
	PER PERSON/PER DAY			PER PERSON/PER DAY		
Daily Flow	150L			150L		
Maximum Organic Loading (BOD ⁵)	70g			70g		
Total Suspended Solids (TSS)	70g			70g		
Total Nitrogen (TN)	15g			15g		
Total Phosphorus(TP)	2.5g			2.5g		
ELECTRICITY CONSUMPTION						
Kilowatt hours per day (kWh/d)	2.21			2.21		
Kilowatt hours per 1000L (kWh/1000L)	1.62			1.62		
SERVICING AND MAINTENANCE						
Servicing Frequency*	Every 3 months			Every 3 months		

*If Chlorine is used for disinfection. Otherwise every 6 months



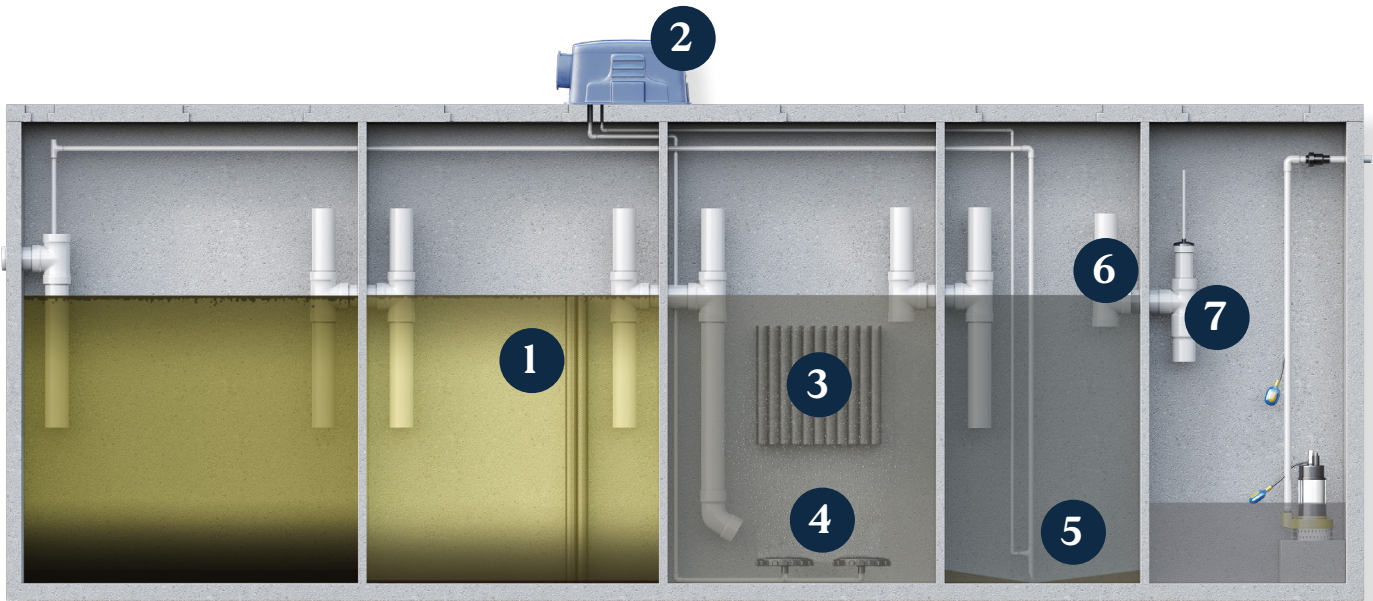
NEW AUSTRALIAN STANDARD - AS1546.3:2017

INFLUENT CRITERIA	AS1546.3:2017 42 Week Test*	AS1546.3:2017 Required Average
BOD ⁵	150 - 750mg/l	≥300mg/l
TSS	150 - 750mg/l	≥300mg/l
Total Nitrogen	20 - 150mg/l	≥60mg/l
Total Phosphorus	4 - 25mg/l	≥8mg/l
Phosphorus	≥6 - 25mg/l	≥8mg/l

EFFLUENT CRITERIA	AS1546.3:2017 Advanced Secondary Quality Effluent	
	90% of Samples	Maximum
BOD ⁵	≤10mg/l	≤20mg/l
TSS	≤10mg/l	≤20mg/l
E.coli	<<10cfu/100ml	<<30cfu/100ml

*34 Weeks + 8 Weeks Commissioning

The New Taylex ABS Nutrient Reduction Systems.



New Developments in the Taylex PABS NR

1. Retention Bio Mass - Withholds excess solids, creating a clearer supernatant zone.
2. Larger 120L Blower - Allows for enhanced oxygenation of the aeration chamber.
3. Larger Aeration Bio Mass - Broader colony for Aerobic bacteria, amplifying digestion/treatment.
4. Dual-Disk Diffusers - Evenly disperses dissolved oxygen throughout the chamber.
5. Enhanced Sludge Recirculation - Removes fine particle solids from clarification chamber.
6. Taylex Filter Control (TFC) Patent Pending - Delivers a constant, stable flow to the irrigation chamber.
7. Precise Chlorination - Provides efficient disinfection and uses less chlorine per litre.

ABSNR Treatment Systems with % Nutrient Reductions

	NEW PABS1350NR (9EP)			NEW PABS2000NR (13EP)		
TANK COMPLIANCE						
Tank Design & Testing (In Ground)	AS1546.1:2008			AS1546.1:2008		
Tank Design & Testing (Above Ground)	AS/NZS 4766:2006			AS/NZS 4766:2006		
EFFLUENT COMPLIANCE						
	AS1546.3:2017			AS1546.3:2017		
	Aust. Std	Av. Results	% Reduction	Aust. Std	Av. Results	% Reduction
Biochemical Oxygen Demand (BOD ⁵)	<10mg/l	1.63 mg/l	99.50%	<10mg/l	2.59 mg/l	99.20%
Total Suspended Solids (TSS)	<10mg/l	4.29 mg/l	98.90%	<10mg/l	5.63 mg/l	98.56%
E. Coli	<10cfu/100ml	0.95 cfu/100ml	99.99%	<10cfu/100ml	0.80 cfu/100ml	99.99%
Total Nitrogen (TN)	N/A	23.30 mg/l	66.90%	N/A	31.94 mg/l	54.70%
Total Phosphorus (TP)	N/A	8.56 mg/l	26.46%	N/A	8.76 mg/l	24.74%
Free Available Chlorine (FAC)	N/A	1.05 mg/l		N/A	0.82 mg/l	
Combined Nutrient Reduction (TN + TP)	N/A	93.36%		N/A	148.70%	
Operating Temperature	Min. -2°C Max. 45°C			Min. -2°C Max. 45°C		
TANK CAPACITY						
Total Capacity	7,449L			7,449L		
Operating Capacity	5,908L			5,908L		
EMERGENCY STORAGE						
Poly	1,541L			1,541L		
SYSTEM CHAMBER CAPACITIES						
Primary Chamber	1,646L			1,646L		
Secondary Chamber	881L			881L		
Aeration Chamber	2,053L			2,053L		
Clarifier Chamber	663L			663L		
Irrigation Chamber	665L			665L		
Maximum Hydraulic Loading Capacity	1,350L per day			2,000 L per day		
DESIGN PARAMETERS						
	PER PERSON/PER DAY			PER PERSON/PER DAY		
Daily Flow	150L			150L		
Maximum Organic Loading (BOD ⁵)	70g			70g		
Total Suspended Solids (TSS)	70g			70g		
Total Nitrogen (TN)	15g			15g		
Total Phosphorus(TP)	2.5g			2.5g		
ELECTRICITY CONSUMPTION						
Kilowatt hours per day (kWh/d)	1.90			2.50		
Kilowatt hours per 1000L (kWh/1000L)	1.52			1.33		
SERVICING AND MAINTENANCE						
Servicing Frequency*	Every 3 months			Every 3 months		

*If Chlorine is used for disinfection. Otherwise every 6 months

Importance of Nutrient Reduction

The ABS NR is tested to the Advanced Secondary Standard with a % Nutrient Reduction. Meaning that the treatment processes are more efficient in digesting and disposing of excess levels of potentially harmful elements, preventing them from entering and degrading the environment.

Nitrogen & Phosphorus are classified as Macronutrients and are key factors in plant growth and development. However, when excess levels of these nutrients (i.e. the levels found in wastewater) are added on top of what is naturally occurring it can put a substantial strain on the wider environment. Excess nutrients lead to stunted root/plant growth and in worst cases polluted groundwater and dead top soil.

Because of our superior combined nutrient reduction, this environmental strain is significantly minimised. Additionally the Land application areas (LAAs) required for Taylex ABS NR systems are substantially reduced.



Summary Of Advanced Secondary Results

	PABS1500 (10EP)		PABS2000 (13EP)		NEW PABS1350NR (9EP)		NEW PABS2000NR (13EP)	
EFFLUENT COMPLIANCE	AS1546.3:2017		ABS1546.3:2008		AS1546.3:2017		AS1546.3:2017	
	Av. Results	% Reduction	Av. Results	% Reduction	Av. Results	% Reduction	Av. Results	% Reduction
Biochemical Oxygen Demand (BOD ⁵)	1.5 mg/l	99.59%	3.4 mg/l	98.50%	1.63 mg/l	99.50%	2.59 mg/l	99.20%
Total Suspended Solids (TSS)	7.6 mg/l	97.66%	2.6 mg/l	99.25%	4.29 mg/l	98.90%	5.63 mg/l	98.56%
E. Coli	1.4 cfu/ml	99.99%	ND	99.99%	0.95 cfu/100ml	99.99%	0.80 cfu/100ml	99.99%
Total Nitrogen (TN)	N/A	N/A	24.9 mg/l	53.77%	23.30 mg/l	66.90%	31.94 mg/l	54.70%
Total Phosphorus (TP)	N/A	N/A	2.5 mg/l	84.67%	8.56 mg/l	26.46%	8.76 mg/l	24.74%
Free Available Chlorine (FAC)	1.05 mg/l		N/A		1.05 mg/l		0.82 mg/l	
Combined Nutrient Reduction: (TN + TP)	N/A		138.44%		93.36%		79.44%	
Servicing Frequency*	Every 3 Months		Every 3 Months		Every 3 Months		Every 3 Months	

*If Chlorine is used for disinfection. Otherwise every 6 months

Certificate Of Compliance

	PABS1500 (10EP)	PABS2000 (13EP)	NEW PABS1350NR (9EP)	NEW PABS2000NR (13EP)
Poly	040/22	040/10	4386-3039-01	4388-3039-01

Servicing

Twelve months servicing is packaged with every Taylex wastewater system.

All home sewerage treatment systems are required to be serviced regularly. Your local council may enforce these requirements. Systems may only be serviced by licensed wastewater service personnel. Contact your local accredited Taylex service agent or contact Taylex directly with any questions or enquiries about servicing your Taylex systems.



Servicing straight from the manufacturer

Fully licensed factory trained service technicians.



Discounted spare parts

Provide spare parts to current contract holders at a discounted rate.



Discounted call-outs

Prioritised and discounted emergency call-outs. After hours emergency phone support.



Fast 24hr response time

Technicians dedicated to your local area with a 24hr response time.



Friendly service and advice

Pre property purchase service and advice.



Council Requirements

We send your service reports to your local council on your behalf and ensure that all council reporting requirements are met.

Warranty

Every Taylex Wastewater Treatment System is covered by a full manufacturer's warranty.

There is a 15 year warranty* on all ABS Poly systems. There is also a three year* warranty on all electrical and mechanical components, including the irrigation pump, if your system is installed and serviced by a Taylex accredited professional (a 12 month standard warranty and a further 24 months extended warranty is available when you purchase your 2nd and 3rd year of service calls with a Taylex Approved Service Agent). Warranties apply from the date of commissioning or 90 days from the date of purchase (which-ever is sooner).

To ensure your warranty is valid, the following should be observed:

- **DO NOT** use system or allow wastewater to enter tanks before power services are available to the System and a Taylex Authorised specialist has been notified of pending occupancy of the property and has subsequently commissioned (activated) the system.
- **DO NOT** cover lids with soil.
- **DO NOT** position decking, concrete paths or driveways over System DO NOT allow surface water to enter the System by incorrect falls and landscaping around the system.
- **NEVER** turn the power off unless instructed to do so by your Service Agent.



This guarantee does not cover damage caused by misuse, neglect, failure to keep the unit clean and functional, accident, use of incorrect power supply, or repair or attempts to repair by unauthorised personnel. The benefits conferred by this warranty are in addition to all other rights and remedies in respect of the product which the consumer has under the Trade Practices Act and other legislations.

*Terms and Conditions apply.

PRECIPITATION



RAIN
WATER



INFILTRATION



AQU

Taylex, part of your sustainable home.

Taylex Advanced Wastewater Systems turn household wastewater into safe, clear water to irrigate your yard, contributing to a healthy water cycle.



EVAPORATION

EVAPORATION

IFER



Your local specialist:

Head Office

Taylex Australia Pty Ltd
56 Prairie Rd, Ormeau QLD 4208
ABN 43 646 051 989

TAYLEX.COM.AU