

Laundering

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Trade waste discharges from laundry and dry cleaning operations could harm the sewerage system. Wastewater from these processes can contain grease/oils, suspended solids and coloured dyes, and be high in pH and temperature. Appropriate management practices at each site are needed.

For the purpose of this guideline, 'laundering' refers to the processes used to clean clothing and linen. This guideline applies to operations undertaking laundering with water or other solvents. These include commercial laundries, dry cleaners, laundromats and laundries in nursing homes, hospitals and hotels.

Key trade waste quality requirements

Parameter	Generally accepted level
pH	Between 6-10 units
Suspended solids	≤500 mg/L
Grease/oil	≤100 mg/L
Temperature	≤38 degrees C
Total dissolved solids	≤1500 mg/L
Flow rate to sewer	Dependant on capacity of receiving sewer

Note: Discharge limits may be varied under certain circumstances for individual dischargers

Best practice management

- Operators are encouraged to adopt water/used water reuse strategies.
- The amount of salt/brine used to regenerate water softeners is minimised.
- Reuse of final rinse water can reduce operating costs, but this could affect compliance with the permitted final TDS concentration limit.

Typical pre-treatment

Domestic machines (equal to or less than 10Kg in size per machine)

- For one or two domestic machines, each machine is fitted with a lint trap.
- More than 2 domestic machines will require a 225mm diameter silt trap fitted with primary screening basket of 3mm mesh size, including a fixed secondary strainer with a max 3mm hole size

Self Service Laundries and laundromats/ laundrettes with one or two machines.

- 225mm diameter silt trap fitted with primary screening basket of 3mm mesh size, including a fixed secondary strainer with a max 3mm hole size

Self Service Laundries and laundromats/ laundrettes with 3-15 machines.

- Discharge to cooling / flow balance channel(s) with a minimum capacity of 30% of the combined discharge of all machines.
- Discharge to the channel must be at the uppermost end of the channel with a minimum length of the channel 1.5 m from the uppermost end to the outlet.
- 225mm diameter silt trap fitted with primary screening basket of 3mm mesh size, including a fixed secondary strainer with a max 3mm hole size
- Where the channel size is unable or impractical to be installed, a cooling pit sized to accommodate 30% of the combined maximum flow from all machines to the below formula must be installed.

Commercial Laundries (less than 3000 kilolitres of water to sewer per annum) and laundromats with more than 15 machines

- A cooling channel fitted with screens, the final one with 3mm mesh size, discharging to a 225mm diameter silt trap fitted with stainless steel basket of 3mm mesh size, including a fixed secondary strainer with a max 3mm hole size.
- A cooling pit/ balancing tank sized to the below formula is required downstream of the trap, to regulate flow rate and temperature of the final discharge to sewer.

Laundries discharging more than 3,000 kilolitres of wastewater to sewer per annum

- An approved screening system with final maximum 2mm mesh or hole size. Examples are:
 - a series of screens with progressively smaller mesh/holes, or
 - bow screen, or
 - rotating drum screen, or
 - vibrating screen.
- A settling tank / cooling pit sized to the below formula,
- Depending on the wastewater quality additional pre-treatment may be required, such as:
 - automatic pH correction system
 - grease and oil separation equipment
 - buffer/ balance tanks to control the rate of discharge to sewer
 - heat exchange/recovery system to reduce temperature of discharges
 - polymer and coagulant addition to aid solids removal.
- An effluent flow meter to be installed in accordance with the [Discharge Flow Meter fact sheet](#)
- All tanks and containers storing process liquors, wastewaters and chemical solutions are stored in accordance with the [Bunding and Blind Tank Guideline](#).

Sizing Cooling Pit/ Settling Pit

- Cooling pits are to be sized by the following formula where V is the total hydraulic capacity of the Pit:

$$V = 1.5 \times V_H + V_H$$

V = is the hydraulic capacity of the pit (volume below water level)

V_H = volume of the expected peak discharge from all machines.

An example of this calculation for a cooling pit to receive 100 L of hot water @ 65°C, where the maximum permissible discharge temperature to sewer is 38°C. The temperature of the cooled water in the pit is 20°C

$$1.5 \times 100 \text{ Litres} + 100 \text{ Litres} = \mathbf{250 \text{ Litres}}$$

Dry cleaning

All solid and liquid waste generated by dry cleaning processes shall not be discharged to sewer. This includes:

- Waste solvent (to be contained in an approved blind tank in accordance with the [Bunding and Blind Tank Guideline](#) or other approved storage system before removal off site.
- Contaminated filter material and sludge.
- Waste produced by the stripping and cleaning of dry cleaning machines or associated equipment.

Blowdown from boilers is in accordance with the [Boilers Guideline](#).

More information

Mains water protection (AS/NZS 3500.1:2018)

[Backflow Prevention Requirements - Office of the Technical Regulator](#)

[Restricted Wastewater Acceptance Standards](#)