



**SILT SENTINEL**  
BUILT FOR SILT

# SILTBLOK

## Design Parameters for the SILTBLOK 500 & 1200

### Typical Particle Size Distribution of runoff water

Use	Total Silt (kg/ha/yr)		<0.45 µm		0.45-30 µm		30-75µm		76-150 µm		151-300 µm		>300 µm	
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
Residential														
High Density	130	840	11.2	72.7	34.7	224.5	40.8	263.5	30.3	195.7	7.5	48.7	5.5	35.3
Low Density	50	230	19.9	19.9	13.4	61.5	15.7	72.2	11.7	53.6	2.9	13.3	2.1	9.7

Please Note: This data sheet gives guidance on the range of contamination levels and treatment efficiency typically found in runoff water. These values are not absolute and site specific studies should be undertaken.

SILTBLOK will remove suspended solids above 30µm with up to a flow rate of 33 l/s/m<sup>2</sup> per SILTBLOK block.

Based on the above data, the estimated annual silt that will be captured by SILTBLOK, when used as a filter is between 32 and 149 kg/ha/yr. This equates to 27 to 124 litres of silt/ha/yr.

Based on a typical, new 3 bed roomed semi-detached house, a SILTBLOK SSSB500 will capture between 10kg & 15kg of silt per year. This equates to 8 litres to 12.6 litres of silt per year. This does not account for silt during building works or localised contamination. **This is 3 times the maximum storage requirement.**

#### Typical calculation:

Housing Plot size - 11m x 29m = 319 sq. m

Rainfall peak - 40mm/hr (Once a year event)

Peak flow - 3.5 litres per second

Surface area of SILTBLOK in SSSB500 unit = 0.33m<sup>2</sup>

Design flow rate through SILTBLOK SSSB500 = 10.95 litres per second

#### Mitigation

Event mean concentration (EMC) refers to a flow-weighted average concentration in the whole process of a rainfall-runoff event, defined as the total pollution load mass divided by the total runoff volume.

SILTBLOK will remove suspended solids above 28µm with up to a flow rate of 30 l/s/m<sup>2</sup>

Event Mean Concentration Values	TSS - Total Suspended Solids(mg/l) or PPM	SILTBLOK Capture Efficiency
Commercial Areas	7.8-270	85% minimum
Car Parks	7.8-270	91% minimum
High Density Residential	55-1568	96% minimum
Low Density Residential	10-300	96% minimum
Urban Roads	11-5400	96% minimum

Please Note: The table above efficiencies is based on particle size distribution found in the respective areas.

**SILTBLOK 500** unit can offer up to **99.9% efficiency** from the run off a total surface area of **1000 sq. Metres**

**SILTBLOK 1200** unit can offer up to **99.9% efficiency** from the run off a total surface area of **3000 sq. metres**

