

# SDS Aqua-Xchange™

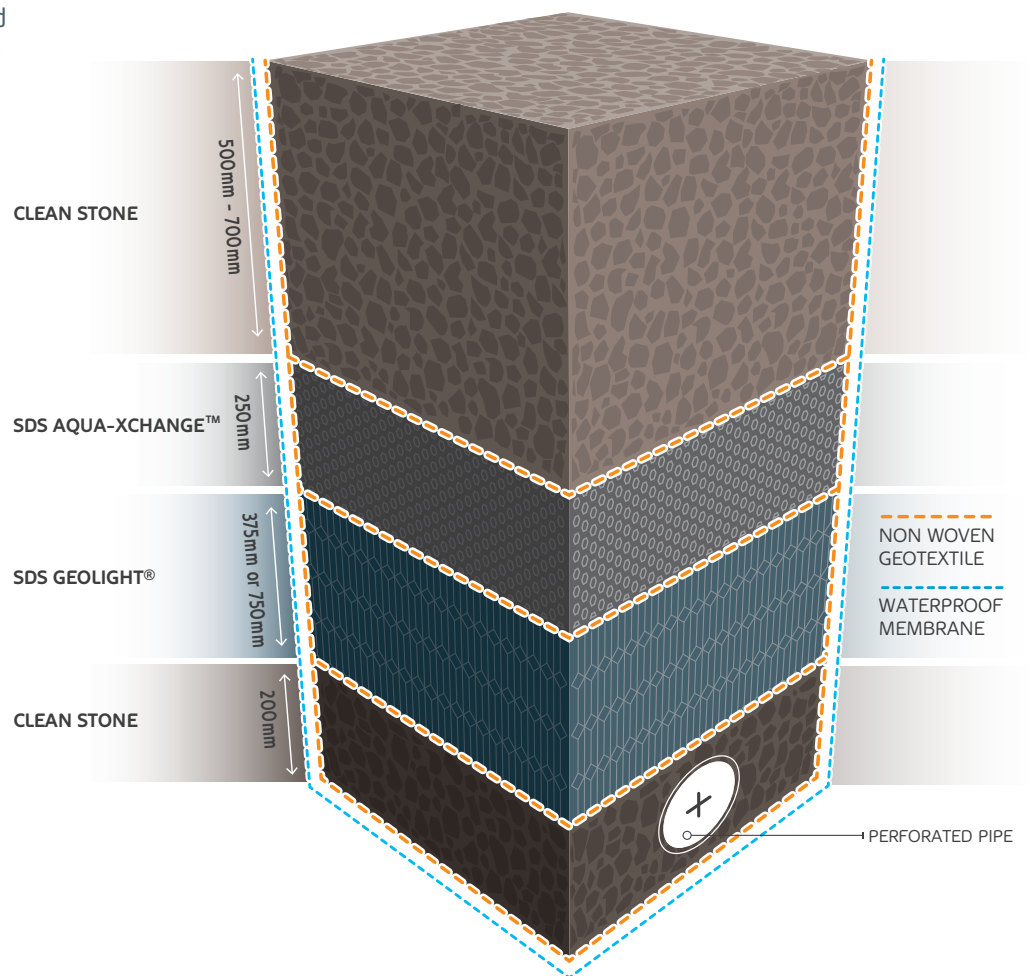
Engineered Treatment Media

**SDS Aqua-Xchange™ is an engineered pollution control and enhanced filter media which uses ionic exchange and filtration to remove soluble and solid pollutants from surface water runoff.**

SDS Aqua-Xchange™ uses naturally occurring materials that maximise the pollution adsorption process. It can be installed as part of the new build construction process or retrofitted in established sites.

- Captures soluble copper and zinc
- All natural materials
- Long effective life span
- Loose granular material
- Supplied in 1m<sup>3</sup> bags
- Large surface area
- Small land take

Example installation:  
edge of carriageway filter drain with attenuation



SDS Aqua-Xchange™ is a granular material suitable for use in devices where stormwater can percolate through the material, allowing sufficient contact time for the pollutants to be captured.

SDS Aqua-Xchange™ can be deployed in a number of stormwater treatment applications including filter drains, dry swales, bio-remediation devices, infiltration basins and catch pits, and with or without attenuation.

Features	Benefits
Proven capability to remove and retain dissolved heavy metals including copper and zinc.	Can be deployed to control pollution and satisfy requirements of risk assessments for surface water runoff.
For use in linear developments as a 250mm deep layer beneath standard aggregate.	Increases treatment capacity and reduces downstream flood risk.
Loose granular material available in large one cubic metre bags.	Provides cost effective design flexibility.
Large treatment capacity from small land-take.	Minimises costs of materials, on-site machinery and equipment, and labour resource.
High surface area of each component material.	Allows greater contact time to improve the overall treatment efficiency.
High percolation rate combined with large surface area.	Limits surcharging even in extreme environments.
Filters out finer solid particles.	Captures pollutants that would otherwise pass through an upstream hydrodynamic separator or silt trap.
Captured metals are retained even when road salt is applied to the catchment area.	Can be used unchanged throughout the year.
Suitable for use beneath a dry swale, rain garden or infiltration basin and as a road- or track-side filter drain.	Suitable for use in multiple high- and medium-risk sites.
Tested at an independent facility under the observation of a UKAS-accredited laboratory chemist.	Product's performance capacity has been independently verified.
Estimated min 25 year performance lifespan.	Extended material durability provides long lasting service.

## Specifications

Example specification (as measured in test<sup>1</sup>): for the treatment of an impermeable catchment area measuring 50m<sup>2</sup>, a 250mm deep layer of SDS Aqua-Xchange™ measuring 0.5m<sup>2</sup> is required.

	Flow rate per hectare	Rainfall depth	Flow rate per 50m <sup>2</sup>
Treatment flow rate	75 l/s/ha	27mm/hr	0.375 l/s
Pollutant retention flow rate	111 l/s/ha	40mm/hr	0.556 l/s

Treatment efficiency		Metals retention efficiency <sup>2</sup>	
Zinc capture	99.8%	Zinc retention	99.6%
Copper capture	99.5%	Copper retention	100.0%

<sup>1</sup> Tests were carried out in accordance with the British Water Code of Practice 'Assessment of Manufactured Treatment Devices Designed to Treat Surface Water Runoff'.

<sup>2</sup> Metals retention under the influence of road salt application.

<sup>3</sup> Total Carbon Factor: 0.13262298 tonnes CO<sub>2</sub>e per 700kg/1m<sup>3</sup> of Aqua X-change.