



GEOMEMBRANE 14-DAY EXPOSURE TEST TO PETROL & DIESEL



RAIL



ROAD



MINING



PETROCHEM



AGRO



UTILITIES



PUBLIC WORKS



DEFENCE



DESIGN



SHELTER



Winner
Technical Innovation Award



award winner
ICE Wales Cymru Project Awards

Innovation Award
ICE Wales Cymru Awards 2017



2014 Fast Track 100
16th fastest growing
company in the UK.



2014 Queen's Award
for Enterprise in
Innovation



2013
MacRobert Award
Finalist



2013 Innovation Award Winner
Railtex Exhibition



2012 R&D 100
Award winner
R&D Magazine



2009 Winner
Material Connection Medium Award
Material of the Year



D&AD Yellow Pencil Award
Winner
Product Design

CC Hydro™ Geomembrane 14-day Exposure Test to Petrol & Diesel

Based on testing to **BS EN 14414:2004** *“Geosynthetics. Screening test method for determining chemical resistance for landfill applications”*.

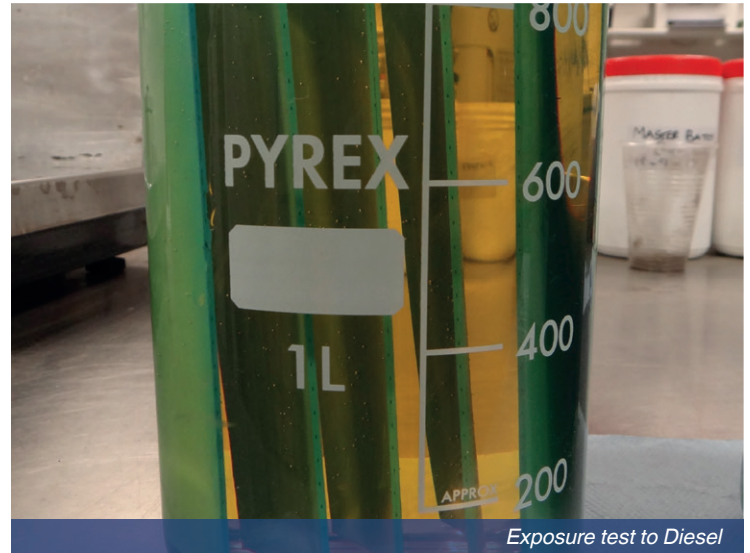
14-day exposure testing to Petrol and Diesel to assess the resistance of the geomembrane laminate used on rear surface of the CC Hydro™ product has been conducted.

The test method used is based on BS EN 14414:2004, “Geosynthetics. Screening test method for determining chemical resistance for landfill applications”. The test method involves full immersion of the test specimens (50x160mm) in the test chemicals.

The test method has been modified for the original standard to reflect real world conditions in the event of a containment event where the product is used as the secondary containment liner.

This involved testing at ambient temperature rather than an elevated temperature of 56°C and testing was based on 14 days exposure rather than 56 days to reflect the maximum possible exposure time expected in the field.

Following the 14 day immersion period, the samples are subjected to a visual inspection, assessment of dimensional stability (mass and thickness change) and tensile strength tests (to BS-EN-12226). Results were compared to control specimens.



Summary of Results

		PETROL	DIESEL
		%	%
Dimensional Stability	Retained Weight	94%	101%
	Retained Thickness	105%	101%
Mechanical Performance	Retained U.T.S	93%	102%
	Retained Elongation	112%	135%

Diesel: Specimens exposed to Diesel demonstrated no loss in ultimate tensile strength (UTS), no loss in mass and no loss in thickness. There was an increase in elongation at failure of 35%.

Petrol: Specimens exposed to Petrol demonstrated a 6% loss in mass and no loss in thickness. There was a increase in elongation at failure of 12% and a 7% drop in ultimate tensile strength (UTS).

*Geosynthetic Cementitious Composite Mat