



### Typical stone gradings

Typical test pressure (kPa) <sub>1</sub>	Waste depth (m)	10	20	20	20	30	30	32	40	Maximum stone size (mm)
		5-10	5-20	10-20	20	10-30	20-30	16-32	20-40	Stone grading (mm)
245	10	HP55	HP56	HP56	HP57	HP59	HP511	HP59	HP535	Geotextile grade
370	15	HP56	HP57	HP57	HP511	HP511	HP512	HP511	HP535	
490	20	HP57	HP59	HP59	HP514	HP512	HP514	HP512	HP540	
615	25	HP58	HP59	HP511	HP517	HP514	HP517	HP514	HP540	
735	30	HP59	HP51	HP514	HP517	HP517	HP519/22	HP519/22	HP540	
860	35	HP511	HP514	HP517	HP517	HP517	HP522/25	HP522/25	HP540	
980	40	HP511	HP517	HP517	HP519	HP519/22	HP530/35	HP530/35	x	
1105	45	HP514	HP517	HP519	HP522	HP525/30	HP535/40	HP535/40	x	
1225	50	HP517	HP517	HP522	HP530	HP535/40	HP535/40	HP535/40	x	

#### Notes:

1. Typical test pressures are based on a waste density of 1000kg/m<sup>3</sup> using The Environment Agency standard calculation for accelerated testing: Depth of waste x Density x Acceleration due to gravity (9.81 x 10<sup>-3</sup>m/sec<sup>2</sup>) x Safety factor (2.5)
2. Assumes sub-rounded stone and waste density of 1t/m<sup>3</sup>.
3. Two grades are shown where the loading conditions are more severe and the angularity of the stone is more critical. The lower grade is predicted for well-rounded stone and the higher grade for angular stone.
4. x denotes that no solution is possible with a single layer of geotextile within the limiting strain of 0.25% required by The Environment Agency. Please contact GEOfabrics Limited for an alternative protection solution.
5. The data contained in this table is for guidance only. The geotextile grade should be confirmed by cylinder testing with a sample of the stone to be used and at a load that simulates the waste depth.
6. Please contact GEOfabrics to arrange a complementary UKAS accredited cylinder test to either Environment Agency Methodology for cylinder testing of protectors for geomembranes (UK) or Determination of the long-term protection efficiency of geotextiles in contact with geosynthetic barriers EN 13719.