

COMPARISON OF COMPACTED CLAY AND GCLs FOR COMPOSITE LANDFILL CAP APPLICATIONS

COMPACTED CLAY	GCLs
More material required (resulting in more equipment, more noise, more dust)	Far less material required
Installation time is usually longer	Very rapid installation
Installation is extremely weather-sensitive	Installs in a variety of weather conditions
Difficult to control quality of raw materials	Made with pure, processed bentonite
Difficult to control quality of installation; rigid CQA program required	Pre-manufactured product, rigidly controlled, much less CQA needed
Hydraulic performance is severely compromised by desiccation	Hydraulic performance is severely compromised by desiccation after several wet/dry cycles
Cannot withstand differential settlement without cracking	Can undergo settlement with no impact on permeability
Significant freeze/thaw effects	Unaffected by freeze/thaw cycles
Difficult to achieve necessary compaction on soft landfill surface	No compaction required
Heavy construction equipment required	Only light equipment required
Substantial liner construction experience is essential for proper performance	Inexperienced field crews can be trained to install properly
Test pad typically required	No test pad needed
Difficult to repair	Easy to repair using patches
Thickness results in increased space requirements	Very thin and occupies little space
Unpredictable costs	Completely predictable cost
Preferential flow paths likely	No preferential flow paths possible
If not available on site, clay soils must be delivered (resulting in excess noise, road deterioration, traffic, air pollution)	One truckload of Bentomat is enough to cover 3/4 acre
Additional water must be added during construction	Installed dry, no additional water needed

The claims presented above have been substantiated with field and laboratory data. Contact CETCO for more specific information.