Connecticut Public Health Code Technical Standards for Approved Septic Fill, C 33 Sand and Stone Aggregate

Select fill is material placed within and adjacent to leaching system areas and comprised of clean bank run sand, clean bank run sand and gravel, or approved manufactured fill that is free from organic matter or foreign substances and having a gradation which conforms to the specifications stipulated in Section VIII A of the technical standards (see below) or ASTM C 33 (see below). Select fill shall meet the following requirements unless otherwise approved by the design engineer, **however a design engineer cannot approve fill exceeding 6% passing the #200 wet sieve:**:

1. The select fill shall not contain any material larger than the three (3) inch sieve.
2. Up to 45% of the dry weight of the representative sample may be retained on the #4 sieve (This is the gravel portion of the sample).
3. The material that passes the #4 sieve is then reweighed and the sieve analysis started.
4. The remaining sample shall meet the following gradation criteria:

SELECT FILL SIEVE SIZE	PERCENT PASSING	
	WET SIEVE	DRY SIEVE
#4	100	100
#10	70 - 100	70 - 100
#40	10 - 50 *	10 - 75
#100	0 - 20	0 - 5
#200	0 - 5	0 - 2.5

C 33 SIEVE SIZE	PERCENT PASSING
0.375"	100
#4	95.0-100
#8	80.0-100.0
#16	50.0-85.0
#30	25.0-60.0
#50	5.0-30.0
#100	< 10
#200	< 5

* Percent passing the #40 sieve can be increased to no greater than 75% if the percent passing the #100 sieve does not exceed 10% and the #200 sieve does not exceed 5%. If the fill fails the dry sieve but passes the wet sieve, then the fill shall be approved.

The licensed installer is responsible for preparing the leaching area with necessary select fill. The topsoil in the leaching system area must be removed and the subsoil scarified prior to select fill placement unless otherwise directed by the design engineer. The installer shall take the necessary steps to protect the underlying naturally occurring soil from over compaction or damage. Select fill shall extend a minimum of five (5) feet laterally in all directions beyond the outer perimeter of the leaching system.

The Commissioner of Public Health must approve manufactured fill. Rock used to produce manufactured fill must have a loss of abrasion of not more than 50 % using AASHTO Method T-96. Suppliers of manufactured fill must make application for approval to the Commissioner of Public Health. Documentation must be submitted on the quarry operation, and production process. Fill specifications (gradation, permeability, etc) and a narrative of the quality control/quality assurance program must also be included. The manufactured fill producers must provide annual product registrations to the Commissioner of Public Health.

Stone aggregate means crushed or broken stone, or crushed and uncrushed gravel meeting the gradation for No. 4 or No. 6 aggregate per Connecticut Department of Transportation Form 816 Specification M.01.01 (or latest specification) and the #40 and #200 sieve gradation stipulated above, based on the wet sieve analysis. Stone aggregate shall be free of silt, dirt or debris and shall show a loss of abrasion of not more than 50% using AASHTO Method T-96, and when tested for soundness using AASHTO Method T-104 not have a loss of more than 15% at the end of 5 cycles.

	No. 4 Stone Aggregate (AKA 1 & ¼" Stone)	No. 6 Stone Aggregate (AKA ¾" Stone)
SIEVE SIZE	PERCENT PASSING (by weight)	PERCENT PASSING (by weight)
2-inch	100	N/A
1.5-inch	90 – 100	N/A
1-inch	20 – 55	100
3/4-inch	0 – 15	90-100
1/2-inch	N/A	20-55
3/8-inch	0 – 5	0-15
#4	N/A	0-5
#40	0 – 3	0-3
#200	0 – 1.5	0-1.5