

Backfill Guidelines

F 905 Rev B

BACKFILL MATERIAL – CRUSHED STONE OR PEA GRAVEL

The backfill material surrounding a composite tank is a critical part of the installation. This data sheet provides guidelines for choosing the best material when installing composite tanks.

FTS recommends that either crushed stone or pea gravel is used as a backfill material.

1. CRUSHED STONE should be washed and free flowing. Angular particle size should be between 10 mm and 14 mm.
2. PEA GRAVEL (rounded particles, river gravel deposits) must have a nominal diameter of 10 mm and a maximum diameter of 20 mm.

Australian Standards AS2758.1, AS1141.11, AS1141.12, AS1141.24 and AS1141.34 have been used to specify the aggregate required for backfill.

The standard sizes of coarse aggregate that meet FTS's crushed stone or pea gravel specifications are given in the table on the back page of this data sheet.

Suppliers should be able to provide a specification that identifies the size or gradation of the material. If a specification for the material is not available, an independent testing laboratory can provide a sieve analysis on a sample of the backfill material. The sieve analysis or material specification can then be compared against size requirements for the crushed stone or pea gravel.

WARNING: An important characteristic of good backfill material is hardness or stability when exposed to water or loads. Most materials have no problem meeting the hardness requirement. Materials like soft limestone, sandstone or shale should not be used as backfill because they break down over time.





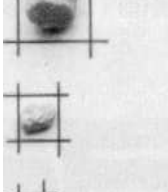
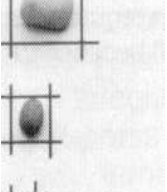

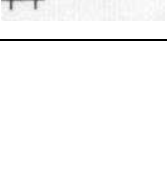
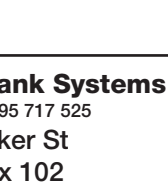

If in doubt about backfill, contact FTS.

STANDARD SIZES OF COARSE AGGREGATE THAT MEET FTS CRUSHED STONE OR PEA GRAVEL SPECIFICATIONS

The first column of each table identifies the standard Sieve sizes that are used to grade aggregate material. The remaining columns have a standard Aggregate size range.

For each Aggregate size, the amount of material finer than each laboratory sieve (square openings) is given as percentage of the total weight of the sample. These percentages give an indication of the particle size distribution within the given aggregate size.

For example: 20 mm pea gravel aggregate size, 20% to 55% of the sample (measured by weight) should pass through a 13.2 mm sieve.

Crushed Stone				Pea Gravel			
Sieve Size	Aggregate Size		Sieve Size	Aggregate Size			
	14mm	10mm		20mm	10mm		
 19 mm	100 %	100 %	 19 mm	90 to 100 %	100 %		
 13.2 mm	90 to 100 %	100 %	 13.2 mm	20 to 55 %	90 to 100 %		
 9.5 mm	40 to 70 %	85 to 100 %	 9.5 mm	0 to 15 %	40 to 70 %		
 4.75 mm	0 to 15 %	10 to 30 %	 4.75 mm	0 to 5 %	0 to 15 %		
 2.36 mm	0 to 5 %	0 to 5 %	 2.36 mm	-	0 to 5 %		