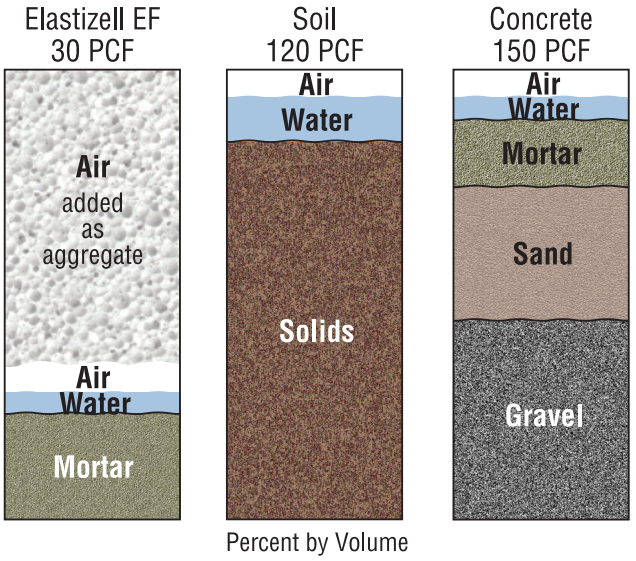
Elastizell EF Applications as Broad as the Designer's Imagination

Elastizell Cellular Concrete

ENGINEERED FILL

How is Elastizell EF lightweight?



Percent by Volume

Elastizell pre-formed foam

Placement of Elastizell EF

On site production equipment for Elastizell EF

What is Elastizell EF?

- Cellular concrete is a mixture of Portland cement, water and ELASTIZELL pre-formed foam.
- Designs utilizing fly ash, sand and other materials may be included for specific densities and strengths.
- May be designed for densities varying from 20-120 pcf.
- Batched on site and pumped into place.

Why use Elastizell EF?

ELASTIZELL EF has a typical density of 30-40 pcf. Although it is only 1/4 the weight, it is considerably stronger than compacted soil. ELASTIZELL EF can be tailored to a specific density or strength to meet design requirements. Successive lifts may be placed daily. Within 24 hours, ELASTIZELL EF no longer exerts hydrostatic pressure and can support foot traffic. Common applications include the following:

Bridge Approach Fills • Fills Between Retaining Walls • Roadway Fills • Load Balancing • Landslip Repair Fills • Weight Reducing Fills • Culvert Fills • Lightweight Levee Structures • Foundation Fills • Landscaping and Plaza Fills • Void Fills • Pipeline Fills • Mine Fills • Pressure Reducing Fills • Storage Silo Fills

General Advantages

- *ELASTIZELL EF is customized with different densities and strengths as required by the specific application.*
- *ELASTIZELL EF is a lightweight fill for use over poor soils.*
- *ELASTIZELL EF can increase elevations without adding load to weak soil, via load balancing.*
- *ELASTIZELL EF flows easily into all spaces eliminating potential voids.*
- *ELASTIZELL EF is easily excavated.*
- *ELASTIZELL EF is competitively priced and maintenance costs are low.*
- *ELASTIZELL EF can maintain traffic during construction.*
- *ELASTIZELL EF requires no compaction.*

BASIC PHYSICAL PROPERTIES

Elastizell EF

*Greater values may be obtained if required per Elastizell Corporation design.

CLASS	MAXIMUM CAST DENSITY pcf (kg/m³)	MINIMUM COMPRESSIVE STRENGTH* psi (Mpa)	ULTIMATE BEARING CAPACITY Tons/sf (kN/m²)
I	24 (384)	10 (0.07)	.07 (69)
II	30 (480)	40 (0.28)	2.9 (276)
III	36 (576)	80 (0.55)	5.8 (552)
IV	42 (672)	120 (0.83)	8.6 (827)
V	50 (800)	160 (1.10)	11.5 (1103)
VI	80 (1280)	300 (2.07)	21.6 (2068)

Comparison of Maximum Fill Material Densities

ELASTIZELL EF			
Class I	24 pcf (384 kg/m³)	Water	62.4 pcf (1000 kg/m³)
Class II	30 pcf (480 kg/m³)	Lightweight Aggregates	60-90 pcf (961-1442 kg/m³)
Class III	36 pcf (576 kg/m³)	Flowable Fills	90+ pcf (1442+ kg/m³)
Class IV	42 pcf (672 kg/m³)	Soils	120 pcf (1922 kg/m³)
Class V	50 pcf (800 kg/m³)	Aggregates, Asphalts	125 pcf (2002 kg/m³)
Class VI	80 pcf (1280 kg/m³)	Lean Concrete	145 pcf (2323 kg/m³)

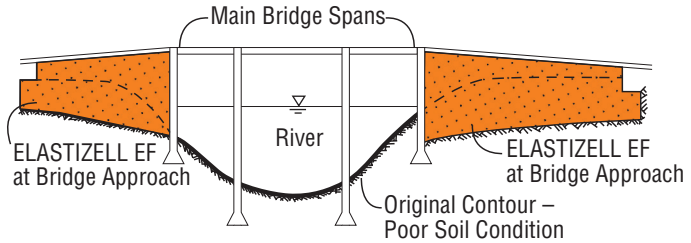
A Common Application Example

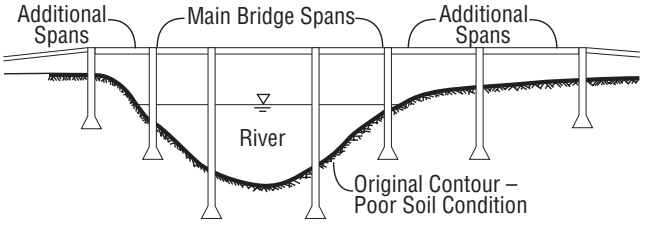
Bridge Approach Fills

- *Usually poor soils exist at bridges*
- *Compaction is not necessary*
- *Shorter bridge spans with longer ramps*
- *Reduce system construction and life cycle costs*

Bridge approach fill with Elastizell EF

IDEAL SOLUTION





COSTLY ALTERNATIVE

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ENGINEERED FILL

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