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# UNIVERSAL FOUNDATIONS

## THIS TUTORIAL

THIS TUTORIAL WILL PROVIDE YOU WITH AN OVERVIEW OF THE BASIC TOOLS AND WAYS OF CREATING IMAGES IN ON.

Universal Foundations is delivering excellence to the region's foundation and piling industry since it was inaugurated. Our customers are assured that our engineers are advanced in the foundation, piling and ground engineering industry's best practice, management, engineering, safety, quality, and innovation. Furthermore, our members are periodically audited individually to ensure that they meet industry standards.

Universal Foundations is always aware of the foundation, piling and ground engineering industry's state-of-the-art technologies and upgrades its machineries with cutting-edge ones.

Additionally, Universal Foundations supplies quality, raw building materials. It has gained the reputation of being the supplier of the most compatible fill materials.

EXPERTISE ALLOWS US TO WORK THROUGH THE DAY AND NIGHT



## ABOUT US

### OUR EXPERTISE ALLOWS US TO WORK THROUGH THE DAY AND NIGHT

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## MISSION & VISION

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# PRODUCTS

## CLASS (1) FILL

Class 1 fill is a crusher run type material normally used as a road base. It shall be good, hard well-graded material screened and crushed as necessary to lie within the grading envelope given below when tested. The fill material shall be non-plastic when tested and the content of clay and friable particles when determined, shall not exceed 1% for any individual sieve size fraction. The total sulphate content as SO<sub>3</sub> of the material shall not exceed 1% and the total soluble salts shall not exceed 2%. When used as road base, CBR at 95% max. Dry density should be minimum 80%.



## CLASS (2) FILL

Class 2 fill is normally employed as a road sub-base material and shall be good, hard well-graded material, screened and crushed as necessary to lie within the grading envelope given below when tested. The CBR of the material when tested at the density likely to exist in the field shall not be less than 30%. The liquid limit shall not be more than 25% and the plasticity index shall not exceed 6% when tested. The total soluble salts shall not exceed 2%.



## CLASS 3 FILL (DESERT FINE)

Class 3 fill is desert fill type material and shall be a selected, graded, hard granular material free from clay and deleterious substances. The total sulphate content as SO<sub>3</sub> of the material shall not exceed 1% and the total soluble salts shall not exceed 2%. The grading of the fill shall lie within the grading envelope given below when tested. Where the percentage passing the 0.075mm sieve is greater than 8%, the plasticity index shall not exceed 20%.



## CLASS 4 (DREDGED MARINE SAND)

Class 4 fill is a dredged sand type material normally employed as common fill. The material shall be evenly graded and shall lie within the grading envelope given below when tested. The material shall be non-plastic when tested. The total sulphate content as SO<sub>3</sub> of the material shall not exceed 1% and the total soluble salts shall not exceed 2%.





# SERVICES & MATERIALS



## CLASS 5 FILL (DRAINAGE FILL)

Class 5 fill is a single size-type material normally employed as a drainage blanket medium. The material shall be good hard rock screened and crushed to lie within the grading envelope shown below and shall be free from deleterious material.

## CLASS 6 (CRUSHER DUST/FINES)

Class 6 fill is a crusher dust type material. It shall be good, hard rock screened and crushed to lie within the grading envelope shown below and free from natural sand, silt, clay and any other deleterious material. Class 6 fill shall also be non-plastic when tested and shall not be susceptible to breakdown under moist conditions. The total sulphate content as SO<sub>3</sub> of the material shall not exceed 1% and the total soluble salts shall not exceed 2%.



## CLASS 7 (HARDCORE)

Class 7 is a hardcore material. It shall be good stone, concrete, hard tiles or other approved material not exceeding 100mm gauge with not more than 1% passing a 20mm sieve. The fill shall not be susceptible to breakdown under moist conditions and shall not contain any deleterious materials. The total sulphate content as SO<sub>3</sub> of the material shall not exceed 1% and the total soluble salts shall not exceed 2%.

## SERVICES:

1. Foundation Works
  - Shallow Foundations
  - Deep Foundations
  - Cantilever
2. Dewatering Works
  - Well Point System
  - Deep Well System
3. Demolition Works
4. Backfilling Works
5. Material Supply
6. Excavation Works
7. Sheet Piling Works (Side Shoring)
8. Excavated Materials Removal
9. Site Clearing Works

## MATERIALS:

1. Daffan Type B
2. Type A
3. Double Washed Plaster Sand
4. Double Washed Sand
5. Single Washed Sand
6. Unwashed Sand (Marine Sand)
7. (RAK) Black Aggregate (All Sizes)
8. Saudi Sand
9. Local White Aggregate (All Sizes)
10. Hard Core (Stone All Sizes)
11. Desert Fill
12. Crusher (Class 3 Fill)
13. Sea Shells
14. Crusher Dust (Fine)

