



Media - Acid Resistant Porous Lava Rock - Specifications

ARP Max™

Biological Scrubber and Biofilters

The acid resistant porous rock media used in the Biological Scrubber and Biofilters serves as part of the ecosystem for the growth of acidithiobacillus thiooxidans microorganisms. The porous rock media shall also contain the necessary iron content that in a low pH environment will create a chemistry of iron ions to support a colony of acidithiobacillus ferrooxidans microorganisms. The media shall be of the type that the surface openings are not through-and-through, therefore eliminating any increase in static pressure over time due to fouling of the pore structure. The porous rock media shall be as provided by HEE Environmental Engineering. The media shall have a proven reliability record for biological growth with a minimum of 100,000 cubic feet installed over a five year period, with at least five separate projects, based on actual installations in a low pH sulfuric application without degradation. The media utilized shall be treated, crushed; using no aggregate larger than 3” in diameter, insuring a uniform surface area of a minimum 10,000 square feet per cubic foot of media. The media will then be screened to size and meet the following specifications:

- 1. UNIT WEIGHT (Jigging Method)/% Voids ASTM C29
 Dry Unit Weight (pcf) 50.8 Percentage Voids 45.2
 Saturated Surface Dry (SSD) Unit Weight (pcf) 59.1 Percentage Voids 36.3

- 2. SPECIFIC GRAVITY/ % Adsorption ASTM C127
 Specific Gravity (Oven Dry Basis) 1.486
 Specific Gravity SSD (Saturated Surface Dry) 1.705
 Dry/Wet Weight (Lbs/Cu Ft) 35/41
 Percentage Adsorption 14.7

- 3. DURABILITY INDEX Cal 229
 Time line of determination form line of sediment (min) 180
 Sediment Height Reading (in) 0.1
 Durability Index 96

4. SCREENING & GRADING (ASTM C136)

Sieve Size	Percentage Passing
3"	100
2 ½"	100
2'	96.0
1 ½"	77.5
1"	16.5
¾"	2.3
½"	0
3/8"	0
No. 4	0

