



W	X	Y	Z	D	D
				UNREINFORCED	REINFORCED
1000	670	330	110	125	100
1500	1000	500	170	125	100
2000	1330	670	220	150	100
2500	1670	830	280	150	100

A. "D x" IS THE SIZE OF SIEVE THROUGH WHICH x % OF THE FILER MATERIAL WILL PASS.  
 $D^{50} (GF) = \text{AVERAGE SIZE OF THE OPENINGS ON THE SYNTHETIC FIBRE FILTER FABRIC.}$

B. FILTER SANDS (FS) IN RELATION TO WATER BEARING STRATA (WS)

1. FOR  $D^{85}(WS) > 0.05 \text{ mm}$ :
  - (a) TO PREVENT BLOCKING OF FILTER SAND:
 
$$D^{15} (FS) < D^{85} (WS)$$

$$D^{50} (FS) < 25 \times D^{50} (WS)$$
  - (b) FOR PERMEABILITY OF FILTER SAND:
 
$$D^{15} (FS) > 5 \times D^{15} (WS)$$
2. FOR  $D^{85} (WS) < 0.05 \text{ mm}$ :
  - (a) TO PREVENT BLOCKING OF FILTER SAND:
 
$$D^{15} (FS) > 0.25 \text{ mm}$$

$$D^{0.05} (FS) > 0.75 \text{ mm}$$
  - (b) PERMEABILITY REQUIREMENTS NOT NECESSARY.

C. FILTER STONE (FSN) IN RELATION TO FILTER SAND (FS):

- (a) TO PREVENT BLOCKING OF FILTER STONE:
 
$$D^{15} (FSN) < 5 \times D^{85} (FS)$$

$$D^{50} (FSN) < 25 \times D^{50} (FS)$$
- (b) PERMEABILITY: FILTER STONE MUST BE COARSER THAN SAND AT ALL PERCENTAGES.

D. FILTER STONE (FSN) IN RELATION TO PERFORATIONS IN PIPES:

TO PREVENT BLOCKING OF PERFORATIONS IN PIPES:

$$D85 (FSN) > 1.2 \times \text{DIAMETER OF ROUND PERFORATIONS}$$

$$D85 (FSN) > 1.2 \text{ WIDTHS OF SLOTS}$$

E. SYNTHETIC FIBRE FILTER FABRIC (SF) IN RELATION TO FILTER SAND (FS):

- (a) TO PREVENT CLOGGING OF SYNTHETIC FIBRE FILTER FABRIC:
 
$$O^{50} (SF) < D^{85} (FS)$$
- (b) FOR PERMEABILITY OF SYNTHETIC FIBRE FILTER FABRIC :
 
$$O^{50} (SF) > D^{15} (FS)$$