



TABEL PERHITUNGAN JOB MIX FORMULA (JMF)

Gradasi Batas Tengah/Ideal

Saringan	Diameter	% Lolos	%Tertahan	PB	Fraksi Agregat
3/4"	19	100	0	CA= 53,95	Agregat Kasar
1/2"	12,5	95	5		
3/8"	9,5	81	14		
No.4	4,75	61,5	19,5		
No.8	2,36	46,05	15,45		
No.16	1,18	35,8	10,25	FA= 39,05	Agregat Halus
No.30	0,6	26,55	9,25		
No.50	0,3	18,75	7,8		
No.100	0,15	12	6,75		
No.200	0,075	7	5		
Pan	-	0	7	7	Filler

Kadar Aspal Ditentukan dengan Cara Menghitung Nilai Pb

$$\begin{aligned}
 Pb &= (0.035 \times CA) + (0.045 \times FA) + (0.18 \times \text{Filler}) + K \\
 &= (0.035 \times 53.95) + (0.045 \times 39.05) + (0.18 \times 7) + 0.75 \\
 &= 5.66 \approx \mathbf{5.5\%}
 \end{aligned}$$

JMF kalo penyerapan < 1.5 ambil apperent, kalo lbh bsar dari 1.5 = (bulk+apperent)/2

Fraksi	% Tertahan	Berat Jenis			% Penyerapan	BJ Terpakai	[2] / [7]
		Bulk	SSD	Apparent			
1	2	3	4	5	6	7	8
Kasar	53,95	2,8216	2,8279	2,8393	0,2220	2,8393	19,00
Halus	39,05	2,6534	2,6889	2,7511	1,3381	2,7511	14,19
Filler	7,00	3,1604				3,1604	2,21
Total							35,41

Kadar Aspal (%)	BJ Aspal (gr/cm ³)	[9] / [10]	$\sum [8] \times \{(100 - [9]) / 100\}$	[11] + [12]	BJ Teori Max 100 / [13]
9	10	11	12	13	14
4,50	1,0247	4,39	33,82	38,21	2,6172
5,00	1,0247	4,88	33,64	38,52	2,5961
5,50	1,0247	5,37	33,46	38,83	2,5753
6,00	1,0247	5,86	33,29	39,14	2,5549
6,50	1,0247	6,34	33,11	39,45	2,5347

$$\begin{aligned}
 \text{Diameter Benda Uji} &= 10,16 \text{ cm} \\
 \text{Tinggi Benda Uji} &= 6,35 \text{ cm} \\
 \text{Volume Benda Uji} &= \frac{1}{4} \times \pi \times d^2 \times t = 514,8148 \text{ cm}^3 \\
 &= \frac{1}{4} \times \pi \times (10,16)^2 \times (6,35)
 \end{aligned}$$

Contoh Perhitungan untuk Kadar Aspal 5.5 % :

$$\begin{aligned}
 \text{Berat Total} &= \text{Volume Benda Uji} \times \text{BJ Teori Max} && \text{gr} \\
 &= 514.8148 \times 2.5753 && = 1325,8 \\
 \text{Berat Aspal} &= \text{Kadar Aspal} \times \text{Berat Total} && \text{gr} \\
 &= 5.5\% \times 1325.8 && = 72,9 \\
 \text{Berat Agregat} &= \text{Berat Total} - \text{Berat Aspal} && \text{gr} \\
 &= 1325.8 - 72.9 && = 1252,9
 \end{aligned}$$