

**5.17.02**      **THEORETICAL SPECIFIC GRAVITY OF A COMBINATION OF AGGREGATES**

(a)      Scope.

This method covers the procedure for calculating the theoretical specific gravity of a mixture of aggregates that have been combined on a weight basis.

(b)      Procedure.

The specific gravity of the individual aggregates shall be determined using Kansas Test Method KT-6. Calculate the specific gravity of the mixture by use of the following formula.

$$G = \frac{100}{\left(\frac{P_1}{G_1}\right) + \left(\frac{P_2}{G_2}\right) + \left(\frac{P_3}{G_3}\right) + \dots}$$

Where: G      =      Specific gravity of the combined aggregate.

P<sub>1</sub>,P<sub>2</sub>,P<sub>3</sub>, etc.      =      Percentage by weight of aggregates No. 1,2,3, etc. in the mixture.

G<sub>1</sub>,G<sub>2</sub>,G<sub>3</sub>, etc.      =      Specific gravity (Bulk-Saturated Surface Dry) of aggregates No. 1,2,3, etc.

Example:

<u>Aggregate</u>	<u>% in Mix by Weight</u>	<u>Specific Gravity</u>
Crushed Stone	45	2.58
Sand	40	2.61
Mineral Filler	15	2.52

$$G = \frac{100}{\left(\frac{45}{2.58}\right) + \left(\frac{40}{2.61}\right) + \left(\frac{15}{2.52}\right)} = 2.58$$